

The right to procreate and the legitimate scope of anti-natalist policies

Karin Kuhlemann

Thesis submitted for the degree of Doctor of Philosophy

University College London
School of Public Policy

February 2023

Declaration

I, Karin Kuhlemann, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm this has been indicated in the thesis.

Impact Statement

This thesis aims to correct widespread assumptions that there is a virtually absolute right to procreate which renders illegitimate any anti-natalist policy which directly or coercively interferes with procreative behaviours. This assumption, which I argue is very much unfounded, has led to policy inaction in relation to serious harms, both at the micro level of imprudent procreation that causes harm to children and at the macro level of increasingly serious human overpopulation. This thesis will hopefully contribute to a more rational, and morally sounder, approach to anti-natalist policy-making, one that does not dismiss procreative harms as though something we are required to tolerate if we are to respect people's basic rights, however catastrophic those harms may be, or plainly unfair to children. I hope my conclusions will also inform judicial treatment of procreative harms, which to date has been confused, inconsistent, and often endorsed open-ended setbacks to children's interests and unlimited costs to society, both of which I argue cannot be plausibly justified by our narrow interest in procreative freedom.

Abstract

Human procreation is normatively unique. It entails bringing into existence new persons who have the same moral standing as every other human being, and to whom a wide range of duties are owed by the State, their parents, and many others. In creating a child, the parent unilaterally creates new rights and obligations for other persons, as well as a lifetime of human needs and aspirations to be met from non-infinite collective resources. Nothing about the “natural” mechanism by which these normative changes and practical costs are imposed makes them automatically fair, or compossible with the pre-existing rights, needs, and obligations of others.

Nonetheless, it is standardly assumed that individuals have a virtually absolute right to create biological children, and that anti-natalist interventions are for this reason generally impermissible. Works of human or civil rights activism, including publications by the United Nations, tend to briefly touch on the possibility of procreative harm due to human overpopulation, generally framed as a distant, unlikely, or misattributed threat. Procreative harm in the more immediate context of the family is typically ignored altogether.

In this dissertation I provide a novel conceptualisation and philosophical account of a morally justified right to procreate. I employ a modified, empirically informed interests-based theory that grounds rights in components of human wellbeing as well as uncontroversial requirements of justice, and takes account of the complex moral conflicts and harms that may arise from procreation. The resulting right is much narrower and more caveated than is commonly assumed. I conclude that, far from ruling out anti-natalist interventions, respect for fundamental rights requires the implementation of appropriate anti-natalist policies to address moral conflicts involving the right to procreate and to preserve the longer-term viability of these basic protections.

Acknowledgments

I am not a typical PhD candidate, in that for the duration of my project I have worked as a lawyer in a demanding job. This project was going to take much longer to complete from the start, and it took much longer than I had hoped or feared.

I owe an enormous debt of gratitude to Albert Weale, for his consistently kind, encouraging, and illuminating supervision, and endless supply of helpful prompts and practical suggestions. Albert continued to supervise me even after his retirement, a testament to his generosity of spirit. Any deficiencies in this thesis are not in any way to be attributed to Albert's ever-patient and extremely knowledgeable supervision. Without Albert's guidance I would never have arrived at the finish line, nor expressed my ideas in a way that was reasonably intelligible to examiners.

I am also grateful to Saladin Meckled-Garcia, my secondary supervisor, for finding my topic interesting in the first place, and for teaching me most of what I know about philosophy and theories of rights. If what I know of philosophy is perhaps not as much as I should, given my endeavour, the fault is mine, for Saladin's tutoring was really excellent.

I am thankful to Avia Pasternak and Jeff King, each of whom at one point were my secondary supervisors and provided me with very useful feedback, suggestions, and practical advice. I am also grateful to my colleagues at the Political Theory PhD workshop for their useful comments, in particular Cristobal Bellolio, Maeve McKeown, Lior Erez, John Willesmith, and Volkan Gul.

Further thanks to the administrative team at the School of Public Policy, in particular Helen Elliot and Ajay Patel, for their help with paperwork and refunds for valuable conferences I was able to attend and present at over the course of my studies.

I am grateful to my examiners, Adam Swift and Diana Coole, for their thoughtful and clear suggestions and feedback, which were of considerable help in improving the presentation of my thesis.

On a personal level, I must thank my partner Andrew Byde for his consistent encouragement and for paying the bills during the two spells of time off work which I took to concentrate on this thesis. Further thanks to my friends SJ Beard, Aleksandra Jordanoska, Malcolm Potts and William Ryerson for their valuable encouragement. I

am also grateful to Mark Threipland, Caroline Mabon, Nicholas Holloway, John Dyson, Andrew Whittaker, and Giles Stimson for accommodating and supporting my study in the context of my employment.

I cannot claim the honour of being a friend of the late and great Herman Daly, but his unprompted positive feedback and words of encouragement were a particularly delightful surprise.

Finally, Martha Campbell, Ursula Kuhlemann, and Joanna Toole were inspirations to me, and all three passed away while I was working on this project. I had hoped to make you proud.

23 February 2023

Contents

CHAPTER 1: A RIGHT TO CREATE RIGHT-HOLDERS.....	10
1.1 Introduction	10
1.2 A right to create new rights-holders	11
<i>The aims of this contribution to scholarship.....</i>	<i>13</i>
1.3 Empirical and ideational context: a brief overview	14
<i>Human overpopulation.....</i>	<i>15</i>
<i>Other procreative harms</i>	<i>18</i>
<i>The Cairo consensus and anti-natalist policies.....</i>	<i>19</i>
1.4 The right to procreate and related rights claims	20
<i>The right to procreate vs the rights and duties of a parent</i>	<i>20</i>
<i>Related rights.....</i>	<i>21</i>
1.5 What kind of right is the right to procreate?	23
<i>A “fundamental” right to procreate</i>	<i>23</i>
<i>Relationship with legal rights</i>	<i>24</i>
<i>A positive or negative right?.....</i>	<i>25</i>
<i>When is a right engaged?.....</i>	<i>25</i>
1.6 Anti-natalist policies.....	26
(I) “Rights-based” policies enabling individuals to control their fertility	27
(II) Social policies capable of (indirect) anti-natalist effects	27
(III) Anti-natalist interventions per se.....	28
<i>Pro-natalist population policies.....</i>	<i>29</i>
1.7 Methodological approach.....	29
<i>Interplay of philosophical and empirical considerations.....</i>	<i>31</i>
1.8 Conclusion and summary of chapters.....	32
CHAPTER 2: IS THERE A LEGAL RIGHT TO PROCREATE?.....	36
2.1 Introduction: the legal perspective.....	36
<i>Limitations of the legal perspective.....</i>	<i>37</i>
2.2 Origins of a legal right to marry and of a right to privacy.....	38
<i>Right to marry and found a family</i>	<i>39</i>
<i>Right to privacy.....</i>	<i>43</i>
2.3 United States jurisprudence and the evolution of a privacy-based right to procreate.....	45
<i>Meyer, Pierce, and Skinner</i>	<i>46</i>
<i>Griswold, Roe, and Casey.....</i>	<i>47</i>
2.4 Cases more directly concerning procreation	51
<i>Family caps on social assistance.....</i>	<i>52</i>
<i>Cases relating to access to assisted reproductive technology (ART).....</i>	<i>53</i>
<i>Non-US cases about abortion</i>	<i>53</i>
2.5 Conclusion: unresolved questions	54

CHAPTER 3: IDEAS AND IDEATION: THE CAIRO CONSENSUS AND LITERATURE ON A RIGHT TO PROCREATE	57
3.1 Introduction	57
3.2 A right to family planning and to access contraception	57
3.3 The Cairo consensus, or how a right to family planning became a right to create children.....	60
3.4 The ICPD and hostility to population concern	63
<i>The ICPD’s reliance on demographic transition theory</i>	<i>66</i>
<i>The Cairo consensus’ symbiotic relationship to the population taboo.....</i>	<i>67</i>
3.5 Normative entailments of the Cairo consensus.....	68
3.6 Competing interpretations of a right to procreate by political activists, legal scholars, and philosophers.....	71
<i>The political or activist strand</i>	<i>72</i>
<i>The legal strand</i>	<i>74</i>
<i>The philosophical strand.....</i>	<i>76</i>
3.7 Conclusion: Desiderata for a robust philosophical account of a plausibly justified right to procreate	81
CHAPTER 4: ACCOUNTING FOR A PLAUSIBLE RIGHT TO PROCREATE: CONCEPTUAL, THEORETICAL, AND EVALUATIVE APPROACH	83
4.1 Introduction	83
4.2 The language of rights.....	84
<i>Rights and bare liberties</i>	<i>86</i>
4.3 Theories of rights	88
4.4 A modified interests-based theoretical approach: part I	90
4.5 Theories of human rights	91
<i>Political or functionalist accounts.....</i>	<i>92</i>
<i>Foundational or orthodox approaches</i>	<i>93</i>
Dignity as the ground of human rights.....	93
James Griffin’s agency-focused approach	94
The broad interests-based approach of John Tasioulas.....	95
4.6 A modified interests-based theoretical approach: part II	97
<i>Value commitments.....</i>	<i>98</i>
The basic requirements of justice	98
Human wellbeing interests.....	99
4.7 Pre-conditions versus limits to rights.....	100
4.8 Conclusion	102
CHAPTER 5 – PROCREATIVE HARMS	103
5.1 Introduction: how procreation generates moral conflicts	103
5.2 Troubling intuitions about an absolute right to procreate.....	104
5.3 Moral conflicts as countervailing reasons when considering a proposed duty	107
5.4 Wrongful Harm.....	109
Wrongful procreative harms	110

5.5 Non-compossibility and impossibility	111
5.6 Objections to procreative harms within the family	112
<i>Creation harms</i>	112
<i>Future vs hypothetical (or merely possible) persons</i>	113
<i>Familial harms</i>	115
5.7 Harms to society: resource non-compossibility, normative forcings, and retrogression	116
<i>Normative forcings and rights retrogression</i>	118
5.8 Procreative harms and cognitive biases	121
5.9 Conclusion: moral conflicts and moral priority.....	123
CHAPTER 6: GROUNDING A RIGHT TO PROCREATE	125
6.1 Introduction: the requisite relationship between grounding interests and proposed claims	125
6.2 Generating initial judgments: is an absolute right to procreate plausible?	126
6.3 Plausible and implausible autonomy interests.....	128
<i>Liberty vs normative agency</i>	129
6.4 Children as means and motivational interests	131
6.5 Countervailing considerations, or the moral implications of a right to <i>have</i> biological children	134
<i>Our obligations to future persons</i>	135
<i>The distinctive parent-child relationship, or children as the object of a right</i>	136
<i>The existential hazard and the harm-based precondition</i>	137
<i>Possible objection: is the duty to refrain from harmful procreation too existentially indeterminate?</i>	140
6.6 Additional countervailing considerations: The impossibility of consent.....	142
<i>Biological children as their parents' property</i>	143
6.7 Conclusion: the pre-conditions to a right to procreate	146
CHAPTER 7: OVERPOPULATION AND THE LIMITS OF THE RIGHT TO PROCREATE....	150
7.1 Introduction: non-compossibility and aggregate harms, or why pre-conditions are not enough.....	150
7.2 The limits of moral justification of a right to procreate	151
7.3 Can we have a right to create multiple children?.....	152
<i>A weak, heavily contingent right to creating two children</i>	153
<i>A bare liberty (not a right) to create three or more children</i>	154
<i>The right to (mostly) one child</i>	155
7.4 What does overpopulation mean?	155
<i>Collective action problems</i>	157
<i>Conceptualising overpopulation</i>	158
<i>Overpopulation and committed consumption</i>	160
7.5 Standard objections to anti-natalist population policy-making	161
7.6 Conclusion: The implications of collective action problems.....	164

CHAPTER 8: OVERPOPULATION: EMPIRICAL CONSIDERATIONS	166
8.1 Introduction	166
8.2 Overpopulation: demographic trajectory	166
8.3 Evidence of overpopulation	170
8.4 Population momentum	175
8.5 Family size preferences	176
8.6 The myth of virtuous procreation and reprehensible consumption	178
<i>Wrongful consumption</i>	179
<i>Should procreation take priority over consumption?</i>	180
8.7 Consumption-lowering interventions	183
8.8 Conclusion	185
CHAPTER 9: THE LEGITIMATE SCOPE OF ANTI-NATALIST POLICIES	187
9.1 A morally justified right to procreate is both pre-conditioned and limited	187
<i>Is talk of a right to procreate even appropriate?</i>	189
9.2 Bringing the full suite of anti-natalist interventions back to the table.....	190
<i>Types of anti-natalist policies and the consequences of a conditional, limited right to one child</i>	192
9.3 Interventions acting on bare procreative liberties	194
9.4 Interventions interfering with the right to procreate.....	196
9.5 Why not stick with non-coercive anti-natalist policies anyway?.....	198
(I) Policies enabling individuals to control their fertility	198
(II) Social policies capable of anti-natalist effects.....	199
<i>The short answer</i>	199
<i>A more detailed answer</i>	200
9.6 An outline of principles guiding anti-natalist interventions	204
<i>Interventions concerning procreative freedom outside the scope of the right</i>	204
<i>Interventions concerning procreative freedom within the scope of the right</i>	204
<i>Considerations about coerciveness and political feasibility</i>	205
9.7 Conclusion: The role of anti-natalist policies in mitigating moral conflicts and harm relating to procreation	206
APPENDIX	209
Ideational background: the taboo on problematising procreation and population growth	209
<i>Procreative choices and climate change mitigation</i>	209
<i>A taboo with a long history</i>	214
<i>A population taboo case study: FAO reports</i>	217
BIBLIOGRAPHICAL REFERENCES	219

Chapter 1: A right to create right-holders

1.1 Introduction

Is there a fundamental right to procreate, and if so, what is it a right to, how is it justified, and to what extent? The analysis set out in this dissertation is concerned with the philosophical foundations and moral justification, if they can be found, for a basic right to create biological offspring through “natural” means, that is, via heterosexual intercourse between fertile individuals, free from state interference.

At least in a Western context, it is standardly assumed in popular, academic and political discourse that there is a distinctive right to procreate and that it is virtually absolute, that is, neither limitable nor subject to conditions. This belief is hugely consequential. I do not wish to claim ordinary individuals around the world are guided in their procreative behaviours by any specific beliefs about a right to procreate. The larger force influencing decisions to have larger families, or to not use contraception, is almost certainly cultural pronatalism in its various guises, for example as expressed through religious and patriarchal traditions. But procreation is framed as a matter of basic rights by those who influence or determine policy-making. The international policy-makers, opinion leaders, lawyers and human rights activists who believe that there is a right to procreate also understand the right is virtually absolute, and that it renders illegitimate almost any anti-natalist (though not pro-natalist) policy intervention, whether to tackle catastrophic human overpopulation or to prevent the creation of children into serious and foreseeable harm.

For a right that features so prominently as a constraint to policy-making in relation to some of the most grievous concerns of our time, pinning it down is surprisingly difficult. As discussed in Chapter 2, that we each have a right to be free to create as many children as we like, under any circumstances, is standardly treated as morally as well as legally self-evident (Dillard, 2007; Pearson, 2007; Eijkholt, 2010), as though there is no need to expressly articulate it in legislation, let alone consider its philosophical foundations or morally justified scope. Admittedly this is hardly unusual when it comes to rights talk.

In this introductory chapter I start by sketching out what is normatively unique about human procreation, and which argues for particular care in making sure normative claims about a right to procreate are philosophically sound. I then briefly summarise the relevant empirical background, with particular focus on the historical and projected trajectory of human population growth. I set out some initial concepts to situate the discussion, and briefly characterise the right to procreate that is the subject of this philosophical enquiry as a basic right to create biological children free from state anti-natalist interference, that is, a special type of autonomy right supposedly immune to contestation. I also typify anti-natalist policies and explain that the ones

which are of particular interest here are those which involve imposing a degree of pressure or compulsion in relation to procreative behaviour in pursuit of unmistakably anti-natalist goals. Such policies or interventions are generally regarded as incompatible with the right to procreate as assumed to exist. Other anti-natalist policies, with only passive or indirect interaction with procreative behaviour, are generally assumed to be legitimate. I conclude with a brief explanation of my methodological approach and an overview of the discussion as set out in subsequent chapters.

1.2 A right to create new rights-holders

There are inherent contradictions in a purported right that is unavoidably relational and profoundly other-affecting while supposedly exempt from the kind of harm- or moral conflict- based limitations that uncontroversially, or much less controversially, apply to other, far less consequential rights, including the wider rights of which the right to procreate is often assumed to be a derivation. The ways in which procreation is relational and other-affecting are both practical and normative, and generate ample room for conflict between our moral commitments. On a practical level, procreation can only be achieved with the participation, willing or not, of a co-procreator. It involves the creation of another, extremely vulnerable human being who will non-optionally rely on other persons for their survival and wellbeing for many years. That vulnerable new person inevitably will compete with others for resources, public services, and opportunities throughout their life.

Furthermore, properly understood, a right to procreate is not simply a freedom, or even a freedom coupled with claims to certain services or resources to support the parents' exercise of that freedom. It uniquely includes a Hohfeldian power to create new rights and to impose new or added correlative duties and practical burdens on others, unilaterally and without their consent. After all, any right to procreate amounts to a right to create new right-holders. The rights being created are principally the child's, secondarily those of the parents. The duties imposed on others largely fall on the state, to make good on a wide range of legal, moral and practical entitlements to access to public services and collective resources, including but not limited to those needed to satisfy their basic rights, to which the child will be entitled as an added member of society.

Practical burdens in relation to each child are imposed upon other members of society, principally as a fractional reduction of collective resources available to all and a slightly increased cost for public services paid for by general taxation. Though seemingly trivial when considered in isolation, the aggregate, cumulative effect of these dilutions of resources and the increased costs of ungoverned population growth pose catastrophic risks. Additional, often quite onerous, obligations are imposed on family members and relatives. These are typically in the nature of practical burdens, often on older children, to provide childcare or share what may be already insufficient

domestic resources, but may extend to socially or legally enforceable obligations of financial support placed on parents, siblings, and potentially other relatives.

The new duties and practical burdens on others are imposed automatically upon the child's birth, independently of compatibility with the wishes, own needs, or competing duties of the persons affected. This automatic imposition does not make these burdens automatically fair, or compossible with competing needs and duties. And certainly, there is nothing about the "natural" mechanism by which children are created that would cause additional collective goods on which human wellbeing and survival depend to be created in tandem or at all.

Perhaps more troubling, a right to procreate seems to involve something akin to a property claim towards another, or at least, an entitlement on the would-be parent to use a non-consenting other – the would-be child – as an object of rights and as means to the parent's ends. An unqualified right to have children is indifferent as to whether the child that would be created would enjoy an open future¹, or whether they would be born into challenging, even harrowing circumstances. This makes the creation of the child entirely into something *for* the parent, to meet the *parent's* needs, preferences, even their whims and idiosyncrasies.

The reality that fertile human beings are able to create new persons does not imply any moral entitlement to do so, let alone an entitlement to do so irrespective of consequences to other persons. Instead, one must locate the philosophical foundations for a procreative entitlement, if there is one, on that which is morally valuable and important and which having a right to procreate would protect or realise. From there on, we must consider what sort of edifice such foundations can support: its core elements, its periphery, and that which is not within the scope of the right but merely thematically related to the interests or other values that ground it. That is, we assess what it is that we have a right to. No conceivable human interest or principle of justice is so self-evidently important that it can be assumed to justify the imposition of any and all burdens or harms onto others. So finding its philosophical foundations is only the start of a theoretical account of a right.

A right to procreate, again if there truly is one, needs to be properly accounted for, with identification of its grounding values and what duties those values are able to justify. A reasonably robust philosophical account must have regard not only to what the proposed right would do for the right-holder, but to the justification of the foreseeable consequences for others, including the costs to the duty-bearers and those to whom the duty-bearer owes competing duties.

¹ Joel Feinberg (1980) characterises these rights as protecting the child's future autonomy, a right which is violated by parental choices that unduly circumscribe the options that will be open to the child as an adult.

This sort of philosophical analysis invariably reveals limits to the justified scope of any right, including the right to procreate. Indeed, to my knowledge no moral philosopher or legal theorist has seriously proposed the existence of an absolute right to procreate like the one which rights advocates, policy makers and many judges standardly assume to exist (see section 3.6). But due to a variety of complicated ideational reasons that are probably unique to the right to procreate, there has been a systematic failure in rights theory, law, and practical policy-making to identify and articulate the moral limits of an individual entitlement to create new persons and to clarify the consequences of those limits to the legitimacy of anti-natalist policy-making. These ideational reasons include, but are not limited to, the operation of something of a taboo on the problematisation of procreation and population growth.

In this dissertation I set out my thesis that careful consideration of jurisprudence, real-life examples, empirical considerations relating to resources and (un)sustainability, thought experiments and other tools of analytical philosophy reveals that the standardly accepted version of a right to procreate – a nearly absolute right – is morally and philosophically ungrounded. It relies instead on a number of presumptions, confusions, and on a reluctance by many to engage with the subject, aided by a taboo on problematising procreation and population growth.

This is not merely an interesting philosophical question. The supposed existence of a virtually absolute right to procreate has had a paralysing effect on the sort of anti-natalist policy-making which could otherwise avoid or mitigate serious procreative harms. That we have supposedly a right to procreate that blocks policy interference is the standard reason for the avoidance, in public policy-making and human rights discourse, of any effort to understand and address such harms, chief among which those caused by grievously unsustainable human population growth. It is also the presumptive reason for policy inertia in relation to the birth of children in circumstances so hazardous to their welfare that we would not countenance placing an already existing child, or perhaps even a pet, into the same situation via adoption.

The aims of this contribution to scholarship

I aim to show that anti-natalist policy interventions designed to discourage hazardous procreation or to reduce fertility rates so as to mitigate human overpopulation would not in principle offend any right. This is true even of interventions that are unquestionably coercive, such as requiring prospective parents to be licensed or to abide by a family size limit. However, beyond urging active consideration of the full suite of possible anti-natalist interventions, it is not my aim to advocate for specific policy prescriptions. Legitimacy is not the only consideration in policy design. Anti-natalist interventions cannot be designed in the abstract via some one-size-fits-all approach, but must instead be carefully tailored to conditions on the ground. For example, what is politically feasible and likely to be effective in one social or material context may backfire in another, making an already difficult situation even worse.

Establishing whether a fundamental right to procreative freedom can be morally justified, and to the limits of that justification, could make a real difference in clarifying what policy responses may be legitimately pursued in addressing human overpopulation and preventing the creation of children under unacceptably hazardous circumstances. Conversely, left undisturbed, the dominant view of the right to procreate (in particular as held by policy-makers and opinion leaders in the international arena) poses an existential threat to all fundamental rights, in particular those of children and younger generations.

In this dissertation I set out to provide a comprehensive, philosophically grounded and empirically informed account of a right to procreate and of its implications for the legitimacy of anti-natalist interventions, in particular those involving at least some degree of impingement upon an individual freedom to create (more) children. I am not aware of a similar undertaking. Existing scholarship in the field of reproductive rights, while abundant, is quite fragmented, and much more focused on questions that are *adjacent* to a right to create biological children (via natural means) rather than directly about the right to procreate - for example, focusing on parenting rights or duties, or on access to certain assisted reproduction technologies. As discussed in the literature review in section 3.6, existing philosophical work on the right to procreate *per se* tends to offer more tentative, less action-guiding conclusions than I set out in this dissertation. This may be because the incorporation of judgments based on empirical evidence has been, to date, much more limited than what I have attempted, and hopefully succeeded at, with this analysis.

1.3 Empirical and ideational context: a brief overview

For the majority of the ~300,000 years of humanity's existence as a distinct species, our numbers were within what one might expect for a large mammal, perhaps one or two million human beings (Weiss, 1984). As our range expanded out of Africa and into other continents, we increasingly displaced other species and commandeered more resources towards human reproduction, gradually increasing our numbers. But the rate of growth was still very slow. By the time of the earliest agrarian societies, some 9 to 10 thousand years ago, it is estimated there were still fewer than 10 million of us. Agriculture fuelled substantial population growth over the next few thousand years, then reached something of an enduring plateau. From the height of the Roman Republic (~200BC) until close to the end of the Dark Ages (10th century AD), the global population is thought to have hovered in the neighbourhood of 200 million.

Population growth resumed in earnest from around 1,000 AD, tempered by multiple outbreaks of the plague. Within some 500 years, our numbers had doubled to 500 million; three hundred years after that, we reached one billion, shortly after the turn of the 19th century. From then on, our numbers exploded. We reached 2 billion around 1927, a doubling within a mere 123 years. We doubled our numbers again within fifty years, reaching 4 billion around 1974. We are due to reach 8 billion around 2024 - our

fourth doubling since the start of the modern era. Based on demographic trends that have remained more or less unchanged since at least the early 1990s (McNicoll, 1992), the global population is predicted to reach 11 billion around the end of this century and to keep on rising well into the next one.

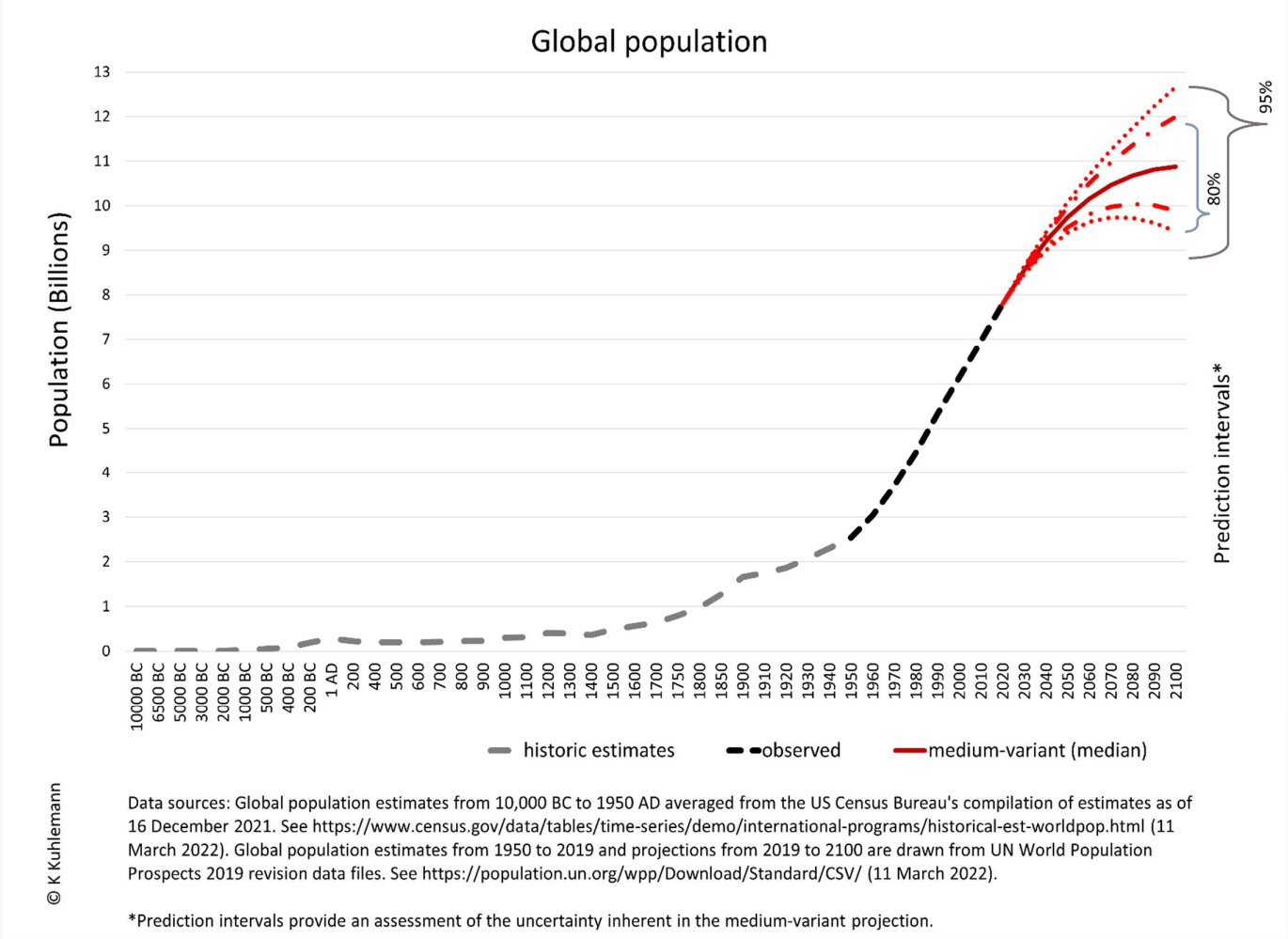


Fig. 1: Estimated global population size from 10,000 BC to 2019 and projected trajectory to 2100

Human overpopulation

Are we already overpopulated? It certainly looks that way. As will be explored in more detail in Chapter 8, multiple lines of evidence indicate that our population size ceased being sustainable decades ago. We have been living off natural capital instead of interest, consuming more resources each year than can be replenished.

Each year that passes sees us locked into ever more dangerous levels of global warming, of which population growth is a primary driver. Climate change could devastate food production and render uninhabitable vast areas of the world which are

currently home to billions of people, and where much of future population growth is likely to concentrate. Pollution, driven by population growth, urbanisation and industrialisation, is quite literally killing us, responsible for one in six deaths worldwide². Enormous areas of the world are running out of reliable supplies of freshwater, which we need not only to drink, cook and clean, but for agriculture and virtually any productive activity. Several major world cities have already started facing severe water shortages³. Worldwide, agricultural soils are being degraded, eroding away, losing productive capacity and turning into desert⁴. We keep our animal products cheap via unspeakable cruelty to livestock and fish⁵. But even less barbaric ways of consuming animals are unsustainable because there are so very many of us⁶. We are doing such a great job at chasing every last fish in the sea, using ever more extreme techniques and going farther and farther afield, that commercial fishing looks set to collapse altogether over the coming decades⁷. We have been eradicating the world's wildlife at an accelerating pace, bringing about a sixth mass extinction⁸. Even insects are disappearing⁹, with unpredictable consequences for the ecosystems on which we all depend.

The symptoms of our overpopulation are not limited to the natural world and to food production. Younger generations are suffering through a decades-long trend of difficulties in finding decent work, or any work at all, in job markets increasingly saturated with workers and jobseekers¹⁰. As the number of people soars in communities worldwide while the pool of key assets does not expand at pace or at all (for example, land and housing), population growth has gone hand in hand with rising social inequality and a long-term trend of stagnating wages, even as economic output has grown enormously.¹¹

The complexity of human overpopulation is not assisted by its incremental onset. This is a “boiling frog” phenomenon that plays out in slow motion – at least as perceived by human beings. Its creeping nature obscures the extent and momentum of

² Fuller *et al.* (2022).

³ See for example Mekonnen and Hoekstra (2016) and Welch (2018)

⁴ See UNCCD (2014; 2022) and Gomiero (2016).

⁵ See Singer (2010) and Harari (2015).

⁶ See for example McWilliams (2012), Rööös *et al.* (2016), and Rizvi *et al.* (2018).

⁷ See for example Worm *et al.* (2009), Roberts (2012), McKie (2014), and Pauly and Zeller (2016).

⁸ See Dirzo *et al.* (2014), Ceballos *et al.* (2017; 2020), and IPBES (2019).

⁹ See Hallmann *et al.* (2017) and Sánchez-Bayo and Wyckhuys (2019)

¹⁰ International Labour Organization (1996, 2007, 2012, 2014, 2017, 2020, 2022a, 2022b).

¹¹ See for example Deaton (2016) and United Nations (2020).

accumulated and latent damage to collective goods¹², while shifting baselines¹³ tend to go unnoticed, misleadingly resetting our perception of what is normal¹⁴. Even where we recognise that something is a problem, we may still not recognise the underlying, catastrophic trendline, or just how much damage is already baked into states of affairs that we have come to regard as normal.

Our collective unsustainability is on an accelerating trajectory as per capita consumption, as well as population itself, both continue to rise rapidly. It seems reasonable to assume that, left to run its course, at some point our population growth trajectory will undergo a forceful correction of some sort, perhaps including collapsed or much smaller economies, unprecedented mass displacement and societal upheaval, runaway unemployment and fiscal unsustainability, and increased mortality. The timing of this correction can only be conjectured. But the increasingly likely and increasingly near prospect of runaway global warming, together with the ongoing exhaustion of resources required for food production and multi-decadal problem of youth unemployment suggest it may commence within the relatively near future, and almost certainly within the lifetimes of younger generations. Enduring immiseration is another all but certain outcome, as a global population set to be larger than today's by billions of people will have no choice but to subsist on fewer resources than those on which we draw today. These likely consequences amount to a morally hazardous and inherently asymmetric imposition of risk by today's adult cohorts onto people who are currently children, or yet to be born.

Concerted anti-natalist policy action to arrest and reverse unsustainable population growth could dramatically boost societal resilience to increasingly dire environmental conditions, and greatly reduce the number of human lives in harm's way. It could avoid, and ultimately reverse, increases in aggregate consumption and CO2 emissions to an extent that cannot possibly be achieved by increased efficiency in the use of resources, or efforts, however forceful they might become in future, to reduce per capita consumption. Unlike procreation, which is non-essential for individual health and survival, people must consume resources in order to survive, every day, even if they are very poor. This means consumption reductions can only ever be marginal. Population growth, in contrast, multiplies lifetimes' worth of consumption, making it impossible to offset it via reductions in per capita consumption. And unlike growth in consumption, population growth is compound. Each birth entails potentially many further births via the child's future offspring and their own descendants, each of them a potential procreator of yet more lifetimes of consumption and vulnerability. The

¹² Collective goods are normally non-excludable goods, including *common pool resources* (e.g. fisheries, aquifers, a public health service) as well as *public goods* such as a stable climate, a well-functioning democracy, food security, an adequately funded health system, etc.

¹³ See Klein and Thurstan (2016) for a good explanation of the phenomenon.

¹⁴ Jared Diamond (2005) refers to this as "creeping normalcy".

difference over time is nothing short of dramatic.

UN population projections typically illustrate a “low fertility” variant as well as a “high fertility” variant at either side of the actual projection. The low fertility variant assumes average family sizes which are, on average, *half* a child smaller than assumed by the actual projection. The high fertility variant makes the opposite assumption¹⁵. The difference between the two variants, then, are average family sizes that differ by one fewer or additional child. Whereas the “low fertility” variant results in a population of between 7 and 8 billion people by 2100, the “high fertility” variant illustrates a population that is twice as large, at over 16 billion. And even the “high fertility” variant looks modest next to the 2100 population of *over 20 billion people* that would result from holding *current* fertility rates *constant* into the future. Conversely, bringing about a universal shift to an average family size of one child would bring about a population size of fewer than 4 billion by 2100 (Bradshaw and Brook, 2014). A one-child family norm would make it far more realistic that societies would be able to secure everyone’s basic needs at what looks set to be a time of potentially catastrophic concatenations of climatic upheaval, resource scarcities, and environmental deterioration, while still securing for all the option of experiencing biological parenthood.

Other procreative harms

Overpopulation is not the only ethical concern arising from human reproductive choices and behaviours. At a more granular level of individuals and families, appropriately designed anti-natalist interventions could prevent the birth of children in circumstances of serious and foreseeable harm. This may in many cases be a fairer and more effective approach than (for example) removing a child into the care of social services to protect it from parental maltreatment, which is a well-established cause of lifelong impairments in children’s physical and mental health (Springer *et al.*, 2003; Shonkoff *et al.*, 2012; Berens, Jensen and Nelson, 2018).

Placing a child in institutional or foster care is an expensive and only partial remedy; a child taken away from a neglectful or abusive home will still likely sustain long-term harm to their wellbeing (Turney and Wildeman, 2016; Murray *et al.*, 2020). Unplanned or improvident procreation also routinely worsens the lot of individual parents struggling with economic and food insecurity, substance abuse, or mental health issues, and who might therefore benefit from sensitively designed anti-natalist interventions. In lower income countries where social services are virtually absent, anti-natalist interventions could help change traditional attitudes that value children in instrumental rather than intrinsic terms, and which can trap families in multi-generational cycles of childhood adversity, high fertility, and poverty (Grantham-McGregor *et al.*, 2007; Dasgupta, 2011).

¹⁵ The definition of projection variants used in UN projections can be found at <https://population.un.org/wpp/DefinitionOfProjectionVariants/> (2 July 2022)

The Cairo consensus and anti-natalist policies

It is surprising, then, that anti-natalist policies are not a meaningful component of the response to threats to food security and livelihoods, or to foreseeable harm to children, and have not been since the mid-1990s. The primary reason for this is the afore-mentioned belief in an unconditional and unlimited individual freedom to create new persons which would rule out all but the most passive or indirect types of anti-natalist intervention. In development circles and the international human rights community, this belief tracks what is known as the “**Cairo consensus**”.

As explained in Chapter 3, references to the Cairo consensus relate to the UN-endorsed view that individuals enjoy absolute discretion in procreative matters, tempered only by their own judgment of what is the responsible thing to do. I demonstrate in Chapter 2 that this view of the right to procreate is based on language almost certainly intended originally as asserting a right to use contraception, but which was hijacked by interest groups united in their desire to sideline and ultimately to delegitimise concern about procreative choices and population growth. In this they were tremendously successful. As mentioned in Chapter 3, under the Cairo consensus, rather than worrying about the consequences of procreation, including in particular overpopulation, policy-makers should focus on addressing gender inequality, poverty, or lack of access to family planning and reproductive health care. Anti-natalist interventions are only acceptable if they can be passed off as something other than an anti-natalist intervention: as rights-enhancing access to means and information on family planning, for example, or independently justifiable social measures merely capable of having anti-natalist effects. Direct-acting anti-natalist policies and interventions are viewed with at best deep suspicion, and for those seen as incorporating actual or arguable coercion, as amounting to rights-violating tyranny.

The taboo on problematising procreation and its harms, in particular human overpopulation, works symbiotically with the Cairo consensus’ conception of a virtually absolute right to procreate. On the one hand, the Cairo consensus works to buttress the taboo by implying that problematising procreation, or expressing concern about population growth, is itself disrespectful of human rights. It does seem strange to criticise as seriously harmful, or wrongful, a person acting on a freedom interest which is supposedly protected as a basic right. But that unfettered procreative freedom is a basic right is itself much easier to believe for as long as the harms caused by procreation are not openly discussed, or at least not explicitly and causatively connected to procreative choices. And here the taboo’s contribution is critical. The Cairo consensus version of a right to procreate is highly vulnerable to refutation on the basis of the severity of harms which procreation is capable of causing. But so as long as those harms are not openly discussed, or so as long as we keep hearing alternative causal explanations for them, we feel able to ease back into complacency. Interrogating some of the most intimate behaviours of others is awkward at the best of times, and procreative harms are often caused by people trapped in highly

disadvantageous circumstances, and who we prefer not to hold responsible for any causation of harm if we at all can.

Outside of development circles, a functionally identical normative presumption to the Cairo consensus holds that the state and other institutional agents (e.g. employers, non-governmental organisations, and correctional facilities) ought not to meddle with procreative behaviours, at least not in an anti-natalist fashion. I include this normative presumption in references to a “Cairo consensus-style” right to procreate, particularly relevant to the discussion about related, formally recognised rights in Chapter 2.

1.4 The right to procreate and related rights claims

Discussions about the right to procreate are often framed with reference to reproductive rights. However, this label bundles together various different normative concepts, which I seek to disaggregate below.

The right to procreate vs the rights and duties of a parent

- a) The right to experience biological parenthood, or the right to procreate (in a wide sense). This right can further be parsed out into:
 - i. the freedom to bring into existence one or more biological children, or the right to procreate (in a narrow sense); and
 - ii. the right to have a family life with one’s biological child(ren) and to guide their upbringing, that is, the right to parent one’s biological child(ren). This is connected with the privacy rights set out at (c) below. Rights claims pertaining to the rearing of children – how, by whom, with whose financial or practical support – pertain to this particular right.
- b) The right to procreate is usually regarded as bound up with a duty to provide and care for one’s biological children until they reach maturity.

The above elements correspond, *mutatis mutandis*, to a right to adoptive parenthood and become the right to adopt children, the right to raise adopted children, and the duty to provide and care for the children one has adopted.

My particular focus is on the right to procreate element of the right to experience biological parenthood. To be more precise, it is on the simplest, most parsimonious version of a right to procreate: the right to be free from anti-natalist interference by

the state in relation to the creation of children through sex.¹⁶ In other words, I am concerned with a purported right not to be compelled or encouraged to use contraception. Unless otherwise specified, references to the right to procreate in this dissertation should be understood as references to this narrow right.

Perhaps reflecting the Cairo consensus' forceful reframing of the public debate away from procreative behaviours and towards individual empowerment, the right to procreate is popularly believed to mean that where a parent has children they cannot adequately care for, they have a right to not be criticised about it. It seems to me that if the premise of an individual entitlement to complete procreative discretion is refuted, so are its more ornate entailments, which therefore do not require specific consideration.

Related rights

The right to procreate belongs to a larger family of reproductive and privacy rights which are beyond the scope of this dissertation. These rights are set out below by mean of situating and distinguishing the right to procreate:

- c) The right to privacy, or to respect for private and family life. Generally speaking this is the freedom to have close, private relationships with friends, children, relatives, and sexual partners without unjustified intrusion by the state. This right is often equated with a broad personal autonomy right, that is, a right to choose one's course in life and freely develop and express one's personality. As noted above, in a legal context one or another version of a right to privacy or to personal autonomy is often relied upon as a basis for arguing for an implicit or derived right to procreate, or to resist anti-natalist interference. As further discussed in Chapter 2, the right to privacy itself has unclear foundations, and is at any rate uncontroversially a non-absolute right.
- d) The right to bodily autonomy. This right, also non-absolute, relates to protection from non-consensual interference with one's own body. It is almost always raised in relation to women, perhaps because men tend to be granted more respect for their bodily autonomy. Its application in the context of reproductive health is often said to ground at least a *prima facie* right of a woman to decide for whether to carry a pregnancy to term or have an abortion, a right to choose whether to use contraception and what method of contraception to use, and a right to refuse (but not necessarily a right to obtain) medical interventions such as caesarean sections and tubal ligations.

¹⁶ Daniela Cutas (2009) remarks on the strangeness of how acquiring children by creating them through unassisted reproductive sex seems to *uniquely* entitle the parent to be free from any interference at all, at least not until neglect or abuse of their children becomes known.

The right to procreate (in the strict sense) is treated here as a specific and distinct right and not as a sub-set of the right to bodily autonomy. The exception to this is where the rationale for arguing that policies compelling or encouraging the use of contraception are or may be impermissible because they violate a right to bodily autonomy. Again, the right to bodily autonomy is uncontroversially not an absolute right, so this sort of claim is inherently more difficult than a claim that anti-natalist interference is a violation of a right to procreate that is supposedly absolute or very near absolute. This specific derivation of a right to bodily autonomy is for practical purposes indistinguishable from the right to procreate under examination in this dissertation. I therefore treat it as a slightly different flavour of the same normative claim.

- e) The right to family planning and reproductive healthcare. A number of human rights texts advocate a universal entitlement to family planning services and information, including potentially public funding for contraception and for prenatal and obstetric care. This right may be framed as a self-standing reproductive right, a derivation of the right to health care, or by direct appeal to the importance of family planning in personal autonomy, in particular women's. The moral considerations about a right to access contraception and reproductive health care are fundamentally very different, and rather simpler, than those of a purported individual right to create people. It would seem very difficult, at any rate, for anyone to succeed in resisting anti-natalist interference on the basis of a right to plan to have children as opposed to a right to actually have them.
- f) A broad right, or a cluster of rights, relating to assisted reproduction techniques (ARTs). The right(s) in question are sometimes claimed to be extensions of the right to procreate, the right to healthcare, or even a right against discrimination (for example, against the infertile). The most basic version of this would be a right to be permitted to use fertility treatments for overcoming a physiological obstacle to the exercise of one's freedom to create a biological child. More demanding versions would include an entitlement to public funding for at least some forms of ART, most commonly in-vitro fertilization (IVF). Proposed versions of ART rights may involve a right to use donor gametes; a right to be free to enter reproductive contracts with surrogate gestational carriers or with gamete providers; a right to have a child produced via ART legally recognised as the child of a person who is not their biological parent, of a woman who did not carry the pregnancy, or of a person in a same-sex marriage to the biological parent. As technology in this area continues to make advances, new normative claims are advanced, including for example that parents should be free (or in some contexts, should have a duty) to select or tailor the characteristics of the would-be child, for example via sex selection, screening for disabilities, and potentially via genetic editing or

mitochondrial transfer. I am not concerned here with claims relating to ART, except insofar as such claims might help illuminate what is morally at stake when it is suggested that the state ought not to seek to discourage or deter individuals from creating children because to do so would violate a basic right.

Finally, it may be suggested that claims that people have a right not to be subject to anti-natalist interference may be grounded in a right to religious freedom. Most of the world's religions are pronatalist and encourage followers to create children intentionally, or at least to avoid contraception and make oneself open to unplanned procreation (in either case within the bounds of heterosexual marriage). One initial hurdle is that religious rights are also uncontroversially non-absolute rights. But I suggest religious freedom-based objections to anti-natalist interventions face additional challenges in order to succeed. It seems much more difficult to advance the claim that one should be exempt, on account of their (often idiosyncratic) personal view of what their faith requires, from the same interferences with personal freedom apply to others in the same situation in order to prevent harm to others.¹⁷ Whereas arguments grounded on (say) bodily autonomy would in principle be universally applicable, claiming a religious exemption allowing one to (say) create children into hazardous conditions, or to continue to have large families in societies facing catastrophic overpopulation, would seem much more vulnerable to charges of unfairness.

1.5 What kind of right is the right to procreate?

A “fundamental” right to procreate

In this thesis I refer to the (purported) right to procreate as a fundamental or basic right, by which I mean that the right in question is, or is assumed to be, a high-priority right applying to all individuals whose procreative freedom might be affected by an anti-natalist intervention, irrespective of nationality, citizenship status, or any other eligibility criterion. As any right of universal application, it is presumed to be a philosophically justified right grounded on some morally important aspect of human needs, human dignity, or natural justice.

As discussed in more detail in Chapter 2, where the right to procreate is in issue in legal proceedings in Western jurisdictions, it is likely to be asserted as a derivation from a much more general civil, constitutional, or human right. In some contexts, notably the United States, the right is more likely to be regarded as an entailment of an (unenumerated) constitutional right to privacy or some variation of it, such as self-expression, bodily integrity or sexual autonomy. In other contexts, for example in the European Union and (since the implementation of the Human Rights Act 1998) the

¹⁷ Exemptions to mask mandates during the covid pandemic granted on purported grounds of respect for religious freedom differed in that the rationale for mask wearing was at least a significant extent based on protecting the individual him/herself from infection.

United Kingdom, it will tend to be framed as a human right variously implied by the right to marry and found a family or the right to privacy and family life. Sometimes it is expressed merely in terms of general principle, for example personal liberty or individual dignity. In yet other contexts, it may be referred to as a common-law¹⁸ or even a customary right. In policy-making contexts, the right is more likely to be framed with reference to language from non-binding UN instruments relating to the Cairo consensus.

The status of the right to procreate as a fundamental right entails purported lexical priority over competing demands of morality and a trumping of consequentialist considerations relating to the common good. I consider these issues in Chapters 4 and 5.

Relationship with legal rights

I follow Joel Feinberg (1969) in regarding a legal right as a ‘valid’ claim recognised within a system of legal rules and a moral right as a ‘justified’ claim supported by moral principles, whether or not corresponding to a legal right.¹⁹ A moral right has a morally justified content. A legal right may or may not be backed up by a moral justification; there is certainly no requirement for it. Legal rights decreed by a legitimate authority are normally valid even if their content only partially overlaps with a moral right. For some legal rights, there might be no corresponding moral right at all.

One might object to this distinction by arguing that legal rights that do not reflect the scope of antecedent moral rights are not real law and do not truly bind, notwithstanding social facts. Conversely, one might take a positivist approach and reject my distinction on the basis that legal rights are the only rights there are, or (on an even more restrictive view) that the only real rights are those legal rights where the corresponding duties are effectively enforced by institutions and practices.²⁰ Consideration of the merits of these views is outside the scope of this thesis. My aim here is merely to clarify my meaning.

In this dissertation, when I refer to the right to procreate and to any potentially competing right, I mean a right in respect of which there is at least purported moral justification and which is capable of at least partial correspondence with a legal right, whether or not there is a corresponding legal right.

¹⁸ For example, Judith Mair (1992) suggests that Australian common-law recognises “the right of every woman to bear a child”, a right which should not be contravened unless there are compelling reasons for doing so.

¹⁹ Similarly, Joseph Raz (1986) posits that one has a legal right because law-makers declared that one has an interest which justifies holding others to be subject to duties, even if law-makers’ view on this is mistaken. See also the classical formulation of legal positivism by John Austin: “The existence of law is one thing; its merit and demerit another.” (Austin’s Lecture V, p. 157, 1832)

²⁰ See for example Raymond Geuss (2001) and Susan James (2003). See also Saladin Meckled-Garcia (2005) for a critique of the enforceability requirement.

A positive or negative right?

Some authors frame the right to procreate in “negative” terms (Sen, 1996; Brock, 2005); others discuss the right as also including a “positive” element, (Robertson, 1994; Overall, 2012). It is seen as a negative right if it is understood as a freedom to create children. It is a positive right if it is thought to include claims for some degree of public assistance or other resources in achieving procreation, offsetting some of the costs of rearing the child, or providing material support and services to the parent or the child, for example via welfare payments or state-funded childcare.

This dichotomy is rejected here for three reasons. First, the kinds of positive right relating to procreation that have been advanced in the literature are better understood as pertaining to a proposed right to ART, a right to healthcare, or a right to parent. They do not pertain to the purported right to create biological children via ‘natural’ means, without state anti-natalist interference, which is our focus here.

Second, even a negative conceptualisation of the right to procreate, or indeed any other basic right, necessarily entails a claim to public resources on behalf of each right-holders, as needed in order to ensure the right is adequately protected and given effect. In so far as there is a difference between the two kinds of rights, it is one of degree, not kind.

Third, the dichotomy between freedom-based, “negative” rights and claim-based, “positive” rights ignores what is often the costliest element of a proposed right, namely the costs to other persons’ rights and interests that can arise from non-compossible obligations on the state and the duty-bound reprioritisation of ultimately limited public resources. I refer to these costs as **normative forcings** (see section 5.7 in particular). These usually include the imposition of increased risks or costs onto persons other than the right-holder as a result of the right-holder acting in the exercise of a (purported) protected freedom, as well as increased costs to the public purse of mitigating these increased risks or costs. Consideration of normative forcings are important to evaluating the burdensomeness of a right to procreate.

Fourth, the right to procreate is a right to create right-holders. It entails the creation of additional rights vesting on the child, including positive rights. It is a philosophical and moral error to regard the right to procreate, in any version, as simply a liberty; it inevitably and uniquely contains a Hohfeldian power-right to alter the rights and obligations of others. The negative-positive dichotomy cannot make any sense of this kind of right.

When is a right engaged?

I will at various points make reference to whether the right to procreate is engaged. This concept is perhaps more familiar to lawyers than to philosophers or political theorists. By engagement I mean whether a behaviour or choice that appears conceptually related to a right is in fact within the scope of protection of that right.

A right may not be engaged because there is an (implicit or explicit) eligibility condition that has not been met. For example, a 10-year-old cannot appeal to their right to vote or to marry, and a comatose person does not, while comatose, have any autonomy-type rights. Or a right may not be engaged because it only protects a particular expression of an interest and not all possible expressions or derivations of that interest. There is only limited correspondence, after all, between the content of a right versus what it could conceivably include if it were as wide as the *conceptual* scope of the underlying interest would seem to allow. This is different from where the right is engaged but it is limited. For example, a right to marry is usually limited to one spouse at any one time; a right to healthcare is generally limited to receiving standard treatments but not experimental therapies.

Consider a right to security of the person. It is not engaged in relation to all hazards. It is engaged, for example, where police use force to effect an arrest, but not in relation to the ordinary risk of being a victim of an accident or of criminal acts. A right to freedom of information is not engaged if one seeks to obtain personal data, as its subject matter is information held by public authorities. The right to asylum is not engaged where one faces persecution in a country other than their own. And as in the example I give in section 6.1, a right to privacy cannot encompass protection of information about ourselves that we have already disclosed to the public.

1.6 Anti-natalist policies

Anti-natalist *population* policies are state interventions and programmes seeking to induce changes in attitudes and behaviours so as to reduce fertility rates and in order to mitigate or reverse unsustainable population growth. Anti-natalist population policies were an integral part of government policy for much of the world from around the 1950s through to the emergence of the Cairo consensus in the mid-1990s. From there on there was a dramatic decline in anti-natalist population policies. Some countries, such as Iran, eventually replaced their anti-natalist policies with (in Iran's case, increasingly aggressive) pro-natalist policies.

Not all anti-natalist policies are about reducing fertility rates at the macro-level of the entire population. Anti-natalist interventions at the micro-level of individual parents or couples might be implemented as part of social services interventions to prevent the birth of children in circumstances posing unacceptable risk of harm to the child-to-be, a sibling, or a parent. Examples of where such interventions might be considered include, for example, where the parent has serious mental health, capacity, or substance abuse issues; where previous children have already suffered serious abuse or neglect within the family; or in contexts of severe poverty. At this point in time non-population anti-natalist interventions seem to be extremely rare.

For avoidance of doubt, references in this dissertation to “anti-natalist” policies,

interventions, or aims are not intended as relating to the philosophical position known as antinatalism. As proposed by David Benatar (2006), antinatalism takes the view that procreation is always wrongful because existence involves the imposition of severe, inevitable harms upon the person created. The sort of “anti-natalism” I have in mind is simply the counterpoint to the pronatalism of policies seeking to promote procreation and higher fertility rates.

By way of a typology, anti-natalist population policies may feature one or more of the following components:

- (I) *“Rights-based” policies enabling individuals to control their fertility*
 - a. provision of family planning services, including as a minimum advice on and dispensing of modern contraceptives such as the oral contraceptive pill, contraceptive injections, intrauterine devices, and male and female condoms, but potentially also abortion services and advice on and provision of permanent contraception methods (i.e. vasectomies and tubal ligations);
 - b. proactive *education and outreach about modern contraceptive methods* and other elements of family planning and sexual and reproductive healthcare;
- (II) *Social policies capable of (indirect) anti-natalist effects*²¹
 - c. improved access to *primary healthcare* services and advice, in particular maternity and infant care;
 - d. the introduction and provision of state-run *old age pension schemes* and related social safety nets for illness and disability;
 - e. *human capital formation measures* focused on women and children, for example laws requiring parents to keep their children in school, bans on child marriage and child labour, increased public spend on girls’ education, and skills training and business finance for women;
 - f. what we might call *anti-patriarchy measures*, for example laws repealing gender-discriminatory inheritance and divorce customs, bans on child marriage, statutes criminalising female genital mutilation, marital rape, and bride kidnapping, public messaging campaigns aimed at tackling misogynistic attitudes, and public policies promoting greater involvement

²¹ I have not included here broad-ranging and largely endogenous social processes such as economic development and urbanisation, which are also frequently suggested to cause fertility to decline, as these cannot sensibly be considered as components of an anti-natalist population policy. At any rate, to the extent that these general processes correlate with declining fertility rates, the causation is almost certainly better explained by the increased cost of / reduced utility of children already discussed in relation to the human capital formation measures discussed in this section. See for example Drèze and Murthi (2001).

of fathers in childcare;

(III) *Anti-natalist interventions per se*

- g. public messaging campaigns endorsing, promoting or normalising procreative restraint, for example by highlighting the benefits of small families to parents and children, or of using modern contraceptives to space births and to prevent unplanned pregnancies;
- h. *financial or other positive incentives* encouraging smaller families or contraceptive uptake, for example tax rebates for workers who are childless or have only one child, or cash grants rewarding use of contraception;
- i. *financial or other negative incentives* discouraging procreation or larger families (e.g. rules making parents of larger families ineligible for certain welfare payments); and
- j. *compelled family planning* (e.g. a legal requirement on individuals to use contraception to avoid unplanned pregnancies, or to limit family size).

The analysis set out in this dissertation concerns the potential legitimacy or otherwise of anti-natalist interventions per se, as identified at (III) above.

The other policy types – policies enabling individuals to control their fertility and social policies capable of anti-natalist effects – are uncontroversially compatible with and supportive of human rights, and warmly endorsed by proponents of the Cairo consensus and similar versions of an unlimited freedom to procreate. Indeed under the prevailing interpretation of the right to procreate they are the *only* types of policy that may be legitimately pursued in the realm of population and procreation at all.

The standard rationale for the impermissibility of anti-natalist interventions is that they involve coercion, ranging from the “psychological coercion” of public messaging campaigns to the economic coercion of financial incentives and disincentives, to the actual coercion of compelled contraception. Under the key document anchoring the Cairo consensus, after all, coercion has no part to play (see section 3.3).

On closer inspection, coercion is *not* the distinguishing factor between the more direct-acting anti-natalist interventions at (III) and the “rights-based” interventions at (I) or the indirect acting social measures at (II). A number of the social policies at (II) involve clear compulsion affecting people’s decisions about their families and children, public messaging seeking to alter behaviour and attitudes, or changes to the costs and benefits of having a child. And of course, all law is coercive; it is what makes it law rather than guidelines or suggestions.

What seems to be different about anti-natalist interventions is that they are explicitly about the avoidance of births, and cannot plausibly be ascribed some other, non-anti-

natalist purpose, unlike policies at (I) and (II). I return to this in Chapter 9.

That is, the underlying assumption seems to be that coercion, broadly conceived to include any sort of deliberate anti-natalist pressure, is uniquely illegitimate where it seeks to discourage or deter procreation .

Pro-natalist population policies

Pro-natalist population policies follow a similar typology as for anti-natalist policies, but to opposite ends, namely to encourage larger family sizes. Modern examples include laws, policies, and resource allocation decisions that hinder access to contraception and abortion [the opposite to the “rights-based” policies in (I) above], or that perpetuate gender-based inequalities, in particular those that make it harder for women to compete in the job market [the opposite to the social measures at (II) above]. It should be noted that pro-natalist laws, policies, and resource allocation decisions are usually not seen as population policies, and their potential pronatalist effects are generally not acknowledged.

In contrast, policy interventions promoting larger families and offering “baby bonuses” and similar financial incentives for procreation [the opposite to the anti-natalist interventions per se at (III) above] are usually positioned explicitly as pro-natalist population policies looking to address the perceived threats of population ageing and degrowth. Such pro-natalist interventions are usually uncontroversial, or at any rate, unlikely to face any serious criticism that they are (say) unfair or disrespectful towards those who would prefer to have no children, or no more children.

Their mirror opposite – anti-natalist financial incentives - are, however, intensely controversial. Anti-natalist incentives and disincentives are standardly denounced by advocates of the Cairo consensus as illegitimate on the grounds that they are coercive, the prevailing assumption being that it is enough to claim that a policy or intervention is coercive to establish its illegitimacy.

1.7 Methodological approach

What I endeavour to achieve with the present analysis is something along the lines of James Griffin’s idea of providing the best philosophical account for a fundamental right. Such an account can then highlight the discrepancies between what a well thought out right is a right *to*, versus how the right is assumed to exist in authoritative sources such as international declarations, conventions, charters, and judicial decisions (Griffin, 2001). Unlike Griffin, however, I seek to articulate a particular theory of rights rather than just assume one. I set out my theoretical and evaluative commitments in Chapter 4.

My conceptualisation and account of the right to procreate and of its limits is constructed through the method of wide reflective equilibrium proposed by John Rawls (1999, 2001) and further developed by Norman Daniels (1979, 1980). The key

idea of reflective equilibrium is to construct a set of interconnected and mutually supportive beliefs that are coherent with each other at all levels and as a whole, and which allows us to come up with consistent answers to what is the right thing to do. It is a method of theory acceptance or justification, but not necessarily a method for establishing or constituting truths, moral or otherwise.

We start by taking into account all considerations relevant to answering a question about what is the right thing to do for each scenario or problem - the relevant facts, the interests at stake, the conduct of the parties, and the empirical evidence on (say) the nature of the problem or the likely consequences of different solutions. We will likely have some sense or intuition - an initial judgment - of what is the right action in each case, based on our understanding of how the world works, our prior ideas about morality, etc. We disregard any initial judgments made under conditions of partiality (where we stand to gain from taking a particular view) or heightened emotions, or those we are not confident about for other reasons (for example, if we feel we do not know have enough information on the facts of the situation). The initial judgments that survive this pruning are our considered judgments. We then consider what principle or rule we can offer that explains each considered judgment.

We test the tentative rule and the judgment against variations of the problem we are trying to solve to see if the judgment and principle still work, or if either or both need to be revised. In doing so, we may come up with additional judgments or rules. We test those against other judgments and rules about related issues and, for wide reflective equilibrium, against relevant background theories that may support or expose flaws in or doubts about our original thinking. The initial judgment, and any principle or rule we may initially think governs it, are revisable and may be discarded and replaced altogether if they do not cohere with each other or with our other beliefs (and those may be revised, abandoned or replaced too). The ultimate aim is to develop a consistent, comprehensive system of judgments backed by a moral theory of mutually compatible rules or principles that account for all those judgments and offer at least some lateral support for each other. We keep on testing and revising our set until all the beliefs are coherent with each other and at least some explain or support others, such that we are disinclined to revise them further.

At this point our overall set is in reflective equilibrium, and we are justified in holding that set of beliefs. But we hold them contingently. Our beliefs remain revisable, for example if we become aware of new information or moral considerations that expose gaps in our set, mistakes in our assumptions or reasoning, or incoherences in our beliefs. No belief is taken to be axiomatic or self-evidently true. Our confidence in the soundness of a belief - in our being justified in holding that belief - is a product of how coherent it is with our overall set of beliefs and, if not, how willing we are to refine, replace or discard conflicting judgments, principles or theories in order to hold on to it.

I am particularly wary of moralistic fallacies about human nature or about the material limits of our world, as implicit in the Cairo consensus and similarly demanding versions of a right to procreate. Human beings are not reliably prudent, ethical minded, or rational. We frequently make choices, or engage in behaviours, that wrong those close to us, harm our own interests, or irresponsibly undermine the common good. We are no moral angels. But a world of moral angels would have no need for fundamental rights protections anyway.

It is tempting to refrain from further enquiries that might reveal uncomfortable facts, troubling moral inconsistencies, and serious moral conflicts relating to so charged a topic as human procreation. But it would be irrational to assess the relative moral force of our interests in procreative freedom on the basis of empirically untethered, idealised assumptions. The method of wide reflective equilibrium is intended to test our factual assumptions and moral judgments with reference to broader theories and empirical evidence, and is thus well suited to the task at hand. The end result should be conclusions that are intuitively resonant but carefully reflected upon, based on judgments that are coherent with our value commitments and mutually supportive of as many as possible of our other moral commitments, for example to the equality of persons and the progressive realisation, or at least non-retrogression, of human rights commitments.

Interplay of philosophical and empirical considerations

To restate, the present analysis feeds empirical (in particular, demographic) information and evidence into the broader moral and political philosophy framework of the thesis. It might be suggested that a wholly empirical thesis could achieve a similar result, that is, establishing the reality and seriousness of procreative harms by a careful survey of available evidence produced by scientists, demographers, and social workers (for example) might justify coercive anti-natalist interventions. The opposite suggestion might also be made, that this could be a wholly philosophical project where key normative propositions could be advanced as contingently applicable, depending on whether certain states of affair obtain in the real world. But either approach would have been considerably less robust, and much less useful to policymakers.

My aim is to provide answers to a comprehensive set of objections to anti-natalist interventions, of the sort likely to be faced by those considering their options in relation to tackling procreative harm. Empirical evidence alone, however compelling the picture it may paint of severe procreative harm, cannot dislodge the daunting assumption (in particular for those who are not moral philosophers) that we ought not to interfere with procreative choices or behaviours (at least, not in an anti-natalist fashion) because to do so would involve a violation of a fundamental right. And philosophical arguments alone would not assist the policymaker, who would still need a factual basis to proceed. Relevant empirical scholarship can appear as a confused and disconnected landscape of surveys and reports spread across multiple fields of research, where procreative harms are often only implicitly or tangentially articulated.

I believe what would most assist policymakers, or anyone seriously considering what can or ought to be done about procreative harms, is an analysis that is able to deal with moralised presumptions enjoining inaction while providing a summary of the most relevant evidence, at least, by way of roadmap indicating where to look for more and how to connect the dots. And this is what I have endeavoured to do here.

1.8 Conclusion and summary of chapters

In this first chapter I have provided context to this dissertation, seeking to bring out the nature and relevance of the problem I have set out to solve: accounting for the justified scope of the right to procreate and what it means for the permissibility of anti-natalist policies.

While the question my dissertation seeks to answer is ultimately a philosophical one, it seems relevant and intuitive to consider whether there is a legal right to have children, and if so what, if any, philosophical basis has been suggested for such a right. In **Chapter 2** I outline the intellectual history of legal claims of a human or constitutional right to procreate, with a particular focus on the United Kingdom, United States, and European Union. I show that generally speaking, legal instruments setting out constitutional or human rights do not reference a right to procreate or to have children. Case law, in turn, leaves unresolved a number of key questions about what it is that we (implicitly) have a basic right to do with regards to procreation. Looking at this history shows the evolution of assertions of a right to procreate based on rather questionable precursors. It also shows how courts across a range of jurisdictions have struggled to adjudicate questions relating to and adjacent to a right to procreate, resulting in avoidant and often inconsistent judicial treatment. The comprehensive account I set out in this dissertation will hopefully prove useful in future in assisting the courts in reaching more rational and stable decisions.

In **Chapter 3** I trace the history of the Cairo consensus version of a right to procreate, starting with the co-opting and reinterpretation of emerging proposals for a basic right to contraception. I explain how population conferences devolved into highly politicised events which ultimately led to the functional extinction of population concern discussions at the ICPD. The Cairo consensus version of the right was articulated in terms that seemed to rule out explicit anti-natalist interference and which do rule out coercion – thus asserting, in substance, an absolute right. I briefly touch on the Cairo consensus' reliance on an outdated framework for understanding changes in fertility rates – the demographic transition theory – and remark on the symbiotic relationship between the Cairo consensus and the well-documented taboo on the problematising of procreation and population in public I. I then summarise the lay of the land in the current literature on the topic of the right to have biological children, showing how the Cairo consensus has had limited explicit influence outside of political or activist literature. Existing legal and philosophical scholarship, while addressing separate

aspects of a right to procreate, lacks a comprehensive, action-guiding conceptualisation and account of the right to procreate and of the implications for anti-natalist policies, which is what I provide in this dissertation.

In **Chapter 4** I set out my key conceptual, evaluative, and theoretical commitments, with a view to mitigating scope for misunderstanding about what is or is not being assumed about rights and competing considerations in my account. I start by distinguishing “rights” from other moral considerations, and outline how the label is commonly used as shorthand for norms presumed to have lexical priority. I interrogate the assumption that rights, or at any rate fundamental rights, should generally prevail against competing moral considerations. I show how such assumption would only be rational if rights claims were reliably supported by robust philosophical analysis as necessary to resolve the inevitable moral conflicts and ascertain their justified scope. But this is almost never the case, and as shown in Chapter 2, it is *certainly* not the case for the right to procreate. Instead, the language of “rights” is standardly used to sidestep examination of conflicting moral considerations that may have a greater claim to moral priority. I then move on to explain my choice of a modified interests-based theory of rights, drawing inspiration from the works of Joseph Raz, John Tasioulas, and James Griffin. My theoretical approach differs from traditional interest-based theories by combining teleological/consequentialist considerations relating to components or prerequisites to human wellbeing, including setbacks to our interests (harm), with deontological considerations relating to the basic requirements of justice.

In **Chapter 5** I endeavour to put to bed some of the main objections to engagement with procreative harms, relating to their unusual and philosophically complex nature. I start by looking at (real-life) examples of situations where to conclude that the would-be parent is morally *entitled* to create a child seems intuitively troubling. I identify two reasons why this is so. One, the motivations or normative agency of the prospective parents do not seem like a good fit to a right to create children. This is relevant to the discussion in Chapter 6 about the grounds of a right to procreate. Two, in some of the scenarios procreation seems to involve a conflict with the interests of, or what respect is owed to, the prospective child. The conflicts arising from procreation are unusual and some important aspects have not, to my knowledge, been specifically labelled in the literature. This can make those conflicts appear more intractable than they really are. In a bid to name it to tame it, I characterise the main types of procreative harm, starting with harms to the prospective child and following by the aggregate, cumulative harms of overpopulation. My characterisation draws from that most traditional ground of limitation of rights claims, the harm principle. I show that the imposition of harm onto future persons can be as wrongful as harm to those already alive, and is thus no excuse to overlook or dismiss procreative harms. I conceptualise overpopulation as a collective action problem, to which the only realistically effective response is conduct regulation limiting liberties to ensure fairness and harm mitigation. I conclude by explaining my general approach to priority setting and resolving moral conflicts.

In **Chapter 6** I further develop the intuitions about the grounds of a right to procreate generated by the example scenarios in Chapter 1. I start by explaining the relationship between a grounding interest and a proposed claim (i.e. a candidate right or candidate component of a right), and how conceptual relatedness is necessary but not sufficient: any proposed duties must actually serve the interest. I argue that a particular type of liberty interest, in exercising normative agency, is one of the plausible grounding interests, but not capable of grounding any procreative entitlement on its own. Two further interests of a motivational kind, and thus expressing autonomy, need to be engaged as well so as to show appropriate respect for the would-be child. These interests, together with a justice-based constraint, not only ground a right to procreate, but also correspond to three preconditions to it being engaged at all. If preconditions one or two (or both) are not met in any procreative instance, there will normally be a bare liberty to procreate, but not a right. This means one is free to have a child for as long as they are not subject to a duty or prohibition requiring them not to do so. Unlike a right, a bare liberty offers no special resistance against the imposition of such a duty, not beyond the usual considerations of public policy. But if the third precondition (concerning undue hazards to the prospective child) is not met, then procreation is not only *not* a matter of right, it is wrongful and therefore impermissible.

The preconditions arrived at in Chapter 6 focus on addressing moral conflicts relating to the prospective child. But they do not resolve the moral conflicts in the nature of harms to society as discussed in Chapter 5. In **Chapter 7** I analyse the limits applicable to a justified right to procreate even where the preconditions are met. I start by considering whether each of us may have a right to create *multiple* children. I conclude that there is a plausible argument for a relatively weak right to a second child, more easily defeasible than the right to create one child. But there is no morally justifiable right to be free to over-reproduce, that is, to have more than two children. The most obvious basis on which the right to create a second child would be defeated is overpopulation, itself a contested idea in need of proper conceptualisation. I explain how ‘apocalyptic’, end point-focused conceptualisations of overpopulation commonly found in discussions about the right to procreate obscure and distort the nature of the normative problem, leading to predictable and serious evaluative mistakes. I propose a more robust, pattern-focused conceptualisation of overpopulation as a collective action problem of aggregate and cumulative harm that features morally problematic asymmetries in risking. I identify and address standard objections to the case for anti-natalist population policies, including population denial, population deflection (or diversion), and moralised indifference. I conclude by emphasising that, as a collective action problem, addressing overpopulation requires social coordination and cannot be fairly or effectively achieved through wholly voluntary means, contrary to the mainstream discourse on population and procreative harms.

Chapter 7 conceptualises overpopulation in the abstract, leaving it open to investigation whether the facts on the ground support a view that overpopulation is already a problem or not. **Chapter 8** seeks to provide the reader with a summary of the most relevant empirical evidence, showing how it connects with the concepts and normative commitments developed in the previous chapters. I show that the weight of empirical evidence available supports a view that overpopulation is already occurring and poses a severe serious risk to societies' ongoing ability to meet their human rights obligations. I explain the often-overlooked phenomenon of population momentum, which means that population can keep growing for decades after fertility rates fall to sub-replacement levels. For this reason, in order to maximise effectiveness while minimising the degree of intrusiveness, anti-natalist policies need to be implemented decades ahead of some anticipated crisis point. To "wait and see", as seems to be the current approach, is seriously imprudent and morally hazardous towards younger and future generations. I follow this with consideration of the three basic preconditions for fertility decline as articulated by demographer Ansley Coale, a health corrective to assumptions drawn from laypersons' understanding of the demographic transition theory. I then turn to, and refute, the myth of virtuous procreation and reprehensible consumption at the heart of the three main lines of objection to anti-natalist interventions as identified in Chapter 7. I consider potential consumption-lowering interventions, not because they could possibly replace anti-natalist population interventions (they cannot), but in order to show that in order to meaningfully reduce individual consumption one would have to interfere with people's liberties in a much more intrusive and serious way than is commonly assumed. I conclude that, in light of the evidence set out, the the right to procreate at present is limited to only to one child.

In Chapter 9 I bring together the conclusions from Chapters 6, 7, and 8 in identifying the normative implications for policymakers. As discussed in Chapter 7, we have a reasonably robust (but not absolute) right to creating one child, subject to the three preconditions identified in Chapter 6 being met. We have a considerably weaker right to two children, subject in particular to there being no significant concerns about overpopulation, which Chapter 8 shows is not the case at present. This does not mean that having a second child is wrongful (again, provided the preconditions are met). It means that the right to procreate, properly conceptualised and understood, poses no obstacle to anti-natalist interventions intended to discourage or even prohibit procreation beyond a family size of one. Conduct that is neither wrongful nor specifically protected by a right is the sort of ordinary choice subject to conduct regulation as a matter of run of the mill public policy, as with the myriad things we are required to do, or not do, as part of life in society. I defend anti-natalist population policies against two standard objections, showing that they each collapse into morally unjustifiable acceptance of and imposition of risk. I outline proposed principles guiding anti-natalist policy making, before drawing my general conclusions.

Chapter 2: Is there a legal right to procreate?

2.1 Introduction: the legal perspective

In considering the potential grounds of justification and limits of a basic right to procreate, one of the first questions one might ask is whether such a right has been recognised from a legal perspective. Though legal rights are not necessarily moral rights, our public discourse assumes that constitutional or human rights enshrined in law are by nature moral rights, rights each of us deserves to have by virtue of our humanity. It is therefore constructive to consider what the law has to say about a basic right to procreate.

In this chapter I reconstruct the evolution of the idea of a right to procreate from a legal perspective, from its beginnings as a presumed entailment of marriage through to its modern guise as an implicit, privacy-based right. As part of this, I summarise the extent to which a right to procreate has been recognised by the courts and by national legislatures, focusing in particular on jurisdictions that are particularly influential on matters of fundamental rights and most linguistically accessible: the United Kingdom, the United States, and the European Union.

My aim is to demonstrate three main points. First, the instruments setting out fundamental legal rights for these key jurisdictions do not provide for a right to procreate. Second, relevant cases in these jurisdictions generally assume, without themselves purporting to establish, that there is a basic right to procreate. A commonly employed sleight of hand, seen in court judgments, official human rights documents, and academic literature²², is to assert that a right to procreate or something similar to it is generally recognised to exist, without elaboration. And third, these judgments are often avoidant or inconsistent on what sort of rights we have in relation to procreation, and in particular about what sorts of government interference with procreative behaviour may be justified and on what grounds. These three points underscore the importance of a philosophically sound account and conceptualisation of the right to procreate as means of resolving difficult practical questions in a principled, rational and coherent way.

²² Simona Fanni (2018), for example, identifies the 1994 Cairo Programme of Action as an early attempt at conceptualising reproductive rights and which was celebrated at the time as revolutionary. But the Cairo Programme of Action downplays the novelty of the rights articulated, suggesting they had already been recognised elsewhere: “*Reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other relevant UN consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing, and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health.*” (United Nations Population Fund, 1994 Preamble, para 3)

Much of the discussion in this chapter concerns United States caselaw. The political polarisation of American society and its litigious culture combine into fertile ground for adjudications on matters relating to sex, procreation and families. But this is not the only reason. American-led ideational factors and ideological positions on economic matters, population, and civil liberties have been enormously influential in international discussions about population and reproductive rights under the auspices of the United Nations (UN) and which led to the formation of the Cairo consensus as an international norm, as will be discussed in the next chapter.

Limitations of the legal perspective

While any consideration of a purported fundamental right must take account of the legal perspective, it is important to note its limitations. The legal perspective is important in contextualising the right to procreate and exposing its philosophical weaknesses and contradictions in how it is applied. But it cannot be determinative of the issues under consideration here. That is, the solution to our conundrum cannot be had by finding a good judgment, or some clear legal authority, setting out what right to procreate there is. Such judgment or authority does not exist anyway, but even if it did, it would not resolve the inherent problems with the concept of such a right, nor provide us with a rational or stable way forward in addressing the complex moral conflicts and harm that can arise from procreative behaviours. Judges, after all, are generally arbiters of what legal norms there are, not what norms there ought to be. And legislators tend towards the pragmatic and politically expedient, rather than the philosophically robust.

While consistency is a basic philosophical requirement for a credible account of rights, it is not enough, and this is particularly true of legal enactments and jurisprudence. Legal solutions to moral questions can be quite consistent while morally indefensible or philosophically incongruent, supported by little more than specious reasoning or deference to custom or patriarchal tradition. Such indefensible or incongruent legal solutions are particularly common in matters involving marriage and children. They generally favour men over women and girls, and parents over children. For example, until relatively recently even liberal, democratic jurisdictions consistently upheld a marital exemption to the criminalisation of rape. And child marriage remains legal in much of the world, often under cover of parental consent exemptions²³.

²³ As reported by the UNFPA (2012), as of 2010 146 countries permitted girls younger than 18 to marry with the consent of parents or other authorities; in 52 countries, girls under age 15 can marry with parental consent. Many of these countries have higher minimum ages for boys. Once a girl is married, she may be treated as an adult, even if she is 12 years old. While the normalisation of this gross circumscription of children's life chances is most prevalent in high fertility, impoverished countries, it is by no means limited to such contexts. For example, most US states permit children, predominantly girls, to marry with the consent of parents or the courts (Reiss, 2021). As of 2018, only four European countries had an unconditional minimum age of marriage of 18; seven EU countries did not set a minimum age for child marriages with the consent of parents or a public authority (FRA, 2018). In practice this often means girls, sometimes not yet teenagers, being married to their abusers; see for example (Guilbert, 2017; Kristof, 2017)

Furthermore, while courts and legislatures are very familiar with considerations of harms and costs of rights claims, these considerations seem to go awry when the person who would be harmed is a child and the person doing the harm, or creating the costs, is the creator of that child. Consistent with traditional ideation and practices that treat children as the chattels of their parents (Weisberg, 1978; Lafollette, 1980; Godwin, 2015; Lancy, 2015), there is still widespread reluctance to treat harm to one's biological children as of comparable seriousness as harm to other persons. There is even greater reluctance to engage with harms that are concomitantly inflicted along with a child's creation, no doubt due to the philosophical complexities involved, whether real or perceived. The courts, and legislators, are not immune to these biases.

And third, to date there has been no significant engagement by courts and legislatures with procreative harms of a collective, aggregate and cumulative nature, which are the harms characteristic of overpopulation. The cases discussed in this chapter can only exemplify procreative harms of the more direct kind, from parent to child. They are useful examples for the discussion about procreative conflicts and harms in Chapters 5 and 6, but do not contribute to the discussion of cumulative harms and moral hazards in Chapters 7 and 8. The ideational foundations of this broader reluctance to engage with overpopulation are dealt with in the next chapter.

2.2 Origins of a legal right to marry and of a right to privacy

The concept of a right to have children is a relative latecomer to the discourse on human rights and fundamental protections. In understanding its emergence and eventual evolution into a purported absolute individual discretion to create children, it is instructive to consider the nature and background of antecedent right norms of which the right to procreate is often assumed to be a derivation, or which are said to imply it.

The right to marry has its origins in custom. From time immemorial, societies around the world have relied on some version of wedlock as a way to regulate sexual activity, in particular women's, and to minimise uncertainty about the paternity of offspring²⁴. Until the development and widespread availability of the female birth control pill, it was not possible to reliably separate sex and procreation. All Abrahamic religions, and most traditional cultures, condemn sexual activity as immoral *except* within heterosexual marriage, assumed to be the proper context for the creation and rearing of children. Reflecting these pronatalist tenets, conservative authors have opposed the legalisation of gay marriage on the basis that it would undermine the link between marriage and procreation. Conservative objections to liberalisation of divorce laws

²⁴ See for example (Becker, 2019).

similarly object to weakening the linkage between marriage and child-rearing²⁵ (Struening, 1999). Given this background it is unsurprising that marriage and “founding a family” ended up lumped together in post-war assertions of a proposed fundamental right.

But customary norms relating to the family were not simply concerned with corralling human sexuality and attendant childbearing within the institution of marriage. They also affirmed a man’s dominion over his home and all that it contained - his family, property, and private communications. In his public dealings, a man needed to submit to the sovereign authority of the state; but even a man of modest means was the sovereign of his own domestic fiefdom. He, the *pater familias*, was entitled to lawfully repel intruding and prying persons, and to tyrannise his wife, children, and servants (Minow and Shanley, 1996). Over the course of the 20th century, this quintessentially patriarchal norm was recast as a theoretically gender-neutral general right to privacy. And the right to privacy, in turn, became the most oft-cited normative basis for asserting the existence of a purported right to procreative freedom.

Right to marry and found a family

A right to “marry and found a family” is included in the United Nations’ Universal Declaration of Human Rights (UDHR) (1948), which states that:

Article 16 UDHR

1. Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.
2. Marriage shall be entered into only with the free and full consent of the intending spouses.
3. The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

This formulation does not necessarily entail a right to create biological children, let alone an unlimited, individual right to do so. There are other ways to found a family beyond a heterosexual couple having sex within marriage. Creating or adopting one child, at any rate, would seem to satisfy the substance of “founding a family”²⁶. It is telling that art. 16 UDHR is couched in terms of equal rights; it is generally understood to have been a reaction against racially discriminatory policies, including pronatalist

²⁵ Struening (1999). See also the landmark US case legalising gay marriage, *Obergefell et al v Hodges* [556 US 644 (2015)], where the US Supreme Court identified, among the bases for protecting the right to marry, that “it safeguards children and families and thus draws meaning from related rights of childrearing, procreation, and education”. The decision nevertheless holds that “the right to marry cannot be conditioned on the capacity or commitment to procreate”. Naturally to hold otherwise would mean that not only gay couples, but heterosexual couples who do not wish to have children or are infertile would not be entitled to marry.

²⁶ For example, Harry Brighouse and Adam Swift (2014) interpret this right as a right to parent.

policies, under authoritarian rule in Germany and Italy.²⁷

The UDHR is a non-binding instrument intended to set out general principles or goals. The drafting of its provisions was based on political consensus rather than in any sort of philosophical deliberation (Freeman, 2011). It nonetheless laid the conceptual foundation for key instruments of international human rights law²⁸, most notably the European Convention on Human Rights (ECHR), which was opened for signature in 1950 and came into force in 1953, the United Nations' International Covenant on Civil and Political Rights (ICCPR), adopted in 1966 and in force since 1976, and the American Convention on Human Rights (ACHR), adopted in 1969 and in force since 1978.

The ECHR, in turn, forms the primary basis of the Charter of Fundamental Rights of the European Union (CFREU), which sets out largely the same basic rights as a matter of European Union law, with cases adjudicated by the Court of Justice of the European Union (CJEU). The CFREU is the youngest of these basic right documents; it became binding on EU member states when the Treaty of Lisbon came into force in December 2009. The ECHR and the European Court of Human Rights (ECtHR) are part of the Council of Europe, which has a broader membership than the European Union (including, for example, Russia and the United Kingdom). The ECHR was incorporated into the laws of the United Kingdom via the Human Rights Act 1998.

Article 12 ECHR (Right to marry)

Men and women of marriable age have the right to marry and to found a family, according to the national laws governing the exercise of this right.

Article 9 CFREU (Right to marry and right to found a family)

The right to marry and the right to found a family shall be guaranteed in accordance with the national laws governing the exercise of these rights.

Article 23 ICCPR

1. The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

²⁷ See for example Diggelmann and Cleis (2014), Freeman (2011, p. 44), and the discussion in Shanner (1995, p. 835).

²⁸ Other key instruments include the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted in 1979 and in force since 1981, and the United Nations Convention on the Rights of the Child (UNCRC), adopted in 1989 and in force since 1990. The relevant rights as set out in CEDAW are expressed in terms of equality to men's rights, leaving it unclear what the right being equalled consists of. For example, women have the right to free choice of profession and employment (art. 11); an equal right to men to access family planning services (art. 12 CEDAW); the same right to enter into marriage, and "the same rights to decide freely and responsibly on the number and spacing of their children and to have access to the information, education, and means to exercise these rights" (art. 16 CEDAW). The UNCRC understandably does not provide for children to have a right to marry or found a family, but does provide for a right against "arbitrary or unlawful interference" with the child's privacy, family, home or correspondence (art. 16 UNCRC), and a right to preserve their identity, including family relations as recognised by law without unlawful interference (art. 8 UNCRC).

2. The right of men and women of marriageable age to marry and to found a family shall be recognized.
3. No marriage shall be entered into without the free and full consent of the intending spouses.
4. States Parties to the present Covenant shall take appropriate steps to ensure equality of rights and responsibilities of spouses as to marriage, during marriage and at its dissolution. In the case of dissolution, provision shall be made for the necessary protection of any children

Article 17 ACHR (Rights of the family)

1. The family is the natural and fundamental group unit of society and is entitled to protection by society and the state.
2. The right of men and women of marriageable age to marry and to raise a family shall be recognized, if they meet the conditions required by domestic laws, insofar as such conditions do not affect the principle of non-discrimination established in this Convention.
3. No marriage shall be entered into without the free and full consent of the intending spouses.
4. The States Parties shall take appropriate steps to ensure the equality of rights and the adequate balancing of responsibilities of the spouses as to marriage, during marriage, and in the event of its dissolution. In case of dissolution, provision shall be made for the necessary protection of any children solely on the basis of their own best interests.
5. The law shall recognize equal rights for children born out of wedlock and those born in wedlock.

Official commentary by the EU network of independent experts on fundamental rights (De Schutter, Van Goethem and EU Network of Independent Experts on Fundamental Rights, 2006)²⁹ indicates that article 12 ECHR is, or at any rate was in 2006, seen as the proper home of any claim to a right to procreate. It notes that article 9 CFREU separates the right to marriage and the right to found a family as a matter of modernisation, intended to reflect the increasing acceptance that there are other ways to found a family other than within a legally recognised marriage, including by couples (same-sex or heterosexual) living together without getting married or without having children (*ibid*, p. 103).

In relation to procreation, the commentary notes that “the foundation of a family may imply childbearing”. Rather more ambiguously, it goes on to say that

“Restricting the right to found a family through forced sterilization and forced abortion for certain groups of people (for example, people with mental disabilities, people with AIDS, people belonging to a certain minority group, such as the Roma/Sinty people, etc.), coercive use of contraceptives cannot be

²⁹ The Network of Independent Experts on Fundamental Rights (CFR-CDF) was created by the European Commission to monitor the situation of fundamental rights in Member States and in the Union. This role was taken over by the European Union Agency for Fundamental Rights (FRA) in 2007.

considered consistent with contemporary international human rights law.” (De Schutter, Van Goethem and EU Network of Independent Experts on Fundamental Rights, 2006)

The commentary does not elaborate on what international human rights law the experts have in mind. Nonetheless, it is in keeping with a 1990 comment by the UN’s Human Rights Committee in relation to art. 23 ICCPR, suggesting that the right to found a family might preclude laws or policies requiring people to use contraception:

“The right to found a family implies, in principle, the possibility to procreate and live together. When States parties adopt family planning policies, they should be compatible with the provisions of the Covenant and should, in particular, not be discriminatory or compulsory.” (Human Rights Committee, 1990)

Elizabeth Wicks (2007) suggests that the right to marry and found a family is intended to protect the institution of the “family”, however defined, rather than an individual’s freedom to reproduce. On a quick survey of domestic provisions³⁰ purportedly corresponding to art. 12 ECHR, Wicks appears to be right:

- Spain, Luxembourg, Bulgaria, Belgium have a right to marry without reference to the family, children, or procreation.
- Czechia, Slovak Republic, Poland, Lithuania, Italy, Greece, Germany, Estonia, Romania offer protection for marriage and the family, referencing parents’ right and duty to raise and provide for their children but not a right to have them or to “found a family”.
- Ireland has a right to marry that includes a right of women to be stay at home mothers.
- Hungary offers protection for marriage, the family, and for “the commitment to have children”.
- The UK and Cyprus have a right to marry and found a family.
- Portugal has a right to marry and found a family “on terms of full equality”.
- Slovenia’s right to marriage includes multiple rights and duties, including an explicit right for everyone to be free to decide whether to have children.

In the 2003 case of *Sijakova v the Former Yugoslav Republic of Macedonia*³¹, the ECtHR suggested there is no right to procreation under the ECHR. The five women applicants complained that the Macedonian Orthodox Church’s recruitment of their children into monastic orders amounted, *inter alia*, to a violation of their art. 12 ECHR rights, as they would not now be able to have larger families. The ECtHR opined that “*the right to*

³⁰ The European Union Agency for Fundamental Rights maintains a useful database of such provisions, available here: <https://fra.europa.eu/en/eu-charter/article/9-right-marry-and-right-found-family#national-constitutional-law> (accessed 14 July 2022)

³¹ Application no 67914/01 decided on 6 March 2003

have grandchildren or the right to procreation is not covered by article 12 or any other article of the convention.”

Right to privacy

Marleen Eijkholt (2008, 2010) suggests the ECtHR has increasingly looked at the right to respect for privacy and family life under article 8 as a potentially more fruitful basis than article 12 for consideration of claims pertaining to a right to have children. This European turn towards privacy as a basis for some sort of right to procreative freedom is in keeping with the approach in United States jurisprudence on constitutional rights, where claims about reproductive and sexual rights are intermingled with the very existence of a legal right to privacy.

The US constitution does not set out, or enumerate, any right to privacy. Indeed, in their analysis of the genesis of articles 12 UDHR, 16 ECHR and 17 ICCPR, Diggelmann and Cleis (2014) find that no national constitution enacted before the UDHR recognised a right to privacy; it was a novel introduction by the drafters of the UDHR. Diggelman and Cleis found no evidence of bold ambitions behind it. The drafters' intention appears to have been to assert a far more limited right, relating at least to the protection of the home and correspondence from arbitrary searches and seizures, and to protection of domestic relationships from undue interference. References to “privacy” or “private life” seem to have been thrown in rather haphazardly, removed and reinserted as the draft text evolved, without any clear rationale emerging from the records and reports of the drafting process. In its final form, the text says:

Article 12 UDHR

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

The UDHR was the most important point of reference in the drafting of the ECHR, and the only one to contain a general reference to privacy; the previously draft ECHR simply mentioned family rights and the sanctity of the home. Again, during the course of multiple drafts, reference to privacy appeared and disappeared with hardly any record of discussion of key questions.

Article 8 ECHR (Right to respect for private and family life)

1. Everyone has the right to respect for his private and family life, his home and his correspondence.
2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

Article 7 CFREU (Respect for private and family life)

Everyone has the right to respect for his or her private and family life, home and communications.

The drafting of the ICCPR was finalised and adopted in 1966; it would only come into force in 1976. Article 17 of the ICCPR was drafted almost identically to the UDHR text, reflecting the conclusion by the Commission on Human Rights that article 17 should set out a general rule and that each contracting state should be able to decide on its exceptions and methods of application (Diggelmann and Cleis, 2014). The corresponding ACHR article is also very similarly worded.

Article 17 ICCPR

1. No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation.
2. Everyone has the right to the protection of the law against such interference or attacks.

Article 11 ACHR (Right to privacy)

1. Everyone has the right to have his honor respected and his dignity recognized.
2. No one may be the object of arbitrary or abusive interference with his private life, his family, his home, or his correspondence, or of unlawful attacks on his honor or reputation.
3. Everyone has the right to the protection of the law against such interference or attacks.

The commentary by the EU network of independent experts on fundamental rights ((De Schutter, Van Goethem and EU Network of Independent Experts on Fundamental Rights, 2006) suggests the right to respect for private and family life would be the appropriate legal basis for certain claims concerning the parent-child relationships, for example in relation to affiliation, child custody, and family unification. It also grounds claims concerning the protection of sexual privacy, orientation, and preferences.

Whether an European legal right to procreate might be spun out of the right to privacy in art. 8 ECHR versus the right to marry in art. 12 ECHR is not just a presentational question, at least not in theory. Both articles are uncontroversially qualified, so do not correspond to the Cairo consensus-style right to absolute procreative liberty. However, the right to marry and found a family is generally subject to regulation via national laws, without explicit limits as to how the right may be restricted. In contrast, laws restricting the right to privacy and family life must be *“necessary ... in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.”* On its face, this would mean that states have greater freedom regulating marriage than they do privacy.

In practice, however, states have little freedom to regulate *heterosexual, monogamous* marriage beyond setting the age of consent and restricting or liberalising divorce³². This reflects the customary nature of the right to marry. The right to privacy and family life, on the other hand, is supposed to be quite different from the traditional patriarchal right of fathers and husbands to be shielded from government interference with their domestic dominion. In its updated, gender-neutral incarnation as a much broader claim to generic individual autonomy, it is arguably a creature of post-war accidental drafting and US activism on reproductive rights, and as such relatively novel and unsettled in scope. Like the right to procreate, which on some views is included within it, there is lack of clarity about just what it is that a right to privacy is supposed to protect, and what underlying value(s) can be drawn upon to justify the cost of the protection to other rights, interests, and moral considerations. After all, it is unfortunately the case that human beings, not being perfect, do sometimes act in their private lives in ways which cause harm to others, or otherwise are unjust.

2.3 United States jurisprudence and the evolution of a privacy-based right to procreate

American jurisprudence is of particular interest because absolutist conceptions of civil rights and reproductive rights activism in the United States were highly influential in shaping the international discourse on reproductive rights that ultimately led to the Cairo consensus. American constitutional law is also reputed to have strong protections for reproductive autonomy, for which numerous landmark cases are offered as evidence. Yet, where it is argued that there is a fundamental right to procreate in the United States³³, invariably the authorities relied upon are cases that were ultimately trying to answer quite different questions³⁴, and which assert much broader rights to general liberty, privacy, or equal protection. These rights, in turn, are generally asserted on the basis of the 14th Amendment:

“No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law [*due process clause*]; nor deny to any person within its jurisdiction the equal protection of the laws [*equal protection clause*].”

³² The ECtHR has also opined that, while national legislatures have a wide margin of appreciation in relation to art. 12, restrictions on the right to marry must not be so extensive as to impair “the very essence of the right”. *Schalk and Kopf v Austria*, Appl no. 30141/04 (2010), citing *B. and L. v. the United Kingdom*, Appl. no. [36536/02](#), (2005), and *F. v. Switzerland* (1987).

³³ See for example Kim Hai Pearson in Harris (2020).

³⁴ Carter Dillard (2007) refers to the USSC’s vague conclusions regarding procreation as based on “layers of *dicta*”, that is, side comments or remarks said in passing in the judgments cited. *Dicta* are not binding precedent but may still be cited as persuasive authority.

A plethora of basic or fundamental rights were later argued to be implicit in the above text, ultimately including rights relating to contraception, abortion, and claims of a fundamental right to procreate which are generally seen as supported by these rights to *not* procreate.

What it means for these rights to be basic or fundamental turned into a question about the appropriate test for state interference. On the terms stated, even the most demanding test, strict scrutiny, does not appear to pose a bar to reasonable and well-designed anti-natalist interventions. However, in practice US higher courts have often (though not reliably) held the right to have children, specifically and as distinct from rights to access to contraception or abortion, as virtually invulnerable to direct interference.

Meyer, Pierce, and Skinner

Meyer v Nebraska [262 US 390 (1923)] is sometimes described as the US's first privacy case, or as the first case acknowledging a right to have children. In *Meyer*, the US Supreme Court (USSC) held that the 14th Amendment freedoms of teachers and parents were infringed by a 1919 Nebraska law prohibiting the teaching of foreign languages to school children. The court concluded the ban was arbitrary and therefore unconstitutional. In doing so, the Court interpreted the reference to "liberty" in the due process clause as essentially an all-purpose right to individual self-determination including freedom from bodily restraint as well as

“... the right of the individual to contract, to engage in any of the common occupations of life, to acquire useful knowledge, **to marry, establish a home and bring up children**, to worship God according to the dictates of his own conscience, and generally to enjoy those privileges long recognised at common law as essential to the orderly pursuit of happiness by free men.” [emphasis added]

The court found that under “*established doctrine*”, this all-purpose individual liberty must not be subject to interference “*by legislative action which is arbitrary or without reasonable relation to some purpose within the competency of the state to effect*”. This rather undemanding standard is generally referred to as “rational basis scrutiny”, nowadays thought to apply where the liberty at stake in a case before US courts is an interest or non- fundamental right (Fleming and McClain, 2013). This is a similar judicial review standard to that applied by the UK Supreme Court in cases concerning welfare caps. It is also in keeping with what I propose in Chapter 9 in relation to policy interference with manifestations of the procreative interest that do not properly fall within the scope of the right to procreate.

Meyer was followed in *Pierce v Society of Sisters* [268 US 510 (1925)], where the USSC invalidated a law requiring all children to attend public schools. Both cases would later be relied upon as authority for a number of implicit constitutional rights, including

freedom of employment, of contract, of conscience, of access to knowledge, and of parents to shape the education of their children. They feature prominently in the landmark contraception case of *Griswold v Connecticut* [381 US 479 (1965)], where a general constitutional right to privacy was first asserted by the USSC. Before turning to *Griswold*, it is worth briefly considering another case that is often invoked as setting a precedent for a constitutional right to procreate in the US.

In *Skinner v Oklahoma ex rel. Williamson* [316 US 535 (1942)], the USSC struck down legislation, purportedly of a eugenics nature, providing for the compulsory sterilization of recidivist offenders with three or more felony convictions. The court did not hold that compulsory sterilization was per se unconstitutional, nor that eugenics was an impermissible rationale. What it took issue with was the express exclusion of convictions for white-collar crimes in the statute under challenge. The court reasoned that, bearing in mind sterilization entails an irreversible deprivation of a “basic liberty”³⁵, laws providing for it needed to be held to “*strict scrutiny*” to avoid “invidious discriminations” against groups or types of individuals in violation of the equal protection clause. There was no reason to think that a person committing larceny carried biologically inheritable traits which the one committing embezzlement did not; the distinction being drawn was “conspicuously artificial”.

The “strict scrutiny” standard articulated in *Skinner* is nowadays supposed to apply to any case before US courts involving interference with fundamental rights. It requires that the interference must be narrowly tailored to what is *necessary* to further a compelling government interest. This is a more demanding standard, to be sure, but it does not seem on its face to mean that the state must not interfere with fundamental rights. Nonetheless, in practice the adoption of the strict scrutiny standard has been criticised as impoverishing judicial reasoning with formulaic decisions that either automatically invalidate a statute if it interferes with a liberty said to be a fundamental right, or uphold it if the liberty is found to be merely an interest or some lesser right (Gunther, 1972; Glendon, 1991)³⁶. As will be seen in Chapter 3, this interpretative trend towards absolutism in rights rhetoric is manifest in the Cairo consensus.

Griswold, Roe, and Casey

In 1960, the United States Food and Drug Administration approved the world’s first commercially produced birth control pill, making it relatively easy for sexually active women and teenage girls to avoid unwanted pregnancy. This stoked conservative fears that the pill would lead to female promiscuity and the weakening of the

³⁵ The judgment also refers to this liberty as a “human right”, and notes that “marriage and procreation are fundamental to the very existence and survival of the race”.

³⁶ Fleming and McClain (2013) argue that in practice the USSC does not stick to this simplistic, judgment-avoiding binary, but instead engages in reasoned judgment against a spectrum of standards, from balancing of individual versus state interests, “accommodation” of rights and authority, and heightened protection, to the more demanding principles against “unnecessarily broad” means and “undue burdens” seen in *Griswold* and *Casey*.

traditional family. In the United States, dozens of states had “obscenity” laws banning the sale of and distribution of information about contraceptives; most states had also criminalised abortion. In other Western countries such as the UK, Australia and France, doctors were reluctant to prescribe the pill to women requesting it.

Simultaneously, shifting social attitudes supported access to modern contraceptive methods. There were competing concerns, too, with the rate of global population growth approaching its peak and increasing public awareness about the linkage between high fertility rates, environmental degradation, and poverty, which were still openly discussed in these pre-Cairo times. Women were being increasingly granted formal equality in relation to professional, economic and educational opportunities, which fertility control made much more realistic (Goldin and Katz, 2002) and which in turn made access to family planning even more important. The public generally favoured contraception, and for a moment in time it appeared as though even the Catholic Church would resile from its opposition to it.³⁷

Connecticut was one of the states with anti-contraception laws, with a statute dating from 1879 which banned the use of and advice on contraceptives. *Griswold* was preceded by a number of failed attempts by medical and legal activists to bring test cases to challenge the ban. Two of them made it as far as the USSC before being dismissed, in the split 5-4 judgment in *Poe v Ullman* [367 US 497 (1961)], on the dubious grounds that the claimants had faced no criminal prosecution under the Connecticut law, which was weakly enforced and therefore not “ripe” for challenge. In a forceful dissent, Justice Harlan hinted at ways the plaintiffs could prevail next time around, suggesting they could advance a more substantial claim based on a “right to enjoy the privacy of their marital relations” based on the expansion of the meaning of “liberty” in *Meyer* and *Pierce*.

Five months later, one of the *Poe* plaintiffs, Dr C Lee Buxton (a Yale professor of obstetrics and gynaecology), together with Estelle Griswold, executive director of Connecticut’s Planned Parenthood, opened a clinic in Connecticut and got themselves arrested and convicted for dispensing birth control. Their case was eventually brought to the USSC, this time on a privacy-based argument as Justice Harlan had suggested. The USSC no longer had an excuse to avoid dealing with the question: were individuals, or at any rate married couples, entitled to use birth control?

In the landmark judgment *Griswold v Connecticut* [381 US 479 (1965)], the USSC ruled (7-2) that there exists a constitutional right to privacy which the Connecticut ban

³⁷ An overwhelming majority of the Pontifical Commission on Birth Control, held between 1963 and 1966, made the recommendation, ultimately unheeded, that the Catholic Church should change its position and endorse the use of contraception. Pope Paul VI decided to ignore this recommendation. The Church’s encyclical *Humanae Vitae* (1968) reiterated its opposition to artificial contraception on the basis that it could “open wide the way for marital infidelity and a general lowering of moral standards” (clause 17).

infringed. The majority opinion, penned by Justice Douglas, held that the explicit rights set out in the constitution emanate “penumbras” of implicit, peripheral rights that help give “life and substance” to the specific guarantees in the Bill of Rights. One such right was the (unenumerated) right to privacy³⁸.

Of particular relevance here is the concurring opinion by Justice Goldberg. It noted that “no provision of the Constitution specifically prevents the government from curtailing the marital right to bear children and raise a family”. Nonetheless, Goldberg argued, a law that outlawed voluntary birth control by married persons, just as much as a law requiring the use of birth control, would “unjustifiably intrude upon rights of marital privacy that are constitutionally protected”. Applying the Skinner test of “strict scrutiny”, Goldberg holds that the Connecticut ban was not sufficiently tailored to its aim of discouraging extramarital relations. It swept “unnecessarily broadly, reaching far beyond the evil sought to be dealt with and intruding upon the privacy of all married couples”. Connecticut legislators should have tailored the ban so it would only apply to persons engaging in extramarital relationships. The opinion is silent on how this could be achieved.

It would take another seven years, until *Eisenstadt v Baird* [405 US 438 (1972)], for the USSC to (indirectly) recognise a privacy-based right to use contraception for unmarried persons. This challenge was brought by William Baird, appealing his conviction and imprisonment for giving a young woman a package of contraceptive foam after delivering a lecture to university students on contraception. The court’s idiosyncratic reasoning in *Baird* suggested the relevant Massachusetts statute could have been upheld had it been demonstrably motivated by protection of health or morals. Its goal seemed to be to limit contraceptive use per se, but only in relation to the unmarried, which the court held was a violation of the equal protection clause. This passage in the *Eisenstadt v Baird* judgment is often cited in support of a privacy-based right to procreate (as opposed to a right of access to contraception): “If the right to privacy means anything, it is the right of the individual, married or single, to be free of unwarranted government intrusion on matters so fundamentally affecting a person as the decision whether to beget or bear a child.” It was quoted in *Carey v Population Services Int’l* [431 US 678 (1977)], another contraception case often mentioned in support of a right to procreate. The *Carey* judgment quotes various prominent cases, also including *Skinner*, *Pierce*, *Roe v Wade*, in support of the idea that individuals have a general right to make personal decisions without “unjustified” government

³⁸ In addition to the Fourteenth Amendment’s due process clause, the court in *Griswold* found such a privacy “penumbra” in the Fourth Amendment, the US equivalent of the English common-law right of security from unreasonable searches and seizures of one’s person, home and correspondence. The First Amendment (freedom of religion, speech, press assembly, and right to adjudication of disputes), Fifth Amendment (right to jury trial, due process, and against self-incrimination in criminal proceedings), and the rather cryptic Ninth Amendment (non-enumeration of other rights does not entail denial or disparagement) were also cited as part of a constitutional framework which, taken as a whole, implied an unenumerated right to privacy.

interference, noting that “the decision whether or not to beget or bear a child is at the very heart of this cluster of constitutionally protected choices”.

The *Griswold* right to privacy would form the basis for the landmark cases on abortion, *Roe v Wade* [410 US 113 (1973)] and *Planned Parenthood v Casey* [505 US 833 (1992)]. In brief, *Roe* as modified by *Casey* held that laws that restrict abortion of a pre-viability foetus amount to an undue burden, in violation of a woman’s right to privacy as implied under the due process clause of the 14th Amendment. It is worth noting that in *Roe v Wade* the USSC opined that the right of privacy as applied to bodily autonomy and reproduction was not absolute and could be appropriately subject to some state regulation.

The privacy-based rationales in *Griswold*, *Roe* and *Casey* have been the subject of numerous criticisms over the years, from conservatives as well as progressive scholars.³⁹ *Roe* and *Casey* were recently overturned by the now conservative-dominated USSC in *Dobbs v Jackson Women’s Health Organization* [No. 19-1392, 597 US (2022)]. The majority opinion argument in *Dobbs* held that a privacy-based right cannot properly sustain a right that involves the destruction of potential life. The underlying assumptions about the personhood of embryos and fetuses are clearly a matter of intense controversy, and not relevant here - unlike the interests, rights, or respect owed to persons who *will be* born. However, the mirror version of this argument seems highly plausible. As discussed in Chapter 6, it seems to me wholly untenable that would-be parents’ individual right to or interests in privacy, or individual autonomy, would be sufficient to ground a right to create *another person*.

These US cases, taken together, suggest there is general recognition in that jurisdiction of an implicit or unenumerated constitutional privacy-based right in the nature of a strong presumption against government interference in procreative matters. The text of the judgments evinces a commonly held intuition: absent some clear prospect of serious harm, the government should not encroach upon people’s freedom to control their own fertility.

But it does not follow that the right would amount to an absolute or near absolute individual discretion to create children. All privacy-based rights are expressed in non-absolute language, for example of *undue* burdens, or *unwarranted* or *arbitrary* intrusions. Any anti-natalist interference would need to be robustly justified and not impose a greater limitation of people’s freedom than is necessary to address the harm of concern. Taken at face value, these are not unreasonable parameters. As shown in actual cases, however, what courts say the test is, and how they apply it, can be very

³⁹ See for example James Griffin’s critique (2007). See also “*The forgotten history of Justice Ginsburg’s criticism of Roe v Wade*”, Robert Barnes in the Washington Post, 2 March 2016, and “*Where Roe went wrong: A sweeping new abortion right built on a shaky legal foundation*”, David G Savage in the Los Angeles Times, 3 May 2022.

different things, with inconsistent or avoidant judgments, and often strange reasoning.

2.4 Cases more directly concerning procreation

There are three main areas in which relevant court judgments can cast light on the view of the courts in relation to a fundamental right to procreate. First, a set of cases concerning court-mandated birth control; second, cases in the US and the UK concerning caps on welfare payments, which are commonly argued to have coercive effects on the procreative behaviour of people dependant on social assistance; and third, cases concerning access to assisted reproduction services.

Mandated contraception cases concern situations where a parent poses a serious risk of harm to any child due to a history of violence, neglect of existing children, or a substance abuse problem. Alternatively the parent (invariably a man) has many existing children in respect of whom he owes, and refuses to pay, any child support. All but one of these cases are from US courts, and the judgments show real uncertainty about the legal position.

In *People v Pointer* (1984)⁴⁰, a woman who had very seriously harmed her two young children was placed under a condition that she not procreate during her 5-year probation. The condition was quashed by the Court of Appeal of California for violating her right to privacy. In *People v Johnson* (1990)⁴¹, a young woman with substance abuse issues who had physically abused two of her five children was placed under a similar condition for a 3-year probation. Her appeal became moot before being considered. However, the Court of Appeal of California quashed a similar condition in *People v Zaring* (1992)⁴². In *State v Kline* (1998)⁴³, the Oregon Court of Appeals upheld a probation condition requiring a man not to father any more children after he inflicted severe injuries to his two very young children. In *Oakley v Wisconsin* (2001)⁴⁴ the Wisconsin Supreme Court upheld a 5-year probation condition requiring a father of nine who refused to pay child support to refrain from fathering any more. *Oakley* was followed in at least two other cases⁴⁵. But in *State v Chapman* (2020)⁴⁶ the Supreme Court of Ohio struck down a similar probation condition imposed on a father who refused to support his existing eleven children.

⁴⁰ *People v Pointer*, 151 California Court of Appeal 3d 1128, 199 Cal. Rptr. 357 (1984)

⁴¹ *People v Johnson*, No. 29390, California Superior Court, Tulare County (1990)

⁴² *People v Zaring*, No. F014606. Fifth Dist. July 11, 1992

⁴³ *State v Kline*, 155 Or. App 96, 963 P.2d 697 (1998)

⁴⁴ *Oakley v Wisconsin*, 629 NW 2d 200 (Wis. 2001)

⁴⁵ *Felicia Salazar* (2008), in *Texas*, and *Corey Curtis* (2012), *Wisconsin*.

⁴⁶ *State v Chapman*, 163 Ohio St. 3d 290, 2020-Ohio-6730 (2020)

Finally, in *Soares de Melo v Portugal* (2016)⁴⁷, the ECtHR found that the Portuguese courts should not have removed the youngest seven of a woman's ten children from her custody and severed her parental rights so that those children could be adopted. The children had suffered persistent, severe neglect by their mother. The removal followed a period of seven years during which social services' efforts to nudge the mother into better caring for them had come to naught. The woman had had five extra children during that same period. The ECtHR accepted the mother's argument that she the removal of her children violated her right to family life, and criticised the Portuguese authorities for requiring the woman to have a tubal ligation (a requirement which she did not comply with), on the grounds that it was a medical treatment she did not want and would remove her capacity to procreate, "an essential bodily function".

Family caps on social assistance

A number of countries have experimented with limits to welfare payments intended to promote responsible procreative decisions, reduce welfare dependency, and/or mitigate unintended pronatalist signalling towards welfare recipients. The background is the near-universal observation that the poor tend to have a larger number of children than the better off. There are two likely explanations for this. The first is that poor children are cheap. Children born into poverty tend to cost little to their parents (Doepke and de la Croix, 2003; Moav, 2005; Vargha and Donehower, 2019). The pragmatic considerations that lead more materially secure couples and individuals to limit their families do not seem to have the same effect on the procreative behaviour of those who are worse off. The second, less prominent explanation is that poverty reduces cognitive capacity. People living under the stress of poverty generally appear to operate under conditions of impaired cognitive function that make all sorts of self-defeating, imprudent, or short-sighted choices and behaviours much more likely (Mani *et al.*, 2013; Pepper and Nettle, 2017).

The standard rationale for family caps relates to the first explanation; welfare benefits should not have the effect of removing affordability considerations from the procreative calculus of those who are not in work or otherwise not self-supporting. Family caps tend to take one of three main forms: (a) eligibility to certain child-related benefits may be limited to a maximum number of children per family; (b) parents may receive fixed benefits that do not scale according to the number of children, or (c) parents may be unable to claim child-related benefits in respect of children conceived and born while the parent is already on social assistance. Though these policies incorporate anti-natalist disincentives which are standardly argued to be coercive towards the poor, they have generally survived legal challenge in the US⁴⁸ and the

⁴⁷ *Soares de Melo v Portugal* (2016) (application no. 72850/14) ECtHR.

⁴⁸ See *Dandridge v Williams* [397 US 471 (1970)] and *CK v New Jersey Dept of Health & Human Services* [Civ. A. no. 95-5454, NHP (1996)].

UK⁴⁹, where the courts have repeatedly found family caps to be compatible with claimants' fundamental rights.

Cases relating to access to assisted reproductive technology (ART)

Some of the more relevant ART cases relate to the rights of male prisoners to access means of impregnating their female partners. The context is typically that (1) the man is held at a prison which does not allow conjugal visits, and (2) the female partner's window of fertility may close before the man is released, or he may never be released. In *Goodwin v Turner (1988)*⁵⁰ and *Gerber v Hickman (2001)*⁵¹, US appeal courts upheld decisions to refuse prisoners access to ART. In *Dickson v the UK (2007)*, the ECtHR held that the UK prison's policy was too rigid and violated the couple's article 8 rights.

Two other cases pertained to whether a woman can gestate embryos without the consent of the would-be father. In *Evans v the UK (2007)*⁵², the embryos were the only way for the claimant to have biological children; the ECtHR found that the UK legislation requiring the consent of her ex-partner did not violate her article 8 rights. In *Blood (1997)*⁵³, the UK Court of Appeal, perhaps succumbing to public opinion, relied on a legal loophole to permit a widow to use her dead husband's sperm to conceive, so as long as the fertility treatment was received outside of the UK. In *SH and others v Austria (2011)*⁵⁴, the ECtHR upheld Austria's ban on the use of donated gametes in in-vitro fertilization (IVF), finding there was no consensus yet on the morality of such use.

Non-US cases about abortion

Some of these cases are connected with technological developments, in particular detection of foetal abnormalities. Two Latin American cases, *KL v Peru (2005)*⁵⁵ and '*Beatriz*' (2013)⁵⁶, concerned legal obstacles faced by a teenager and a young woman, respectively, looking to abort anencephalic foetuses. The UN Human Rights Committee found that Peru had violated several of KL's rights by forcing her to gestate and deliver her doomed infant, including her right to privacy. The Inter-American Court of Human Rights (IACtHR) issued an injunction ordering El Salvadorian authorities to step aside

⁴⁹ See *R (on the application of SG and others) v Secretary of State for Work and Pensions* [2015] UKSC 16, and *R (on the application of SC, CB and 8 children) v Secretary of State for Work and Pensions* [2021] UKSC 26.

⁵⁰ *Goodwin v Turner*, 702 F. Supp. 1452 (W.D. Mo. (1988))

⁵¹ *Gerber v Hickman*, 264 F.3d 882, 9th Cir. (2001)

⁵² *Evans v the United Kingdom*, Appl. no. 6339/05 (2007)

⁵³ *R. v Human Fertilisation and Embryology Authority, ex p Blood* 2 All ER 687 (1997)

⁵⁴ *SH and others v Austria*, Appl. no. 57813/00 (2011)

⁵⁵ *KL v Peru*, Comm. no. 1153/2003, UN Doc CCPR/C/D/1153/2003 (2005)

⁵⁶ *Matter of B*, orders of 29 May 2013 and 19 August 2013, Provisional Measures regarding El Salvador, Order of the IACtHR

and allow doctors to administer a potentially life-saving abortion to the seriously ill Beatriz. In neither case was it suggested that women had a general right to abortion, or that abortion bans were contrary to women's rights. In *Artavia Murillo et al v Costa Rica (2012)*⁵⁷, the IACtHR held that Costa Rica's ban on IVF, reasoned on the basis of the purported rights of pre-implantation embryos, violated several rights of the claimants, including their right to respect for privacy and family life and the right to found a family.

In *RR v Poland (2011)*⁵⁸, a pregnant woman had genetic testing purposefully delayed by her doctors until it was too late for her to legally abort her pregnancy of a foetus with Turner syndrome. The ECtHR ruled that her rights under art. 3 (protection from cruel treatment) and 8 (respect for family life) of the ECHR had been violated. In *Costa and Pavan v Italy (2012)*⁵⁹, a couple who were carriers for cystic fibrosis were denied access to pre-implantation genetic screening. The ECtHR held that the Italian ban was a disproportionate interference with their rights under art 8.

A couple of European abortion cases demonstrate the limited willingness of the ECtHR to assert women's rights of bodily autonomy against near-absolute prohibitions in Catholic-majority countries. In *Open Door and Dublin Well Woman v Ireland (1992)*⁶⁰ the ECtHR declined to make a finding on whether art. 8 ECHR includes a right to abortion. In *A, B, C v Ireland (2010)*⁶¹, the ECtHR held that the right to private life in art 8 encompasses the decision whether or not to have a child, but cannot be interpreted as conferring a right to abortion.

2.5 Conclusion: unresolved questions

In the absence of legislative foundations, the case law and materials relied upon in asserting a right to procreate typically claim the right already exists in some undefined manner, in something of an infinite regress. There have been a relatively small number of cases that test claims to a legal right to procreate, and which show that key questions remain unresolved from a legal perspective.

One of those questions is whether there is any level of physical abuse or material neglect of one's existing children that could ever warrant a requirement on the parent to refrain from creating further children. This is deeply tied with the perceived philosophical complexity of harm that is inflicted as a "package deal" with creation, a

⁵⁷ *Artavia Murillo et al* ("in vitro fertilization") *v* Costa Rica, IACtHR, Judgment of November 28, 2012

⁵⁸ *RR v Poland*, Appl. no. 27617/04 (2011)

⁵⁹ *Costa and Pavan v Italy*, Appl. no. 54270/10 (2012)

⁶⁰ *Open Door and Dublin Well Woman v Ireland*, Appl. No. 14234/88, 14235/88 and 64/1991/316/387-388 (1992)

⁶¹ *A, B, C v Ireland*, Appl. no. 25579/05 (2010)

topic which I will explore in Chapters 5 and 6. For now I would note the stark inequality of protection afforded to children one creates relative to children one might seek to adopt. In none of the cases discussed under the mandated contraception heading could there be any realistic contemplation of the would-be parent being permitted to adopt a child into the same circumstances in which multiple court decisions thought they should be allowed to create children.

Relatedly, it is unclear how one might justify open-ended disbursements to mitigate harm to future children of parents who have abused or neglected existing children while accepting that the state is not required to subsidise the procreative choices of parents who are impecunious but not abusive or neglectful. The normative forcings of a right to procreate are considerably more extensive than the explicit outlays in relation to child-related benefits and the plethora of services and extra costs to the public purse in contemplation in cases such as *Pointer* and *Soares de Melo*. Nonetheless, the lack of consistency of approach in these cases when compared with legal challenges to family caps are telling of the pronatalist slant inhering in thinking on procreation, and most evident in the Cairo consensus: wherever interests are in conflict, it is assumed that the interest of the would-be parent in being free to create children must prevail.

Another question is whether people who are unlikely to live with, care, support, or have a parent-child relationship with any future offspring are nonetheless entitled to create them. This question emerges in the US cases concerning “deadbeat dads” and child abusers, as well as male prisoners seeking to create children with female partners who are not incarcerated. Again, it appears that the legal right to procreate, where recognised in such circumstances, is not a right to found a family, but a right to create other persons *simpliciter*.

Turning to ART-related cases, whether couples have a right to use donor gametes, or to screen embryos, or any other method for creating children that involving “unnatural” degrees of parental choice. This question is of limited interest here, but it is indicative of the extent to which legal thinking on the right to procreate has taken its normative moorings from the “naturalness” of biological procreation. But of course, it used to be perfectly natural for people to have numerous children and for most of those children to die. Furthermore, it continues to be seen as “natural” for people to have children without exercising any real agency in the matter; nearly half of pregnancies are unintended (United Nations Population Fund, 2022), even in countries such as the UK or the US⁶². Arguments about what is “natural” or not when it comes to

⁶² In both the US and the UK, around 45% of pregnancies are not actively intended. In the US, about 42% of unintended pregnancies (excluding miscarriages) ended in abortion; in the UK, 36% of unintended pregnancies are terminated. That is to say, unplanned births remain very common in both the US and the UK even in the present time. (Public Health England, 2018; Guttmacher Institute, 2019; Bearak *et al.*, 2022)

procreation tend to be at odds with the purported autonomy-laden, choice-driven nature of the right as claimed.

It is unclear whether women have any basic right to abortion beyond cases where their lives are in danger or the foetus has unsurvivable abnormalities. This specific question is of limited interest here, but it shows how the discourse on absolute reproductive freedom has had most traction in its pronatalist version. Legal limitations on abortion, even those relating to first-trimester abortions, and indeed restrictions on access to contraception, often without any real rationale, remain commonplace and seemingly the locus of little by way of moral controversy. The more interesting question, when it comes to contraception and abortion, is whether the individual wish or decision to procreate, or even one's propensity to careless or unreflective procreative behaviour, can be properly subject to a comparable degree of permissible interference by the state as a woman's wish or decision to *not* procreate. From a legal and discursive perspective the answer is clearly in the negative, even though creating a child is evidently other-affecting, while avoiding procreation is far more obviously a strictly personal matter.

Finally, none of the cases considered, or identified as part of my review, seem to consider any question of balancing parent's interests in being free to create children with the interests of society or the common good. Do each of us have an open-ended right to create children, irrespective of consequences to our collective interests? Perhaps because there have not been anti-natalist population policies where such challenge could be raised, the courts, and legislators, have remained silent on this question.

It seems to me there unresolved key questions are not ultimately that difficult to answer, at least not once we get over the logically and morally untenable premise that one's liberty to have children (though not their liberty to avoid having children) is of overriding importance. What seems to trip up reasoning is the absence of conceptual tools to negotiate the unusual philosophical terrain of procreative harms. I will return to this issue in Chapter 5. First, we must consider another, related but distinct intellectual history, that of the Cairo consensus version of the right to procreate. Unlike the versions of a right to procreate discussed in this chapter, the Cairo consensus was set out in writing, but in non-legal documents setting out a political position agreed at the conference where the international community agreed to stop talking about population concern and start talking about women's rights: the International Conference on Population and Development (ICPD) in Cairo, 1994.

Chapter 3: Ideas and ideation: the Cairo consensus and literature on a right to procreate

3.1 Introduction

In this Chapter I discuss the history of and empirically and philosophically untenable assumptions underlying the Cairo consensus version of the right to procreate.

I show how the notion of an emerging right to contraception morphed into a purported fundamental right to absolute reproductive autonomy, first in the US and then in UN conferences and publications. I outline the ideational factors which enabled the emergence and dominance of the Cairo consensus-style right to procreate, in particular hostility to population concern by interest groups, in particular women's rights and global justice advocates; the ICPD's reliance on outdated empirical assumptions about fertility decline; and the taboo on problematising population growth. These factors operate by suppressing from public discourse any discussion of procreative harms, in particular those relating to human overpopulation, thus disguising the implausibility of a claim to a basic right to absolute individual discretion to do something so clearly other-affecting as creating children.

Those coming to the subject afresh might be surprised to discover, as I did years ago, that the international discourse on the Cairo consensus version of a right to procreate (understood as a human right) has taken place largely in isolation from Cairo consensus-*style* claims relating to constitutional or other basic legal rights to procreative freedom. This is reflected in the literature, where a distinct political or activist strand runs in parallel from a legal and a philosophical strand between which there is greater exchange of ideas. I overview the extent to which authors in these strands have sought to answer the question of whether we have a right to create biological children (through natural means). I identify the gap in the literature which the analysis set out in this dissertation is intended to fill – essentially, there are no competing examples, to my knowledge, of comprehensive, philosophically grounded and empirically informed accounts of the right to procreate that might plausibly guide policy-making. I conclude by outlining what I take to be the desiderata of such an account.

3.2 A right to family planning and to access contraception

Following the FDA approval of the first oral contraceptive in 1960, several countries moved to enable women to access the pill and to make it clear to doctors that it was legal to prescribe it. In the UK, married women were able to access the pill via the National Health Service from 1962; by 1967, the government had passed legislation providing for contraceptives and advice to be provided irrespective of marital status. It

also legalised abortion – on certain grounds – in 1968. In the US, *Griswold* (1966) and *Eberhardt* (1972) clarified the law in relation to contraceptive use by the married and unmarried respectively. France passed a law in 1967 authorising the sale and use of contraceptive methods. Canada formally legalised contraception in 1969. Some countries, like Brazil and Germany, did not feel the need to pass any laws, and just allowed the pill and other contraceptive methods to be freely sold from when they first became available⁶³.

At the time, government worldwide were openly concerned about population growth. Developing countries, in particular, were concerned about what it might do to their ability to deliver on newly acquired human rights obligations.

Iran was one such country concerned about unsustainable population growth. It established a Department of Health and Family Planning in 1967 to educate the public and encourage use of the pill. The year after, it hosted the International Conference on Human Rights in Tehran, where the United Nations first asserted that “parents have a basic human right to determine freely and responsibly the number and spacing of their children” (United Nations, 1968a, 1968b).

Given the context of the most pressing discussions of the time, this form of words was almost certainly intended as an attempt to articulate a universal right to access to contraception and family planning, rather than a right to complete individual discretion in the creation of children. My interpretation is corroborated by demographer and feminist writer Ruth Dixon-Mueller, who in 1993 – the year before the ICPD – described the above-formulated right asserted in Tehran as a human right to *family planning*. Dixon-Mueller notes that the UN formulation was much narrower than a woman’s right to control her body, which would encompass a broader range of sexual and reproductive rights and freedoms (Dixon-Mueller, 1993).

A few years later, the Tehran formulation was revisited during the course of the UN’s 1974 World Conference on Population in Bucharest. The preparatory documents for this were mainly the work of population experts and family planning advocates, many of them from the United States, which was at the time a major proponent of population governance. These experts and advocates were taken by surprise when the draft World Population Plan of Action turned out to be opposed by a group of developing countries led by Algeria. The grounds of opposition had little to do with opposition to family planning, and apparently nothing to do with beliefs about a right to procreate, though some demanded respect for their pronatalist cultures (Coole, 2021, p. 1461). Instead, these developing countries, many of which were newly independent, were concerned about being pushed around and made to make a greater investment into family planning when they were more concerned about

⁶³ Abortions were then, and remain, illegal in Brazil in nearly all cases.

economic development (Finkle and McIntosh, 2002). In its final draft, the plan of action affirmed the “sovereign right of each nation” to formulate and implement population policies to deal effectively with their population problems. Among the principles guiding policy-making was protection of the family, equal opportunities for women, and an expanded version of the Tehran formulation. This expanded version asserted a slightly more ambitious and nuanced right, articulating a responsibility, presumably falling on the state, to provide couples and individuals with access to family planning, while expanding on what it meant for right-holders to exercise the right *responsibly*:

“All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children **and to have the information, education and means to do so; the responsibility of couples and individuals in the exercise of this right takes into account the needs of their living and future children, and their responsibilities toward the community.**” - para. 14 (f), emphasis added.

These rather onerous responsibilities on the right-holder would seem to suggest constraints on the right to procreate. However, by expressing these constraints as entirely a matter of individual judgment, foresight, and long-term planning, and not as qualifications creating room for state intervention, the right articulated was hopelessly idealistic, and its limitations ultimately unworkable. What does it mean, for example, for an individual or couple to make family planning decisions (or indeed, procreative decisions) having regard to the needs of future children or their responsibilities toward the community?

Contemporary observers suggest that as of Bucharest, the international community was still coming to terms with a right of access to contraception, and not thinking about or discussing a right to freely create children. In the years that followed, the United Nations Fund for Population Activities (UNFPA) was flooded with requests by developing countries seeking assistance with their family planning programs. Peter Donaldson, for example, recalls that

“In spite of the sentiments that developing countries expressed at Bucharest, support for family planning grew considerably in the ten years between Bucharest and Mexico City. In many countries, the right of women to select the number and spacing of their children became accepted in law and practice. A new social order was born. **Agreement that women were entitled to contraceptive advice and services and that family planning was proper became almost universal.** Following Bucharest, even those countries whose formal opposition to family planning was the most pronounced at the conference demonstrated support for government provision of contraceptive services.” (Donaldson, 1990, p. 128)

Ten years later, the report of the International Conference on Population held in

Mexico City (1984) reiterated the responsibilities of couples and individuals to take account of the needs of their living and future children, as well as their responsibilities towards the community, when deciding on the number and spacing of their children. Remarkably, given the increasingly sceptical attitudes to population concern at the time, in particular in the United States,⁶⁴ the report emphasises the imperative for governments to do more to assist people in accessing contraception. This was reportedly due to developing countries having reached a consensus about the importance of family planning programs in reducing population growth (Jain, 1998, p. 13). By the time of the Mexico Conference, two-thirds of all countries reported that they had an explicit policy concerning population growth (Johnson, 1987, p. 225).

3.3 The Cairo consensus, or how a right to family planning became a right to create children

Before the United Nations' International Conference on Population and Development (ICPD) in Cairo in 1994 (ICPD), "reproductive rights" did not figure in any of the population conference consensus documents, or even in the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). While delegates attuned to the changes in political winds had already modified draft documents so as to delete most references to family planning, the final draft went further and rejected the framing of population growth as a matter of concern. Seeking to distance family planning services from the aims and concerns of population governance, the emphasis is on broader reproductive health services as means for improving women's health. As chronicled by Finkle and McIntosh,

"Whereas the preparatory process for Bucharest was largely closed to non-scientific influence, the Cairo process was influenced by the participation of a broad coalition of more than 1,500 NGOs whose interests spanned development, reproductive and adolescent health, women's rights and empowerment, violence against women, female genital mutilation, the rights

⁶⁴ Commentators time this shift to the inauguration of US President Ronald Reagan in January 1981, at which point the US government began to court the religious right (Eager, 2004, pp. 88–90). The US position as communicated in Mexico City was received as a "stunning volte face", suggesting that the 1960s and 1970s saw a "demographic overreaction" resulting in many governments pursuing anti-natalist population policies when they could have pursued neoliberal economic policies instead and supposedly achieved a fall in fertility that way. See Johnson (1987, pp. 254–255), Eager (2004, pp. 102–105), and Coole (2021, pp. 1461–1463). Noted feminist writer, Cairo consensus supporter, population concern critic (and contraception sceptic) Betsy Hartmann (1987, p. 36) also credits "conservative cornucopians" for performing "a great service" by discrediting population concern in the run up to Cairo. Essentially, over the course of the 1980s and in the run up to Cairo, US politics started favouring the view that natural resources might be infinite and that population growth was economically useful. The Clinton administration was on the side of population concern advocates, but its delegates to Earth Summit in Rio in 1992 and to the preparatory meetings ahead of the ICPD in 1994 were met with a barrage of ideological opposition by well-organised women's groups as well as an anti-abortion, anti-family planning movement whose goals in relation to the ICPD were in many ways aligned with those of the feminist activists. See for example Eager (2004, pp. 120–127).

of indigenous peoples, and family planning, but which paid little serious attention to the determinants or consequences of population growth.” (Finkle and McIntosh, 2002, p. 14)⁶⁵

Of particular importance here is the assertion, in the much-celebrated ICPD Programme of Action, of a right to unlimited procreative discretion, effectively a heavy gloss on the same wording which had been asserted in Tehran as a right to family planning.

The Tehran formulation appears at least six times in the Programme of Action, now positioned as a matter of empowering and assisting individuals in making their own free choices about procreation. The underlying assumption is that individuals who are free can be trusted to reliably make responsible decisions, even about such an emotive and culturally charged matter, involving complex, long-term considerations, as procreation and its impacts on others.

“Principle 8

... Reproductive health-care programmes should provide the widest range of services without any form of coercion. **All couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so.**” – *ICPD Programme of Action, page 10 (emphasis added)*

“Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. **Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.** Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. ...” – *ICPD Programme of Action, p. 59, para 7.2 (emphasis added)*

“[R]eproductive rights embrace certain human rights that are **already recognized** in national laws, international human rights documents and other

⁶⁵ Paige Whalley Eager notes that “a small group of demographers, whose voice had been somewhat minimised in the Cairo debate, expressed concern that Cairo did not adequately address the true problem of overpopulation”, adding that, while demographers were not absent altogether from Cairo, “their influence was somewhat mitigated.” Referencing Lori Ashford of the Population Reference Bureau, Eager suggests that those demographers with an interest in policy-making felt that Cairo “threw demography out the window”. (Eager, 2004, p. 155)

consensus documents. These rights rest on the recognition of the **basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children** and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. **It also includes their right to make decisions concerning reproduction free of discrimination, coercion and violence**, as expressed in human rights documents. In the exercise of this right, they should take into account the needs of their living and future children and their responsibilities towards the community. (...)" – *ICPD Programme of Action*, p. 60, para 7.3 (*emphasis added*)

"7.12 **"The aim of family-planning programmes must be to enable couples and individuals to decide freely and responsibly the number and spacing of their children** and to have the information and means to do so and to ensure informed choices and make available a full range of safe and effective methods. The success of population education and family-planning programmes in a variety of settings demonstrates that informed individuals everywhere can and will act responsibly in the light of their own needs and those of their families and communities. **The principle of informed free choice is essential to the long-term success of family planning programmes. Any form of coercion has no part to play.** (...)" – *ICPD Programme of Action*, p. 64, para 7.12 (*emphasis added*)

Because the formulation is the same, it *could have been* interpreted, as before, as a right to family planning. But this is not how the Cairo consensus is interpreted by commentators, activists, and writers. It is taken to express a right to procreative freedom, subject only to the constraints of one's judgment and conscience.

The repurposing of an existing formulation of decades-long vintage had the advantage of creating the appearance that the right to procreate being asserted was not new. While the right is still expressed in terms of its responsible exercise, the repeated assertions that coercion was impermissible made it clear that the freedom being discussed was subject only to the constraints of the right-holder's own judgment and conscience. A right with strictly *voluntary* limits, after all, has no *actual* limits. Perhaps underscoring this, the spelling out of responsibilities that had been attached to the formulation in Bucharest, however idealistic, was de-emphasised at Cairo and relegated to side remarks, as shown above.

Rosalind Petchesky credits the "discursive transformation" at Cairo to women's NGOs, prior to the conference, beginning to shift their discourse from a health paradigm to a human rights paradigm, and to the "*felt need of women's movements everywhere, in the face of rising conservatism and fundamentalism, to articulate a strong, militant response*". The language of rights, Petchesky adds, "*provides an effective instrument, universally recognised as political, for making group claims on governments and intergovernmental organisations*" (Petchesky, 1995). Correa and Petchesky argue that

a woman would never owe a duty to society (“or the planet”) to abstain from reproduction. Such a duty, they say, could only “begin to exist” when women are in a position to make reproductive choices in a context of material security and social affirmation outside of childbearing. Even then, they say, “anti-natalist policies that depend on coercion would be unacceptable” (Correa and Petchesky, 1994, pp. 108, 114).

As characterised in the publications emerging from the ICPD, in particular the Programme of Action, the right to procreate asserted at Cairo was essentially a clone of the virtually absolute liberty of US reproductive rights discourse discussed in Chapter 2. This version of the right *as it is understood* (rather than as it perhaps could be interpreted, based on the ICPD Programme of Action), together with the elements of the Programme of Action that delegitimise policies motivated by population concern, are still celebrated in UN publications and related materials as what is colloquially known as the “Cairo consensus”.

As generally understood, the Cairo consensus does not permit any sort of compromise with regards to procreative freedom; any kind of anti-natalist pressure on the would-be parent is regarded as coercive, and any coercion in this context is regarded as disrespectful of human rights. The rubric of coercive policies is assumed to include not only interventions imposing a legal requirement on people to use contraception, but also anti-natalist messaging programs and financial incentives and disincentives (such as fines) (Boland, Rao and Zeidenstein, 1994; Fathalla, 1995; Abrams, 1996; Broomfield, 1996; Türmen, 2000).

Paula Abrams (1996, pp. 22–23) argues that “because population policy assumes state regulation, direct or indirect, of reproduction, the very concept of a population program may be inconsistent with reproductive self-determination.” In other words, even having a population policy, whatever its nature, may be disrespectful of people’s right to procreate. Boland *et al* similarly argues that efforts directed at reducing fertility inherently violate human rights (1994, pp. 99–100).

3.4 The ICPD and hostility to population concern

The ICPD was the fifth, and final, international conference on population⁶⁶. It was a population summit in which the international community decided that we should stop talking about population. (See the Appendix for a more detailed discussion on the taboo). As such, it represents a remarkable victory for population denialists, an unlikely alliance of (a) neoliberal ideologues who believed in the feasibility and desirability of endless economic growth (aided by similarly endless population

⁶⁶ The preceding population conferences were Rome (1954), Belgrade (1965), Bucharest (1974), and Mexico City (1984). Post-1994 events held by the UN in 1999, 2014 and 2019 have focused on progress against the ICPD’s Programme of Action and did not revise or reconsider its pronatalist tenets.

growth), (b) religious conservatives who opposed contraception and abortion, and (c) women's rights and global justice advocates who regarded population concern as a way to blame women and the world's poor for problems which they believed were better attributable to the comfortable lifestyles and wasteful consumption of people in developed countries.⁶⁷

The ICPD Programme of Action was intended as establishing international population policy until 2014. But it is a strange, rambling document, running to 166 pages of discussion and setting of aims and aspirations on a very wide range of issues, including poverty, inequitable consumption, education, sexual and reproductive wellbeing, health and healthcare, the need for "sustained economic growth", the rights of migrants, refugees, and asylum seekers, and various forms of disadvantage and discrimination against women, children and adolescents, the elderly, the disabled, and indigenous peoples. The proposed actions, while worthy, are stated in very high-level terms, and have little if anything to do with population or sustainability. One might wonder why such a vastly diverse set of concerns and aspirations were set out in a document supposedly intended to guide population policy.

What the Programme of Action has to say about family planning is mostly about its (narrow) criteria for legitimacy. To start with, the Programme of Action emphasises that coercive interference with procreative choices is never permissible. Moreover, family planning programs should not have anti-natalist aims. The only valid goals for family planning are those defined in terms of unmet need for information or services. Demographic goals are only appropriately the goal of development (meaning poverty alleviation) strategies.

As observed by Stanley Johnson (1995, p. 188), under the Programme of Action's view of appropriate policy-making, "*demographic impact in terms of births averted [was] to be seen as incidental to the main objective*", which was not to empower women to have (only) as many or as few children as they wanted. To be clear, this was due to the lobbying of interest groups attending the conference, in particular women's groups⁶⁸. It was not the intended policy of the UN going into the conference.

⁶⁷ See Martha Campbell's account (1998) of the interest groups at the ICPD. See also Hartmann (1987, p. 86), Beaujot (1995), McIntosh and Finkle (1995), Eager (2004, pp. 120–127), Kuhlemann (2019), and Coole (2021) for related discussions about the ideational groupings behind the dismissal of population concern and delegitimization of anti-natalist interventions.

⁶⁸ At the UN Earth summit in Rio in 1992, women's groups set the ground by publishing an 'Alternative Treaty on Population, Environment, and Development', which laid the blame for environmental unsustainability primarily at the feet of consumers in developed countries while demanding "the empowerment of women... to exercise free choice and the right to control their fertility and to plan their families". The Treaty further called for "an immediate end to policies and programmes... that attempt to deprive women of their freedom of choice or the full knowledge or means to exercise their reproductive rights." As chronicled in detail by Stanley Johnson (1995, pp. 64, 129–151) and others, the issue of female empowerment came to dominate the Cairo conference.

In the lead up to the ICPD, Dr Nafis Sadik, the Secretary General for the conference and executive director for the United Nations Fund for Population Activities (UNFPA), circulated a paper to delegates urging the conference to set the goal of attaining the low variant population projection of 7.27 billion for 2015, arguing that a quantifiable, reachable goal was a way to address “*the basic components of an acceptable quality of life for all members of the human family*” (Johnson, 1995, pp. 39–40). The final version of the Programme only goes as far as to suggest that stabilizing the population (at some point in the future) would “*make a crucial contribution to realizing the overarching objective of sustainable development.*” (para 7 of Preamble). The initial outline of the Program of Action, produced nearly two years ahead of the ICPD under the advice of the UNFPA, was directed towards mitigating population growth (Eager, 2004, pp. 143–144). But soon enough, population concern and family planning groups realised that if their voices were to be heard at all, they needed to ally themselves with the women’s rights NGOs and adopt the new reproductive rights and health discourse, and learn to talk in “Cairo-speak” (Petchesky, 1995). That meant talking about women’s empowerment and economic development as the only legitimate way to nudge fertility rates downwards.

There should be no family planning targets. The Programme of Action says that governments should avoid any incentives or disincentives to use contraception, not because offering incentives or imposing disincentives is necessarily wrong, but because such approaches, the document stipulates, do not work (see discussion on moralistic fallacies, below). In the aftermath of the ICPD, however, the Cairo consensus was generally interpreted as proscribing anti-natalist incentives and disincentives on the grounds that they are coercive.⁶⁹ Instead, governments should trust individuals to always do the right thing: “*The success of population education and family planning programmes in a variety of settings demonstrates that informed individuals **everywhere** can and **will** act responsibly in light of their own needs and those of their families and communities.*” (*ibid*, para 7.12 – emphasis added).

As noted by Dennis Hodgson and Susan Cotts Watkins, the ICPD Programme of Action “melds feminist and human rights rhetoric into a programmatic position that **bans explicit attempts to influence reproductive behaviour**” (1997). The scope of

⁶⁹ Paige Whaley Eager, for example, describes anti-natalist incentives and disincentives as “a cornerstone of coercive population control policies” (Eager, 2004, p. 43). Ruth Dixon-Mueller cautions that incentive or disincentive schemes to either lower or raise fertility are “inevitably discriminatory” in contexts of social inequality, as “they appear coercive to some individuals or groups but trivial or beneficial to others.” Adrienne Germain and Rachel Kyte say that the Cairo consensus “rejects coercion (including incentives and disincentives)” (1995, p. 2). Yet, writing before the ICPD, and perhaps not in “Cairo-speak”, Dixon-Mueller emphasises that anti-natalist incentives can enhance people’s procreative autonomy, for example by counteracting what Judith Blake (1972) calls the “coercive pronatalism” imposed by family and gender ideologies and the workings of social and economic institutions (Dixon-Mueller, 1993, pp. 19–20).

permissible family planning policy under the Cairo consensus is strictly a passive one, of providing people with information about contraceptives and to make it as easy as possible for people to access contraception.

Instead of acting to bring down fertility rates, the state is enjoined to act on a vast array of exogenous societal factors, on the theory that this will indirectly lead individuals and couples to have fewer children. It was assumed that even if this did not work, the demographic transition was a natural, universal, and inexorable phenomenon that would sooner or later bring fertility rates down to a level conducive to population stabilisation⁷⁰ even if nothing was done to promote it. And population stabilisation, in turn, would itself solve sustainability problems somehow, irrespective of what size the population stabilised at.

The ICPD's reliance on demographic transition theory

The demographic transition theory was a theoretical framework broadly accepted by demographers from the 1950s to late 1980s. Based on what was initially assumed to be a uniform European experience, the theory seeks to describe a supposedly predictable, universal shift whereby fertility falls as a result of a traditional or rural community transitioning into a modern, industrialised society. The starting point are societies where high fertility rates are kept in check by high mortality rates. As mortality rates start to fall, the theory posits that fertility rates do, too, though not immediately. During the lag, while fertility rates remain high while mortality has fallen, the society's population size rises rapidly. But eventually the fertility rate would drop too, driven by societal changes exogenous to the personal experience of the individuals making procreative decisions. At the end of the transition, the enlarged population would tend to reach homeostasis at low rates of both fertility and mortality.

The problem with classic demographic transition theory is that over time plenty of evidence accumulated that showed that its foundational assumptions were flawed. It became clear from data analyses that there had been multiple patterns of fertility decline within the European experience, with multiple plausible drivers. It became increasingly clear that there could be no single explanatory framework for fertility change applicable to the entire world, with its enormously varied material, social, and cultural contexts. Moreover, far too much of the theory had been based on mere correlations that later proved to be inconsistent and weakly predictive at best, and for which multiple causations could be argued. For example, women's job market participation tends to correlate with smaller families. But which is the cause, and which the effect? Are both changes perhaps caused by some other (perhaps ideational) factor?

⁷⁰ See in particular paras 3.13-3.15 and 6.1 to 6.5 of the ICPD Programme of Action.

For these reasons, starting from the 1970s demographic transition theory, whether in its classic form or as any other transition theory, started to face a barrage of criticism from demographers (Mason, 1997). By the early 1990s, the interest groups agitating for discursive change at the Earth Summit and the ICPD had become enamoured with the idea that the population problem did not exist, or would solve itself unproblematically. The demographic transition theory seemed conveniently supportive of the latter position, though the theory itself has absolutely nothing to say about environmental sustainability of population sizes at any stage of the transition. But by then demographers already regarded the demographic transition theory as controversial at best; it did not seem to predict or explain much of anything. It remained the standard simply because no alternative framework had displaced it as the hegemonic guide to empirical research (Hirschman, 1994). None of this seemed to matter at the ICPD, where there was little interest in the view of demographers.

This is all to say, the Cairo consensus relied on theoretical assumptions about the drivers of procreative behaviour and population dynamics that were already outdated in 1994 (Potts *et al.*, 2005). At any rate, the Cairo consensus' expansive view of a right to procreate betrayed no concern that a supposedly inevitable process of demographic transition may not happen fast enough, or bring about sufficiently sharp falls in fertility, to avert catastrophic overpopulation. There were no safety checks, no what-ifs. Its normative assumptions were not stated as contingent on and rebuttable by an independent reality. On the contrary. The Cairo consensus' vulnerable assumptions about questions of fact were taken as *defining* reality while blocking off further inquiry on moral grounds. This, I suggest, is as clear an example as any of what Bernard Davis once termed a moralistic fallacy: an illogical effort to derive an "is" from an "ought" in a bid to protect society from dangerous or disappointing knowledge that (for example) might be distorted or misused by bigots, all along allowing social policy to be built on false and self-defeating foundations (1978).

The Cairo consensus' symbiotic relationship to the population taboo

Arguably the most striking feature of the Cairo consensus was the way in which it endorsed the population taboo. The Programme of Action presupposes the end of population policies and indeed the end of discussion about population concern. *No* demographic factor is identified as the principal cause of *any* problem (Hodgson and Watkins, 1997).⁷¹ Climate change, for example, was declared to be caused primarily by unsustainable patterns of production and consumption, grossly downplaying the role of the enormous growth in the human population (Chamie and Mirkin, 2014).

The Programme of Action states that the business of population and development

⁷¹ Rosalind Petchesky celebrates as a feminist victory the Programme of Action being "almost completely divested of the standard language and conceptual apparatus of Malthusianism and demographic targets (even 'family planning is relegated to a short sub-section), replacing these with the language of reproductive and sexual health and reproductive rights." (Petchesky, 1995)

programmes is to advance gender equality and equity, eliminate gender-based violence, and improve the quality of life of all people (United Nations Population Fund, 1994, p. Principle 4), and ensure people have “the capability to reproduce and the freedom to decide if, when and how often to do so” (*ibid*, para 7.2). Indeed, it appears the strategy developed at the ICPD and reflected in its outputs was to redefine population concern out of existence. Comments by Gita Sen, a women’s rights activist and proponent of the Cairo consensus, suggest this was precisely the intention: “... *the population issue must be defined as the right to determine and make reproductive decisions in the context of fulfilling secure livelihoods, basic needs (including reproductive health), and political participation*” (Chen, Germain and Sen, 1994).

This overt antagonism towards the problematisation of population growth and anti-natalist population policies (and indeed, towards demographers and environmentalists) is difficult to reconcile with the overwhelming reliance of the Cairo consensus upon the responsible decision-making of well-informed individuals – who are apparently not to be made to feel that large families are problematic in any way, or be put under any pressure to exercise procreative restraint.

In the years that followed, there was a sharp reduction in funding for family planning services as international aid was redirected towards a much broader set of reproductive health-related objectives, including in particular disbursements related to HIV-AIDS.⁷² The situation has slowly improved after a series of initiatives aimed at refocusing policy makers’ attention; nonetheless, as mentioned in Chapter 1, current disbursements still fall far short of the estimated funding required to fulfill unmet need for contraception, let alone instigate demand.

3.5 Normative entailments of the Cairo consensus

It is telling that proponents of a Cairo consensus-style right to procreate have little if anything to say about *pronatalist* incentive-based interventions⁷³. Such policies as “baby bonuses”, involving the payment of financial incentives for procreation, are common-place and standardly regarded as benign or quirky, and at any rate as not

⁷² As the UNFPA told the UK’s All Party Parliamentary Group (APPG) on Population, Development, and Reproductive Health in 2006, the shift in Cairo from population concern to gender equality and reproductive health “... led to under-appreciation of population size and growth alone. Numbers do count even as the challenge remains to make every person count.” The APPG noted that “The language of reproductive health did not spur enthusiasm in parliaments or in wider debate. AIDS was seen as the new health problem, leaving high fertility as yesterday’s problem. The impact of population growth in the world’s poorest countries was barely noticed.” See APPG (2007) and Blanc and Tsui (2005). John Bongaarts and Steven Sinding estimated in 2009 that the fall in funding for family planning and contraceptive access had fallen by 30% since the mid-1990s – that is, since the emergence of the Cairo consensus. See Gillespie (2004), Cleland *et al* (2006), and Bongaarts and Sinding (2009).

⁷³ Though this is not generally remarked upon by reproductive rights activists, strictly speaking the text of the ICPD Programme of Action discourages pro-natalist as well as anti-natalist incentives and disincentives.

engaging questions of rights or justice⁷⁴. Instead, pronatalist policies are typically discussed in terms of their cost-effectiveness. But anti-natalist incentives are routinely decried not only as coercive but as motivated by racist or anti-poor animus. This is the case even where the prospective parents are likely to harm, or are in no position to adequately care for, any children they create⁷⁵.

The idea that the state may properly seek to encourage and incentivise procreation does not, on the whole, generate controversy. Pro-natalist policies are standardly justified on grounds of assumed social utility - for example, as a supposed driver of economic growth, or as a counter to the purported threat of population ageing. But social utility never seems to justify anti-natalist incentives. Not as a response to catastrophic risks posed by the depletion and degradation of critical collective goods, not in preventing the birth of children who will end up in the social care system, not to mitigate the intergenerational transmission of poverty.

Not only is it regarded as proper, or at least, not improper, for the state to promote procreation, it is generally accepted that the state may place obstacles - in the case of abortion, often severe ones - in the way of individuals seeking to avoid unwanted procreation. This all takes place with nary a complaint of human rights violations. For example, in many if not most countries the contraceptive pill is only available with a doctor's prescription, though the health risks are at least comparable, and often lower, than those of medications sold over the counter. By way of example, a man in the United Kingdom can order Viagra online⁷⁶, without even speaking to a pharmacist, while a woman needs to see a doctor regularly for her birth control prescription refills, even if she has been on the pill for 20 years. This is the case even though contraceptive pills must be taken continuously in order to be effective, and even though an unintended pregnancy will always have far more serious and enduring consequences than a foiled night of passion.

That state policies hindering access to family planning methods and services are not usually regarded as a human rights violation should put us on notice that the Cairo consensus right to procreate cannot be plausibly accounted for with reference to the

⁷⁴ See for example policy efforts in France (Toulemon, Pailhé and Rossier, 2008), Germany (Ostner *et al.*, 2003; Spiegel International, 2012); Denmark (Sims, 2016), Australia (Parr and Guest, 2011; Einarsdóttir *et al.*, 2012), Sweden (Matthews, 2016), Greece (Smith, 2020), Turkey (Dildar, 2022), and Hungary (Walker, 2019). See also Home (2008), Davies (2013), and Walker (2020).

⁷⁵ See for example Robertson (1994, pp. 69–93), Kleeman (2010), Bickman (2012), Derkas (2012), and Lucke and Hall (2012).

⁷⁶ See for example www.viagraconnect.co.uk/buying-viagra-connect. The UK government has recently decided to make a limited type of birth control pills, known as “mini-pills”, available from pharmacies without requiring prescriptions (BBC News, 2021). The NHS advice page for Viagra contains numerous warnings of potential side effects that would require a call to emergency services (<https://www.nhs.uk/medicines/sildenafil-viagra/side-effects-of-sildenafil/>). The equivalent page for the combined pill warns of a small risk of blood clots and slight increase in the risk of certain cancers (<https://www.nhs.uk/conditions/contraception/combined-contraceptive-pill/>).

moral force of individual autonomy. Indeed, it can be safely assumed that anti-natalist interference *requiring* individuals to take steps to avoid procreation that they do not want or intend would be regarded as contrary to the Cairo consensus view of the right to procreate. Whether an individual controls their own fertility is strictly a personal choice; whether they risk the consequences of unplanned procreation is regarded as strictly their own business. It is nevertheless unquestionably acceptable under the Cairo consensus for individual will and individual freedom, in particular of women, to be subverted and undermined as a 'natural' consequence of unintended or unplanned conceptions, pregnancies, and births. Being pressured into taking care to avoid unintentional procreation is supposedly a violation of one's autonomy; but becoming a parent without intending to – an event with life-changing consequences – supposedly does not violate the parent's autonomy in a comparable way or at all.

We can usefully identify the implicit characteristics of the assumed basic right to procreate by looking at what seems to be wrong with anti-natalist policy interventions, as articulated by proponents of the Cairo consensus and other public commentators:

- If the state is not permitted under any circumstances to coercively interfere with the number of children people choose to have, then the right to procreate must be unlimited. If so, then harms caused by unsustainable fertility rates, however catastrophic they may be, are beyond the realm of what legislation and policy-making can address. After all, a non-coercive, voluntary limit is no limit at all.
- If prospective parents should not be incentivised or compelled to forego procreation even if the resulting child would be at serious risk of harm, then the welfare of the person being created is an irrelevant consideration, or at any rate never important enough to outweigh the importance of not interfering with the parents' procreative behaviour.
- If public resources must be made available, without limit, so as to mitigate severe harm to children in lieu of anti-natalist interventions that prevent the creation of children into unusually adverse circumstances, then supporting procreation must always take priority in the allocation of ultimately limited public resources that might otherwise be allocated to, say, supporting the elderly, unemployed, or those with disabilities, funding research into new treatments for cancer, expanding the hours and school year for primary schools to relieve childcare pressures on parents and improve children's education, etc.
- If people have a right to have children that is not to be interfered with even where they do not actively want to have children, have no real intention to raise and provide for the resulting child, or where the child is likely to be removed into the care of others for its own welfare, then the right to procreate must not draw justification from the family formation interests of the right-holder.

- If it is wrong or morally dangerous to encourage a change in attitudes towards procreative restraint and more prudent family formation, then the preservation of idiosyncratic desires, socially conditioned preferences, and cultural baggage of prospective parents, at least insofar as they are pronatalistic, must take priority over preserving the viability of such central elements of the common good as food security, or a well-functioning, stable natural environment capable of supporting human flourishing over at least multiple human lifetimes.

I hold all of these aspects of the right to procreate as understood under the Cairo consensus to be fundamentally mistaken. I believe the above normative entailments show that the Cairo consensus view of the right to procreate is a strongly pronatalist norm, one that is quite indifferent to the interests of children and of society at large, contemptuous about the life chances of future generations and non-human species, and does not even appear to be predicated on the existence of a strong desire of the right-holder to parent a biological child. The value being protected, such as it is, seems to be the value of creating more people. And this, I suggest, is a wholly implausible foundation for any right claim, let alone a fundamental right.

3.6 Competing interpretations of a right to procreate by political activists, legal scholars, and philosophers

The Cairo consensus's normative entailments appear deeply problematic. They are also at odds with philosophical works on the subject of a right to procreate. But to date the wealth of philosophical materials has had little impact on policy-making and legal practice, which largely abide by the Cairo consensus or a Cairo consensus-style view of procreative entitlements.

One possible reason for this is that, with a few exceptions, existing philosophical materials tend to hesitate in spelling out the limits of justification for a right to procreate, which is not terribly useful for a policy-maker. These materials also tend to shy away from making any firm pronouncements on what kind of anti-natalist policymaking would be legitimate.

In navigating the existing literature on the right to procreate, however, it is interesting to note how it splits along three broad strands that have developed more or less in parallel, with limited cross-pollination: a quite isolated political/activist strand where the right to procreate is what the Cairo consensus says it is; a legal strand, more or less focused on Cairo consensus-style versions of a right to procreate as applicable to real-world legal cases; and a philosophical strand, which is more or less aware of the legal strand, but draws its own conclusions. Of these, the one which is more apt to assist with policy-making is at present the legal strand; but this is a problem. As shown in Chapter 2, the law on a right to procreate is largely illusory, and lacking in

philosophical coherence. But the philosophical works to date have been too unwilling to offer more holistic accounts or to stake a clearer, empirically informed position on limits as is likely to assist a policy-maker (or indeed a judge or law-maker). As I note below, this is the gap my contribution to scholarship aims to fill.

The political or activist strand

The literature from the political or activist standpoint comprises primarily the works of reproductive rights advocates and feminist theorists, who generally endorse the Cairo consensus position and assume in their writings that there is a right to procreate, expressed in American-style, absolute terms, that rules out anti-natalist interventions. In common with the legal strand, these works are lightly theorised; authors do little more than to gesture towards women's rights or interests in liberty and bodily autonomy by way of explaining how we have a right to create children. As such they offer little by way of philosophical arguments for the purposes of the present analysis. But for the general public at least, they are perceived as *the* works on reproductive rights. Several of the authors were involved with the development of the Cairo consensus. The mid-1990s are recalled as an exciting time when activists from diverse backgrounds joined forces to secure an ethical breakthrough: the re-framing of population concern in terms of gender inequality, poverty, and inadequate access to broad reproductive health services. As one might expect, these authors' positions are generally contrary to the arguments and assessments I make in this analysis, but not uniformly so.

At the extreme end of this strand are the works of Betsy Hartmann, a professor of development studies and the author of the influential tome "Reproductive rights and wrongs" (1987). Hartmann's book is in its third edition (2016), and still cited today by those seeking to avoid discussing the role of procreation and population growth in relation to such threats as catastrophic climate change⁷⁷. Rather incongruously for a noted feminist activist, Hartmann is sceptical of the safety or benefits of contraceptives, in particular hormonal birth control, and a critic of what she sees as undue support for family planning when poor countries should be prioritising (other elements of) primary health care⁷⁸. Hartmann rejects the reality, or at any rate the

⁷⁷ For example, noted atmospheric scientist and climate change communicator Katharine Hayhoe gave an online talk at UCL on 2 February 2021. During the Q&A, I asked her what were her thoughts on the role of population policy in climate change mitigation and adaptation. In response, Dr Hayhoe brandished her copy of Hartmann's book and said that she had learned a lot from Hartmann, and that the answer was that in order to respect people's rights we must focus on overconsumption in developed countries. Any consideration of population policies, she said, was completely inappropriate (Hayhoe, 2021).

⁷⁸ See the extensive discussions about contraceptives by Betsy Hartmann in her book (1987). Hartmann concludes that the best approach is to promote gender equality and better sexual health, together with safe and accessible abortion services, i.e. to leave women to avoid pregnancy through "natural" methods with abortion as a backup (1987, p. 286). See also Hartmann's (1994) opinion piece in the New York Times criticising the family planning efforts of Bangladesh. Those efforts were credited with having brought the country's total fertility rate down from 7 births per woman to (in Hartmann's words) "fewer than five today – a considerable achievement", but which she claimed had been obtained via an "ill-conceived

immediacy, of any concern about overpopulation, which she regards as little more than a “tired”, “retro” “hysteria” that “distracts us from the real environmental tasks at hand” (Hartmann, 2009a, 2009b). The “so-called population explosion is over”, Hartmann claims; “the momentum built into our present numbers means that world population will grow to about nine billion in 2050, after which point it will start to stabilize” (Hartmann, 2009b). Hartman assumes that a population of 7, 8, or 9 billion would not itself cause environmental problems or resource depletions. Concerns to the contrary, in her view, amount to “narratives” that ascribe “negative value” to booming populations in the Global South so as to “promote the interests of powerful economic, defense, development and family planning interests” (Hendrixson and Hartmann, 2019). The right to procreate, in Hartmann’s view, is absolute and inviolable. *“No matter how perilous the population problem is deemed to be... the use of force or coercive incentives/disincentives to promote population control is an unjustifiable intrusion of government power into the lives of its citizenry”* (Hartmann, 1987, pp. xviii–xix). Hartmann would no doubt oppose my characterisation of overpopulation as a present and serious harm, and disagree with my argument that overpopulation limits the right to procreate. Hartmann also openly endorses the rationality, and at least implicitly the moral permissibility, of parents living in poverty having numerous children so as to benefit from their children’s labour, or to secure support and care in old age (Hartmann, 1987, pp. 6–9, 20). This comfort with utilitarian motivations for parenthood, or instrumental valuing of children as means to their parents’ ends, suggests Hartmann would strongly disagree with my analysis of justice-based constraints on the grounds for a right to procreate.

At the opposite end of the spectrum in the political/activist strand of literature are the empirically informed works of Ruth Dixon-Mueller, a feminist demographer and professor of sociology. Her most important contribution to the literature is her 1993 essay collection, “Population Policy and Women’s Rights”. It is particularly notable for its snapshot of what an experienced writer in the field of population and womens’ rights thought the UN formulation of a right to “freely and responsibly determine the number and spacing of children” meant before the Cairo consensus came along to repurpose it into a pronatalist norm. As of 1993, Dixon-Mueller interpreted the UN formulation as a right to family planning, not a freedom to have children or reproductive freedom, which she took to be a related right claim conceptually tied to the idea of a right to marry and found a family. She notes that reproductive freedom is not absolute, “for it may conflict with other rights and freedoms and thus conveys certain responsibilities” (1993, pp. 12–13). Drawing from her expertise as a demographer, Dixon-Mueller critically engages with the question of what it means to

crusade for population control” resulting in an “aggressive family planning policy” which had “worked against establishing a primary health system”. The article prompted the publication of at least three letters to the editor highly critical of Hartmann’s take, from Edson Whitney (1994), an international aide worker who had set up the Bangladesh Center for Communication Programs, Pastor B Sison (1994), a World Bank official who specialised in matters related to Asia, and Dhiraj K Nath (1994), Deputy Secretary of Bangladesh’s Ministry of Health and Family Welfare.

have a right to family planning, or to freely decide on the number of children. She identifies the problem of how fertility preferences are socially constructed, making it almost impossible to know if a woman's choice is really her own. In addition, people's reproductive behaviour is often at odds with their stated preferences (1993, pp. 113–115). Dixon-Mueller therefore might agree with my arguments about how overpopulation harms a society's capacity to discharge its obligations in respect of people's basic rights and most important interests. She sees the role of governments as, "ideally, to balance in practice the sometimes contradictory demands of individual freedom and social entitlement as abstractly defined" (Dixon-Mueller, 1993, p. 15). Crucially, Dixon-Mueller shared none of Hartmann's skepticism towards overpopulation or the importance of family planning:

"There is... a tendency among some feminist groups to deny the existence of a global population problem. By focusing on pervasive social injustice and inequalities in the distribution of resources across and within nations, they do a great service to our understanding of the root causes of poverty. Unfortunately, however, the analysis often leads to the conclusion that family planning programs are unnecessary, or that they must be rejected under certain political circumstances, or that the fundamental problems of poverty and injustice must be solved first. (...) There is an urgent need for a gathering of feminist forces that will (1) recognise that population growth at the global level is a problem that must be solved; (2) articulate a set of feminist principles on which a responsive population (reproductive) policy could be based...." (Dixon-Mueller, 1993, pp. x–xi).

The period of 20 or so years between the late 1980s and the late-2000s were the heyday of publications in the political/activist strand. Most authors fall somewhere in between Hartmann's dogmatic activism and Dixon-Mueller's pragmatic theorising. Among the most prominent of these writers are Sonia Corrêa (1994; 1999), Rosalind Petchesky (1990, 1997; 1998), Laurie Mazur (1994, 2010), Adrienne Germain (1994; 1995; 2012), Jyoti Singh (2009), Laura Reichenbach and Mindy Jane Roseman (2009), and Frances Kissling (1994, 2009, 2010; 2018).

The legal strand

The legal standpoint is represented by works of legal theorists, practitioners, and bioethicists who focus on jurisprudence and legislation insofar as it pertains to procreation, or sometimes issues of bodily integrity and consent. Many of these authors are from the United States (US), and thus often attempt to interpret a right to procreate through the lens of a constitutionally unenumerated right to privacy under American law. This tends to yield a Cairo consensus-style view of the very strong protected liberty to create children. This is not a coincidence, given that the Cairo consensus, as discussed earlier in this chapter, was greatly influenced by emerging absolutist reproductive rights talk in the US.

In common with the political authors, the legal standpoint tends to focus on the right to procreate as though a protected liberty, though a number of these authors are unwilling to countenance it being plausibly absolute. These works, too, tend to be lightly theorised, with notable exceptions, such as Carter Dillard's contributions. Most of works in the legal strand focus on questions pertaining to assisted reproduction technologies and abortion, including sometimes questions about the determination of legal parentage.

Carter Dillard, an American activist, legal scholar and lawyer, has written papers directly pertinent to the topic being analysed here, approaching the question of a right to procreate from a legal-theoretical perspective. Dillard argues that is little (legal) authority for a right to procreate in the US, and that law practitioners tend to mistakenly conflate procreation with conceptually distinguishable behaviours. The normative confusion is made worse by assumptions of procreation as having intrinsic and overriding value, which he says leads lawyers to overlook the limits of the right to procreate. Dillard's legal reasoning, including arguments about natural rights, arrives at the conclusion that the right to procreate includes at least the act of replacing oneself, and at most procreation up to a point that optimises the public good (Dillard, 2007). This is a similar conclusion to mine in relation to the limits to the right to procreate, though arrived at through different arguments. Dillard also argues against autonomy and relational values as the grounds for a right to procreate, finding instead that self-regarding values (such as perpetuating one's genetic lineage) are more plausible grounds. This is rather different from my view of the grounds of a plausibly justified right to procreate, but again, Dillard's conclusions and mine are functionally similar: the interest(s) grounding a right to procreate are "sated when one has one child" (Dillard, 2010c). Finally, Dillard, too, argues for a harm-based precondition to the exercise of a right to procreate, conceptualising the harm as creating children in circumstances below a defined threshold of wellbeing (Dillard, 2010b). This is akin to my harm-based precondition, which if not met means that procreation is not a matter of right and moreover that it is wrongful.

Ronald Dworkin, focusing principally in the morality of abortion from a perspective of American constitutional law, speaks of a right of people to control their own role in procreation unless the state has a compelling reason for denying them that control (1993, p. 148). Insofar as he meant this as a more general conceptualisation of a right to procreate, his definition seems compatible with my conceptualisation of the right to procreate as both pre-conditioned and limited (or limitable) on grounds of harm to the prospective child or to society's ability to satisfy everyone's rights and interests.

Another legal scholar is worth mentioning here. Dov Fox (2019) has written about the reluctance of courts to hold providers of assisted reproduction services accountable for a multitude of mistakes, including the accidental destruction of embryos ("procreation deprived"), missed chances to avoid procreation ("procreation imposed"), and gamete mix-ups ("procreation confounded"), including thwarted

efforts to choose a child's sex or genetically determined characteristics, or to screen against disability. Fox suggests that these sorts of procreative harms arising from third-party negligence baffle legislators and judges partly because they are not as tangible as the more ordinary harms courts are used to dealing with, and partly because traditional thinking about procreation and parenthood has not kept up with the new possibilities created by technological developments. I similarly argue that we tend to avoid engagement with procreative harms because they are unusual and lack the usual linkage between a causative evil-doer and an identifiable (and already extant) victim, and that the availability of reliable contraception has changed the morality of procreative behaviour.

The philosophical strand

Finally, the **philosophical** literature comprises the works of political theorists and philosophers. There is a wealth of theoretical materials in these works, though as noted above philosophers often shy away from more definitive pronouncements about the contours of the right to procreate, as might be required to actually guide policy-making and legal interpretation.

In common with authors in the legal strand, philosophical writers were not involved in advocating for the Cairo consensus, and rarely take explicit account of the position enshrined in the ICPD documents and subsequent UN publications. Their focus tends to be on particular normative aspects of procreation, such as parental rights and duties, the permissibility of certain assisted reproduction techniques, and what obligations, if any, are owed towards future people. Where proposals are made about whether and when coercive limitations are permissible, the conclusions in the philosophical literature tend to be tentative and offered more as provocative ideas not intended to assist practical policy-making.

Mine is a distinct endeavour. I want to do as much as possible to rehabilitate anti-natalist policy-making and help release it from its present conceptual, normative, and indeed political logjam. I hope to do so with the comprehensive, evidence-backed account of the right to procreate, its foundations and the limits of its morally justified scope.

Christine Overall (2012) offers what might be the closest thing to philosophical support for the Cairo consensus, in that she argues for a strong 'negative' right to procreate without interference. Overall's version of a right to procreate, like the Cairo consensus version, does not appear to be limitable, though confusingly Overall claims it is can be wrong for people to exercise the right, or that they may have an obligation not to exercise it. But in Overall's view, the wrongfulness does not warrant state policies to incentivise rightful procreative conduct, or to discourage or penalise wrongful procreation, presumably because parents are answerable only to their own conscience for irresponsible procreative decisions. By way of examples of situations that may warrant an obligation on prospective parents to refrain from procreating, Overall cites

people who will be bad parents, or who suffer from such severe impairments that their capacity to care even for themselves is compromised or eliminated (2012, p. 170), or who would deliberately create offspring into a life of serious suffering (2012, p. 156). These examples would also fail to engage a right to procreate under the preconditions I argue for in Chapter 6. However, I argue that in such cases the right to procreate is not engaged, rather than the different argument Overall seems to advance, that under those difficult circumstances it is wrong for people to exercise the right to procreate but it is still engaged (that is, it still applies).

Overall has less to say about prospective parents living in extreme poverty or very dangerous conditions; if they are responsible persons, they should at least “hesitate” to procreate (2012, p. 147). In relation to overpopulation, Overall strongly rejects the popular argument that a person can have as many children as they like provided they can sustain them all and do a reasonable job of rearing all those children. She also considers that humanity’s long-term goal must be a population size compatible not only with our continued existence, but with everyone being able to thrive. And yet, she thinks we ought not to put pressure on people to have fewer children, let alone require them to exercise restraint. She seems to argue for a limited right to procreate at replacement-level fertility: *“we should consider it morally justifiable for every individual, whether in a relationship or not, to have one biologically related child; it would then be permissible for a couple to have two.”* But she is not arguing for any real limitation. Overall claims to be *“doubtful that social policies should be put in place to enforce this moral obligation”*; instead, procreation should be *“undertaken with a commitment to self-limitation and to the moral limitation of one’s choices”* (Overall, 2012, pp. 180–84).

John Robertson’s 1994 classic, *Children of Choice*, offers perhaps the best-known defence of a right to procreate with presumptive lexical priority in moral conflicts, argued on the basis that *“control over whether one reproduces or not is central to personal identity, to dignity, and to the meaning of one’s life”*. It is unclear from his arguments, however, why he thinks procreative freedom should have such priority over our other interests, or in what way this priority should be manifested. To start with, Robertson’s lexically prior right to procreate is explicitly not an absolute right, though it *“sets a very high standard for limiting [the right to procreate], tilting the balance in favour of reproducing but not totally determining its acceptability”* (1994, p. 30). Decisions to have or to avoid having children, Robertson says, are personal decisions of great import that determine the shape and meaning of one’s life (1994, p. 24). The “presumptive right” to procreate depends on whether a person has capacity *“to find significance in reproduction”* (1994, p. 30). I similarly argue in Chapter 6 that our interest in normative agency pertains to the freedom to make *considered choices* in pursuit of one’s conception of the good life, of which the decision whether to become a parent unquestionably plays a major role, and that if normative agency is not exercised then the right to procreate is not engaged.

Robertson also advances a motivational constraint similar to my own: “*procreative liberty would protect only actions designed to enable a couple to have normal, healthy offspring whom they intend to rear*” (1994, p. 167). Robertson considers that the kinds of conflicting interests, or harms, that could warrant the limitation of one’s freedom to procreate via natural means include “the heavy costs it would impose on others”, which could be the case “*if there were severe overpopulation, or if the persons reproducing were unfit parents, if reproduction would harm offspring, or if significant medical or social costs were imposed on others*”. These are similar to the same grounds of limitation as I raise in arguing for the harm precondition and the limits to the right to procreate. The main difference is that I argue that we absolutely must not wait for overpopulation to become severe; due to population momentum, waiting until overpopulation is noticeable and severe is tantamount to deciding to do nothing and just tolerate whatever harms occur. In relation to the respect owed to the prospective child, however, Robertson takes a very different view to mine, arguing that creation only wrongs the child if the circumstances of their birth are so harmful that the child would prefer not to live at all (1994, pp. 75–76). Perhaps Robertson has in view a potential liability of parents to compensate children for wrongfully creating them. This is a rather different question to that I am seeking to answer, about the right of parents to create children. The threshold he sets for procreation not being wrongful is so very low that it would mean parents virtually never wrong their children by creating them, however adverse the circumstances or predictably limited the child’s life chances.

John Harris (2003, 2007) argues that the “democratic presumption” in favour of individual liberty protects a wide freedom to access reproductive technologies, including those used for enhancement purposes. Harris conceptualises the right to procreate as a strictly negative right of non-interference, but accepts that it can be limited if it can be shown that sufficiently serious harm to individuals or society would result from its exercise. Though Harris requires that such harm must be “real and present, not future and speculative”, I do not think he is objecting to the kind of future-oriented and therefore necessarily uncertain harms of overpopulation. I take him to defend a strong presumption that people should be able to use reproductive technologies such as genetic selection without being subject to restrictions based on speculation about future harms that might arise *from such technologies*.

Focusing on the ethical issues of pre-implantation genetic selection, Dan Brock is keen to balance parents’ rights to shape their children against societal interests in the nature of its population and both of those against concerns about “eugenics”. Brock asserts a negative right to decide whether to procreate, with whom among willing partners, when, and however many times. He also seems to believe that persons with serious mental disabilities are entitled to create children (Brock, 2005, pp. 82–83). So his understanding of the right to procreate seems, on its face, to imply a much more demanding right to procreate than the one I propose, and one much more insensitive to creation harms imposed upon children by parents in satisfying their procreative

preferences. But perhaps the difference is not so great. Brock stresses that “*the right to reproductive freedom, while a fundamental moral and legal right, is not an absolute right that can never be justifiably infringed. It can come into conflict with other rights and interests. (...) It would be a mistake to think that the right to reproductive freedom is unitary in content or moral importance, a mistake that would lead to failure to balance appropriately particular aspects of reproductive freedom arising in specific contexts when they come into conflict with other broader societal interests in the nature of the citizenry*” (2005, p. 86). In other words, Brock argues (and I agree) that the question of whether there is a right to procreate isn’t a simple yes or no, all or nothing. There are gradations of entitlement and permissibility, turning on the rational and just resolution of moral conflicts and wrongful harm.

John Robertson, John Harris, and Dan Brock’s favouring of a strong procreative liberty needs to be appreciated in light of their view that emerging, assisted reproduction technology-created options should not be withheld from prospective parents without very good reason. In turn, Christine Overall’s defence of a Cairo consensus-flavoured version of a right to create children may be appropriately contextualised through her focus on the rights and interests of women, as the ones who conceive, gestate, deliver, and bear the brunt of caring obligations for children. In contrast, Sarah Conly’s *One Child* and Rivka Weinberg’s *The Risk of a Lifetime*, both published in 2016, analyse the right to procreate from a more general moral perspective. Weinberg arrives at conclusions with which I broadly agree in relation to the pre-conditions to a right to procreate; Conly, in turn, comes to a similar position to what I argue for on the matter of the limits of the right to procreate.

Rivka Weinberg addresses the morality of procreation from the perspective of the prospective child, whose wellbeing interests are generally in conflict with the autonomy interests of their would-be parent. Weinberg argues that existence is inherently hazardous to the child, and that parents are responsible for the imposition of those hazards, for it is within their power to prevent the conception and birth of children by not allowing their own gametes to unite with others and develop into persons. While she rejects the view that these existential harms render procreation always wrong (as most prominently argued by David Benatar), Weinberg concludes it remains not only a welfare risk but a moral one, that can only be permissibly imposed if principles of procreative permissibility are met. These principles are (1) procreative balance – where the risk the would-be parent is to impose on the prospective child is a risk it would not be irrational for the parent to accept as a condition of their own birth in exchange for the permission to procreate under the same risk conditions. Her procreative balance principle is similar but I think more complicated and less action-guiding than my harm-based precondition. The other principle is (2), a motivational restriction, rather similar to my own, whereby procreation must be motivated by the desire and intention to raise, love, and nurture one’s biological child.

Sarah Conly outlines two alternative accounts of the right to procreate, one grounded

in (bodily) autonomy interests, the other in more general wellbeing interests. She concludes, as I do, that any basic interests we may have in procreation are satisfied by having one child, and this accordingly limits the moral justification of our right to procreate. On the autonomy version of the account, Conly argues that our liberties are always limitable by other moral considerations such as harm. She argues that overpopulation and its many facets, such as climate change, is the kind of harm that would limit the right to procreate on an autonomy-based account to just one child. One weakness of her account is that, while Conly acknowledges that the application of the harm principle is less straightforward in relation to the more indirect, unintentional, and/or incremental harms of procreation in fuelling overpopulation, she does not properly develop her argument of why the harm is nonetheless capable of limiting the right to procreate. Instead Conly briefly gestures at how the law can overcome our collective failure to address incremental harms (2016, pp. 93–98). I have endeavoured to offer a more robust argument on this quarter, by conceptualising overpopulation as well as the types of harms that are commonly (but incorrectly) assumed to not be capable of justifying limits to liberties, which comprise the typical harms arising from procreation. Conly’s account of a limited right to procreate, however, stands out for explicitly endorsing legal sanctions, such as a system of fines on “excessive reproduction” where necessary to achieve compliance. Conly quite reasonably caveats this with the hope that sanctions would not be necessary, and that we could address overpopulation by educating the public together with a system of appropriate incentives and fines (Conly, 2016, p. 137).

Finally, Carol Kates (2004) is the rare example of a philosopher who is clearly aware of and engages with the Cairo consensus. In a comprehensive paper published ten years after the Cairo conference, Kates summarises empirical evidence suggestive that a *very substantial* reduction in population is required if we are to avert catastrophe and secure for everyone an equal, desirable, and sustainable standard of living. She points out that a purported absolute right to reproductive self-determination would be at odds with Article 29 of the Universal Declaration, which asserts that everyone has duties to the community and that rights and freedoms are subject to limitations to protect the rights and freedoms of others as well as to ensure the general welfare. She argues that proponents of reproductive liberty such as Amartya Sen tend to misunderstand or gloss over sociological and demographic factors that argue for more forceful interventions. This, too, is one of my arguments; the Cairo consensus does not assert a plausibly moral right if one understands such key demographic concepts as population momentum. Kates concludes that nations should implement whatever population policy is most likely to be effective at mitigating unsustainable population growth in their own context, noting that it is unlikely that we can achieve sufficiently rapid population growth without some coercive measures.

There are many other relevant and interesting works concerning procreation and parenthood. The ones I summarise above are a sample of those which seem most directly pertinent to the specific question I am trying to answer in this analysis, namely

whether we have a justified right to unfettered procreative discretion, and if not, what justified right do we have.

My account of the right to procreate arrives at many similar or in some respects identical conclusions on different aspects of the right to procreate. I believe my analysis is rather more ambitious than those currently represented in the literature. I attempt to make sense of the right to procreate in light of its legal and discursive history, and to understand how we came to have a highly unstable and morally self-defeating set of assumptions about procreative entitlements. In place of those assumptions I set out my conceptualisation and account of a justified right to procreate, one that is coherent and contains within itself the resources to accommodate our evolving understanding of procreative harms, with philosophical robust, stable normative conclusions that clarify the practical implications for anti-natalist policy-making. I view the areas of coalescing views between my analysis and existing works in the relevant literature as an encouraging sign that my conclusions are not only plausible but fairly inevitable given appropriate thought and reflection on this difficult subject.

3.7 Conclusion: Desiderata for a robust philosophical account of a plausibly justified right to procreate

The Cairo consensus view of the right to procreate emerged from the repurposing and transformation of a right to family planning into a right to create other people, understood in American-style terms of absolute liberties. This was achieved through the successful capture of the international discourse on reproductive rights by a mix of conservative and religious political interests in a temporary alliance with women's groups and global justice activists. Each of these interest groups had their own agenda, overlapping only in a preference for a norm proscribing anti-natalist interference with procreative behaviours. They were seemingly untroubled by how to justify an unlimited right to create other persons in a world where societies already faced daunting challenges in meeting the needs of persons already in existence. Indeed, the use of the language of fundamental rights was key to deterring discussion of possible harms caused by procreation, and has been very successful at it.

The reinterpretation of the right to family planning into a right of unlimited procreative discretion was no doubt assisted by the omission of a right to procreate in any of the major constitutional or human rights instruments, as discussed in Chapter 2. This created a normative lacuna which many instinctively felt should be filled, if only by creative glosses of existing materials. Understandably, this need to have a norm about procreation was felt only once procreation stopped being perceived as a fact of life over which individuals had next to no control, once it became something individuals could realistically make choices about through the use of modern contraceptives.

Laws and policies deploy the state's coercive and resource-allocation powers, and ought to be rational as well as just and at least reasonably consistent. At present they are none of those things, and arguably cannot be, as there is a lack of a sufficiently clear, action-guiding theoretical explanation of the morally justified content of the right to procreate and of what it means for anti-natalist policies. As James Griffin might put it, the right to procreate, as all basic rights, is an essentially contestable concept; but this does not relieve it of the need to be tolerably determinate (Griffin, 2001, p. 2). This theoretical gap has already caused serious damage to the rationality of resource allocations in societies worldwide, as the immediate demands brought by the sheer multiplication of our numbers continue force reallocation of resources to, in practice, support the expression of a very narrow human interest in procreative freedom.

The legal and ideational discussions in Chapters 2 and 3 were intended as a deconstruction of the right to procreate, as presently assumed to exist, by tracing the intellectual history of the concept. What follows in the next Chapters is an attempt at a philosophically robust *reconstruction* of a right to procreate, grounded in uncontroversial value commitments and seeking a good level of fit with other existing norms and ethical ideas. This is broadly in keeping with Griffin's (2001) approach to providing the best philosophical account of human rights as moral and legal concepts. We start, in Chapter 4, with an explicit statement of the conceptual, theoretical, and evaluative commitments underpinning my account. The idea is to ensure that any disagreement by a reader is about the persuasiveness of an argument made, and not doubt or confusion about what is meant when often-abused terms are deployed, or what is being assumed to be important and why.

Chapter 4: Accounting for a plausible right to procreate: conceptual, theoretical, and evaluative approach

4.1 Introduction

I have already clarified in section 1.5 that when I refer to the right to procreate and to any potentially competing right I mean a fundamental or basic right in respect of which there is purported moral justification, and which is capable of at least partial correspondence with a legal right, whether or not there is a corresponding legal right. As further explained in Chapter 2, though it is widely assumed that there is a legal right to procreate, its legal basis and content remain highly uncertain, as it is generally implied out of rights to privacy (which in the US are themselves implied). But to the extent that a legal right is assumed to exist, it will variously be regarded as a constitutional right or a (legal) human right.

My focus is primarily on the right to procreate as a moral right. I consider that the inevitable moral conflicts involving the unique normative features of a right to create other persons are best resolved within a framework of philosophical grounding and coherence testing with competing moral considerations of comparable or higher priority. Some of these moral considerations will themselves be fundamental rights; others may not fit the mould of a right, though they might still be described as such. It is a common habit of normative discourse to describe almost anything that is felt to be morally important in the language of rights, in particular if one regards rights as the end-point of morality⁷⁹. I do not.

I share Raz's view that there are fundamental moral duties that do not derive from or correlate with rights, including for example state duties to maintain collective goods constitutive of the very possibility of individual autonomy (Raz, 1986, pp. 200–203; 210–213, 1989). Such duties may conflict with the demands of a right to procreate, or indeed any other right. This kind of conflict – between a right versus something other than a right – needs to be rationally resolved, rather than waived away via unwarranted assumptions about the moral priority of the very rights claims the justification of which we are trying to assess. I suggest the way to do this in a properly reasoned and systematic fashion is to look under the normative hood and consider the ultimate values that ground duties of all kinds – whether correlating to basic rights or to non-correlative duties – and assess the relative moral priority of their various expressions.

⁷⁹ Ronald Dworkin (1997) and J L Mackie (1978), for example, take the view that morality is rights-based.

These ultimate values, I suggest, are components of or conditions to human wellbeing, in combination with the most basic (or least controversial) requirements of justice, in a modified interests-based theory of rights. Together, these two types of moral values – one teleological, the other deontological – are capable of accounting for fundamental rights as well as duties of all kinds, without straining concepts, drawing upon overly idealised assumptions about human nature, or implausibly focusing on agency or freedom at the expense of all other basic human needs. My approach explicitly provides for requirements of justice and wellbeing interests to interact with and modulate the moral demands of one other. This modest value plurality represents a departure from traditional interest-based theories of rights, which I briefly summarise in this chapter by way of situating and distinguishing my own approach.

4.2 The language of rights

The term “right” is used in a systematically ambiguous manner in ordinary language (Wenar, 2005). We use it to mean anything that is as it should be. In addition, it is common, in lay parlance as well as human rights activism, to describe all sorts of interests as rights, as a way of signalling that the interest is felt to be legitimate or important⁸⁰. Philosophers often use the term interchangeably with moral principles, social goals, human interests, or imperatives of justice.

The concept is no more determinate when it comes to the law. As put by noted American jurist Wesley Newcomb Hohfeld, “*the word ‘right’ is used generically and indiscriminately to denote any sort of legal advantage*” (Hohfeld, 1917). In human rights instruments and case law we find general ideals, non-correlative duties, and contingently realisable desiderata sometimes expressed in a manner indistinguishable from the enumeration of rights.⁸¹

⁸⁰ As James Griffin puts it, “It is a great, but now common, mistake to think that, because we see rights as especially important in morality, we must make everything especially important in morality into a right.” (2008, p. 43)

⁸¹ See for example the following provisions in articles of the Universal Declaration of Human Rights: art 1 (“All human beings are born free and equal in dignity and rights. They are endowed with reason and should act towards one another in a spirit of brotherhood.”); art. 22 (“Everyone... has the right to social security and is entitled to realization... of the economic, social and cultural rights indispensable for his dignity and the full development of his personality.”); art. 25 (“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of ... lack of livelihood in circumstances beyond his control.”); Article 26 (“... Elementary education shall be compulsory....”); art. 28 (“Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.”); art. 29 (“Everyone has duties to the community in which alone the free and full development of his personality is possible.... These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.”).

Here, when I refer to “a right” I mean a particular kind of norm characterised by directed respect.⁸² Specifically, for A to have a right is to have a claim over a duty of B for which B is publicly accountable to A. That is, I hold that **a right must correspond to at least one correlative duty owed to the right-holder**. This is a traditional conceptualisation that generally corresponds to what Hohfeld’s influential analytical classification of the elements of jural relations describes as a claim-right, or as the true meaning of “right” in its strict sense (Hohfeld, 1917; Waldron, 1984).

When it comes to basic, fundamental, or human rights, the duty-bearer B will be principally the state, and the right-holder A could be any individual directly subject to the actions or inactions of the state⁸³. When B fails to discharge a duty that correlates to A’s right, it is not only a wrong, but a wrong done to A.⁸⁴ Rights have correlative duties of this directed character; this is what distinguishes rights from interests, ideals, or unresolved moral demands. But the reverse is not true; I do not hold that a duty is only a duty if it correlates to a right. It is clear to me that there are many non-correlative duties, some of them very important, and that trying to speak of such duties in terms of rights would strain the concept of right out of any meaningful normative structure, and yield unnecessary confusion.⁸⁵

Non-correlative duties include, for example, duties imposed on the public at large by operation of the law or by requirements imposed by public regulators are owed to society at large or to entities not capable of holding rights, such as animals or future persons.⁸⁶ Consider for example, our duties to pay taxes, to refrain from vandalism or environmental fouling, to abide by animal welfare requirements, to not practice law or medicine without a valid professional license, etc.⁸⁷ This also includes strictly moral duties, for example to make an effort to inform oneself before making a voting

⁸² See for example Gosseries (2008), Meckled-Garcia (2008), Tasioulas (2010, 2019), and Cruft (2013).

⁸³ At least some (legal) human rights obligations are capable of extra-territorial application (Janig, 2022).

⁸⁴ Compare with Joel Feinberg’s suggestion (1973) that a right is “something a man can stand on, something that can be demanded or insisted upon without embarrassment or shame”.

⁸⁵ As Hohfeld (1913) put it, “*in any closely reasoned problem, whether legal or non-legal, **chameleon-hued words** are a peril both to clear thought and to lucid expression.*” [emphasis added]

⁸⁶ Future persons are human beings who will be born at some point in the future, though we do not know their precise identity or number. They are distinct from hypothetical persons, who are strictly imaginary. We can only owe duties to future persons, and not to hypothetical persons. See sections 5.6 and 6.5.

⁸⁷ Some theorists view rights and duties as strictly correlated. In their view, a duty such as the one to pay taxes is in fact correlated to the rights of members of the duty-bearer’s community, themselves fellow duty bearers (for example, a right to properly funded public services), or alternatively correlate to a right of the state. See for example Matthew Kramer’s defence of the “correlativity axiom” (Kramer, Simmonds and Steiner, 1998). These approaches tend to deprive the concept of “right” of any distinctive meaning or shape, and seem to overlook duties that cannot sensibly be held to correlate to a claim, such as the duty of a person convicted of an offence to serve whatever sentence or conditions are imposed on them. Such a duty correlates to a combined power, duty, and liberty of the judge to impose a fair sentence or conditions, to be achieved by the considered exercise of discretion and with attention to applicable guidelines.

decision during a general election. A duty-bearer B who fails to discharge a non-correlative duty is not accountable for it to any individual as right-holder; no person in particular has been wronged. Instead, person B wrongs *everyone* by a small, dilute degree, as is typical of collective action problems, a topic we shall return to in Chapter 5. Similarly, basic state duties to make rationally justifiable, procedurally proper, and fair decisions on the exercise of its coercive power, or about the distribution of costs and benefits across society, are generally owed to everyone in a diffuse fashion, and to no one in particular⁸⁸.

Rights and bare liberties

There is an important and too-often overlooked distinction between what I describe as a right versus an absence of duty, that is, a mere **bare liberty**. In Hohfeld's scheme, this is somewhat confusingly dubbed a "privilege", while (even more confusingly) a number of other authors refer to it simply as a "liberty", which is also a term commonly used for actual rights comprising protected liberties⁸⁹. Liberty interests ground a number of fundamental rights. But the vast majority of our liberty interests do not amount to rights; their sole normative expression is as a bare liberty. The distinction is erased when someone speaks of a person having a *right* to do X when what they mean is that that person has done nothing *wrong* because they are not prohibited from doing X, or have not undertaken to refrain from doing X⁹⁰. Importantly, a bare liberty does not imply any duty on the state to *not* to impose a relevant prohibition or restriction upon that liberty. It is no right at all, but simply that which we are allowed to do until such time as we are not.

Imposing any prohibition or restriction on personal liberties is often deeply unpopular, at least initially – consider, for example, the opposition to lockdowns and to face mask mandates during the covid-19 pandemic. Opposition to conduct regulation is particularly strong in liberal or libertarian societies that prize the minimisation of encumbrances upon the choices open to individuals as they go about their lives. But unpopular measures are not by that reason illegitimate or wrongful. Any decision by the state which affects people's lives and affairs always needs to be reasonable, proper, and fair in its aims and execution. But a measure restricting or prohibiting the exercise of a particular bare liberty only needs to be justified in terms of general proportionality, of not trying to use a sledgehammer to crack a nut. In contrast, while most liberty-based rights accept limitations, conditionality, or restrictions, they usually must be much more robustly justified, the implication being that there is something

⁸⁸ Hence the usual challenge of demonstrating that an individual, group, or organisation has sufficient standing to challenge a law or administrative decision by a government body.

⁸⁹ Ronald Dworkin, for example, rejects the idea of an abstract right to liberty; in his view, "there exists no general right to liberty" (1997, p. 269).

⁹⁰ "A person who says to another 'I have a right to do it' is not saying that... it is not wrong to do it. He is claiming that the other has a duty not to interfere." (Raz, 1995)

wrong being done to the right-holder for which there needs to be a very good reason to outweigh that wrong.

Referring to a bare liberty as a “right” confuses any one generic expression of our broad autonomy interest with an actual liberty-based right. It also misleadingly implies a much higher threshold for legitimate interference by the state than is in fact warranted, encouraging evaluative mistakes. Life in society, after all, requires all sorts of compromises, which in the main ought to be brokered by appropriate conduct regulation by the state. Where such regulation is impeded by mistaken assumptions about what rights we have, we face unnecessary attrition between individuals, and allow those better placed to press their own interests to do so at the expense of the interests of others. It is important, therefore, to keep the two concepts separate. A right comprises a (morally justified) claim or entitlement of person *A* that duty-bearer *B* act in a particular way – refraining from interfering with an activity of *A*, or providing *A* with a certain service or resource, or treating *A* in a particular manner. But it does not include the multitude of things which *A* is under no duty to *not* do, that is, *A*’s bare liberties. When I speak of a right which is or includes a liberty I mean only whatever liberty is protected by the right and correlates at least one duty, and not any conceptually related bare liberties⁹¹.

One immediate usefulness of the distinction is that if a right to procreate – in its Cairo consensus guise or any other – were found to be incapable of justification, or otherwise not engaged in any particular case, the result is not that procreation is (necessarily) wrongful. It is simply that procreation is not a right, or a protected freedom, but instead a general liberty subject to government regulation that would not need to satisfy the higher thresholds for justification of interference with activities or choices within the content of a liberty right.

For procreation to be wrongful, one would need to go one step further and argue for deontic restrictions on the freedom to create other persons, that is, for the imposition of a duty on *A* not to procreate, thus constraining or removing the bare liberty. I do argue for the imposition of such duties in Chapter 6, in relation to circumstances where creating a person would involve such disrespect to the wellbeing interests of another as to be wrongful. This is a subset of circumstances where the right to procreate is not engaged, as distinct from where the right is engaged but subject to limitations in its exercise (that is, in the number of children one is entitled to create if they so wish).

⁹¹ See for example James Griffin’s related account (2007) of a materially constrained, narrowly conceptualised right to liberty. Griffin contends that his personhood account means the domain of liberty is limited to what is major enough to count as part of the pursuit of a worthwhile life, as distinct from those liberties open to us in the large residue of all that we are free to do because we are not subject to justifiable restrictions.

4.3 Theories of rights

In this section I outline the main theoretical approaches to accounting for rights in general, and explain how they inform my own approach. Human rights are a bit different, in that many authors adopt a political (and therefore largely non-philosophical) approach whereby rights are identified via international legal instruments and practice or, in some cases, social consensus. Approaches to accounting for human rights are discussed in the next section.

I shall adopt the position that a right must do something good for the right-holder specifically. This is what makes a right a right, as distinct from other norms aiming to advance the common good more generally, such as social goals, civic duties and other non-correlative duties of individuals, and general state duties. There are two main theoretical approaches to explaining what rights do for rights-holders. “Will” or “choice” theories see rights as protecting individual choices or personal autonomy; “interest” or “benefit” theories sees rights as protecting or advancing individual interests more generally, of which personal autonomy is one component.

In general terms, **interest-based accounts** hold that a person has a right whenever the protection or advancement of some interest of theirs provides a (good enough) reason for imposing correlative duties on a duty-bearer. The relevant interest would comprise an element or aspect of the right-holder’s wellbeing, dignity or agency. This approach to accounting for rights is taken by, among others, Joseph Raz (1986), Jeremy Waldron (1993), Neil MacCormick (1976, 1977), and Matthew Kramer (Kramer, Simmonds and Steiner, 1998).

Raz’s theory of rights is perhaps the most influential of all interest-based accounts, and my own approach draws substantially from his thinking. Raz argues that moral rights are generally based on interests, corresponding to aspects of the would-be right-holder’s wellbeing⁹² (1986) that are sufficiently important to defeat countervailing considerations and thus justify holding one or more other persons to be under an obligation to the right-holder. An interest is a non-conclusive reason for imposing a duty; recognising that an interest is important does not mean that a duty of any kind is automatically entailed. In Raz’s theory, assertions of rights provide preemptory practical reasons for action which work as intermediate conclusions in arguments from ultimate values to specific duties. We establish if an asserted right actually contains any duties (that is, if there is a right) by a careful process of balancing various interests as well as moral and practical considerations. Raz is clear that not all interests ground rights, and suggests that not all rights can be accounted for in terms of the interests of the right-holder. The key point is that an action serving someone’s interests offers a *reason* for carrying out that action, without establishing a *duty* to do so. Moreover, there is no one-to-one correlation between rights and duties; on the contrary, one

⁹² Raz defines individual wellbeing as “the successful pursuit of worthwhile activities” (Raz, 1989).

right may ground multiple duties, or ground a duty that falls short of securing its object.

A **will theorist** would argue that the function of rights is not to advance important interests but to secure normative control for the right-holder over another's duty. It is that control that grounds a right. As to the justification of duties, it is limited to the protection and promotion of individual autonomy, rather than human interests generally. It assumes that the law must protect individual choices with peremptory duties. In the worlds of H. L. Hart (1982), a right makes the right-holder into "a small-scale sovereign" with a sphere of control over another's duties. Other prominent will theorists include Carl Wellman (1985) and Hillel Steiner (Kramer, Simmonds and Steiner, 1998). A will theorist would insist that a right-holder must be able to decide whether to press their claim against the duty-bearer or to release the duty-bearer from their duties, or to transfer the benefit of that duty to someone else. The right would therefore include a Hohfeldian power to alter the duties of another, together with a liberty of the right-holder and a correlative duty over which the right-holder is free to exercise their power. Will theories do seem apt at describing legal rights, at least in the Anglo-American tradition.

A standard objection to will-theories is that they do not allow for, or cannot explain, inalienable rights, for example why a person is not free to consent to being enslaved, or to agree to being punished by torture. Will theories also struggle to account for the rights of those whose capacity for normative agency is under-developed, impaired or even non-existent, such as children, those with serious mental illness or mental disability, the comatose, etc. But such people surely have rights. They might not be able to exercise liberty-based rights, but this is best understood as reflecting implicit pre-conditions to the enjoyment of liberty-based rights, in that they must logically require the right-holder to exercise agency, as that is what is protected.

Interest-based theories acquit themselves of these charges, but have weaknesses of their own. The main criticism against interest-based theories is that they are implausibly indiscriminate in what interests are capable of grounding rights, which seems particularly problematic with respect to fundamental rights. That any interest, however trivial, could in theory ground a constitutional or human right (which arguably would be the case if the corresponding duty is similarly trivial) would appear to undermine the very idea of those rights as especially important protections. Nonetheless, interest-based theories are considerably more plausible in how they account for human rights. The concern about too many interests as candidate grounds of rights can be addressed by judicious examination of the extent of moral justification of an asserted right considering countervailing moral considerations. This mechanism is well able to address the gap between the multitude of interests people have and the comparatively few human rights with (plausibly justified) strong duties. The robustness of an interest-based theory can be further improved by a justice-based constraint to the interests capable of being human rights, which is my approach.

Ultimately, I take it that the better view is to regard will theories as a sub-type of interest theory that seeks to explain (most) legal rights (Edmundson, 2012), without attempting to account for moral rights, or rights in general. When it comes to robustly justifying the content of fundamental rights, resort to some form of interest-based theory seems inevitable.

4.4 A modified interests-based theoretical approach: part I

In analysing the right to procreate, I adopt a modified version of Raz's theory. Raz holds that assertions of rights provide peremptory practical reasons⁹³ for action which work as intermediate conclusions in arguments from ultimate values to specific duties. I take it that identifying the relevant interest is only the first step in accounting for a right; one also needs to consider the burdensomeness of any correlative duties which the protection, satisfaction or advancement of that interest would seem to call for. The resulting right, with its correlative duties, may be rather more limited than the underlying interest animating it. Not all duties seemingly suggested by an interest can be justified as the content of a justified right. In particular, not all manifestations of an interest can be equally protected or advanced; for some manifestations, the burden of corresponding duties is unfair or irrational. One of the crucial implications of this is that the practical scope of an interest is typically much broader than the normative scope of any right anchored on it. My approach also treats rights as having a dynamic, responsive character (Raz, 1986, pp. 170–171; 183–186). The duties which are justifiably imposed on others as the correlative of a right may become more (or indeed, less) expansive over time, as more information or more options become available, or as our moral sensibilities evolve. For example, the development of inexpensive, safe and reliable contraceptives created a new possibility for advancing people's interests in personal and bodily autonomy, which grounds state duties to at least permit access to contraception, and probably a duty to provide contraception free of charge. And while almost all countries once held that a man's rights within marriage included a right to sexual intercourse with his wife whether or not she consented, marital rape is now criminalised in most countries. The content of a right is not fixed, and can change as we update our judgments concerning the justification of existing or proposed duties.

Raz's theory accepts that moral considerations that are not rights or duties may have comparable importance to moral reasoning (Raz, 1986, pp. 207, 210, 1989). These include non-correlative duties, that is, duties that are not directed and do not correspond to any right, as well as important interests that do not ground or amount to rights, in addition to the cultivation or preservation of certain values or ideals, such as virtue, citizenship, or collective goods. In my approach these become social goals

⁹³ Compare with Joel Feinberg's view of rights as "something a man can stand on, something that can be demanded or insisted upon without embarrassment or shame" (1973: 58-59).

pertaining to the common good, (valid) human interests, entailments of basic requirements of justice (for example, in relation to future persons), non-correlative duties of individuals, and general state duties.

Raz's theory makes it clear that a right cannot demand more of a duty-bearer than the underlying interest(s) would seem to justify. Indeed, it will normally demand *less*, due to competing moral considerations. We identify the content of a right by working out what duties are justified, having regard to the relative importance of different manifestations or applications of the underlying interest against the cost of the duties their protection or advancement would suggest. A right justifies a duty only to the extent that there are no conflicting considerations of greater weight (Raz, 1986, pp. 170–172). If a right demands more than the importance of the identifiable human wellbeing interest would justify, then this extra force needs to be accounted for with reference to another moral consideration - in my account, another wellbeing interest or a requirement of justice, or in some cases considerations grounded in compassion.

One way my approach is significantly different from Raz's is that it seems to me that some basic rights, in particular those pertaining to fair treatment and equality, are far more plausibly accounted for with direct reference to requirements of justice, and not interests. Another departure, perhaps strictly formal, is that I consider interests, not rights, to be the ground of correlative (as well as non-correlative) duties. In addition, in my account, certain interests are explicitly disallowed on grounds of justice and treated as illegitimate and incapable of grounding rights. Specifically, I treat negative other-regarding preferences as illegitimate interests, however common they might be.⁹⁴ By this I mean any interest in having certain people treated less favourably than others, for example on grounds of gender, sexuality, race, social class, age, or generation. The commonality of this kind of expression of one's autonomous preferences for how society should be organised is implicit in, for example, Rawls' afore-mentioned exclusion of formal equality from his list of universal human rights under his political account (Rawls, 1999). Negative other-regarding interests are incompatible with the equality element of the basic requirements of justice, and do not enter into our moral calculus no matter how common, and therefore potentially universalisable, they unfortunately seem to be.

4.5 Theories of human rights

There are two somewhat distinct approaches to explain human rights. Broadly, one approach attempts to identify what rights are human rights by reference to their political function, while the other seeks to test or argue for the normative justification of the moral content of currently recognised or proposed human rights with reference

⁹⁴ Compare with Joel Feinberg's disallowing of "malicious interests, or patently wicked or morbid interests" as incapable of providing good reasons in support of claims of non-interference by, or assistance from, others (1984, p. 215).

to one or more moral values. The first approach is of very limited usefulness in relation to the right to procreate, but I nonetheless summarise it below by way of distinguishing it from my modified interests-based approach as applied to human rights. I then compare my choice of approach to James Griffin's autonomy-focused account and to John Tasioulas's interest-based theory.

Political or functionalist accounts

Political accounts characterise human rights with reference to their (purported) political function in the international political arena. A typical argument is that we can identify what rights are human rights by considering whether their violation is capable of justifying (potentially armed) intervention with a sovereign nation's affairs. John Rawls (1999), Joseph Raz (2007), and Charles Beitz (2009) are prominent examples of theorists adopting a political conception. Advocates of political conceptions of human rights have a plurality of views about what grounds or justifies rights, but share a general skepticism about this being a particularly important question when it comes to human rights.

The primary appeal of political accounts is that they arguably provide a more accurate explanation of contemporary human rights practice, or at least a particular subset of human rights practice, than orthodox, justification-focused theories that see human rights as fundamentally moral rights. Political accounts give human rights a specific role in our reasoning, distinct from the general role attributed to rights. The justification for armed intervention with a sovereign state's affairs also connects up well with the idea that human rights are especially important rights (Waldron, 2013). A further attraction of political accounts is that they tend to yield parsimonious or minimalist human rights claims, taking account of the risk of instability attached to foreign interventions. This can be appealing in light of concerns about the proliferation and potential trivialisation of assertions of human rights (Griffin, 2008; Mchangama and Verdirame, 2013).

The lists of rights identified by authors taking the political approach, however, can be implausibly minimalistic. For example, Michael Ignatieff (2003) argues human rights claims are only justified in relation to securing the minimal conditions for any kind of life at all. In drawing a list of rights he believes would be plausible for all reasonable countries (and not just liberal democracies), Rawls leaves out basic equality rights, which on any plausible view are a distinctive and necessary element of human rights as universal moral entitlements (Cohen, 2004; Nickel, 2007).

Another serious concern about political approaches is that they tend to be descriptive, basing their arguments about what rights there are on what rights are already recognised in human rights instruments and international legal practice. Observations drawn from human rights practice can identify legal human rights as well as features of human rights discourse suggestive of a certain practical wisdom and some strong intuitions about the values underlying legal human rights. But human rights practice

cannot provide a sufficient normative justification for human rights themselves; it is not constitutive of moral rights.

It seems an inevitable conclusion that, seen through the prism of a political account, human rights lack a foundation in moral concern and instead depend on the contingencies of the current system of international relations. This is, indeed, Raz's view of the matter (2007). A political view of human rights then leads to the strange result that the rights we tend to regard as most important are precisely the ones for which we neither have nor seek to provide an account of moral justification. But political accounts are not committed to a view of human rights as either moral or universal. They seek to answer a different theoretical question: what violations of international norms relating to individual rights do or should justify criticism or coercive interventions by international political actors? But this is not the type of question this analysis is seeking to answer. In assessing whether a purported fundamental right has plausible moral justification, one must consider the grounds of the proposed right and what kinds of duties those grounds justify in light of competing moral considerations.

Foundational or orthodox approaches

A more promising theoretical approach, variously referred to as “normative justification”, “foundationalist” or “naturalist”, looks to provide a substantive philosophical account for human rights and their characteristic nature as universal, high priority moral rights. Theories of this sort typically look to ground human rights on some subset or another of human wellbeing interests or needs (Sumner, 1987; Miller, 2012; Tasioulas, 2012), or on natural justice requirements such as equality⁹⁵ or fairness (Nickel, 2007), or perhaps both types of considerations (Talbot, 2010), as I do in my chosen approach.

Dignity as the ground of human rights

Human dignity is frequently invoked as the ground of human rights, for example in Pablo Gilabert's work (2018), or as some supplementary or prior value to relevant human interests, as in the accounts of James Griffin (2008) and John Tasioulas (2015). For some authors it is the source of the relevant human interests. Human rights instruments standardly refer to dignity in foundational terms, that is, as though it is the ground of the human rights asserted (Waldron, 2015; Gilabert, 2018). The problem is that human dignity is an even vaguer and more ill-defined concept than the human rights purportedly derived from it. Christopher McCrudden (2008) suggests that, at least in respect of the Universal Declaration of Human Rights and the United Nations Charter, the grounding in human dignity was intentionally chosen because it had no

⁹⁵ For example, in *Taking Rights Seriously* (1997), Dworkin argues that a person has a fundamental right if that right is necessary to protect their dignity, or their standing as equally entitled to concern and respect, or some other personal value of like consequence, like his liberty.

particular meaning, allowing the drafters to signal the existence of a *bona fide* philosophical basis for human rights without actually giving that basis any real content.

I take dignity, in substance, as a reference to the distinctive moral status⁹⁶ of all human beings, which would in turn demand an appropriate measure of respect for all individuals. But respect for what? Ultimately, for their interests, or for what justice requires in relation to their treatment, or both. Dignity does not seem to usefully add to these grounds, which have more intelligible or determinate content. It is most useful as an explanatory shorthand for the (unabashedly speciesist) claim that all humans – even those permanently incapable of normative agency, like those with severe cognitive disabilities, or those in a permanent vegetative state - are owed fundamental protections. The obvious counterpoint are non-human animals, who have no rights at all though their capacity for suffering and for autonomous and (for some species) reasoned or even moral behaviour⁹⁷ is comparable or exceeds that of many human beings.

James Griffin's agency-focused approach

Another variation of the orthodox approach, favoured by James Griffin (2008) and Alan Gewirth (1982) among others, focuses on agency (or liberty interests) as the foundation of human rights. Of course, many human rights are not conceptually connected with agency, autonomy, or freedom. Broadly speaking, agency-focused versions of justification accounts seek to explain non-liberty rights as implied by or necessary for the enjoyment of liberty rights.

Griffin's theory of human rights is perhaps the best contemporary example of an autonomy-focused account, and is one of the major influences on my approach. His overall aim is to address what he diagnoses as the unacceptable indeterminateness surrounding the normative concept of human rights and to provide an account with at least enough content to tell us, for any proposed human right, leaving aside difficult borderline cases, whether such a right exists and what it is a right to (2008: 20). Griffin repeatedly uses the right to procreate as an example of the problem, noting that, while there seems to be agreement that there is such a right, we have no idea what kinds of anti-natalist policies would infringe it⁹⁸, because we do not know its content.

⁹⁶ Jeremy Waldron similarly views dignity as a status concept, and not a value concept (2009, 2015).

⁹⁷ See for example Range *et al.* (2009), Brosnan (2013), Fox *et al.* (2017), Sánchez-Amaro *et al.* (2019), Masilkova *et al.* (2021), and Wright (2022).

⁹⁸ “*Thirty world leaders, in a statement issued through the Secretary-General of the United Nations, claimed that ‘the opportunity to decide the number and spacing of their children is a basic human right of parents. Does China’s one-child policy then really infringe a human right? Would a five- or a ten-child policy do so too?’*” (Griffin, 2008, p. 14). “*The few criteria attaching to the term ‘human rights’ would leave us with too many unanswered questions. Do we have a human right to determine how many children to have?’*” (*ibid.*, 16) “*In the case of human rights there are so few criteria to determine when the term is used correctly or incorrectly that we are largely in the dark even as to what considerations are taken to be relevant. (...) Do we have a human right to determine how many children we have? Can we even tell what is relevant to the question?’*” (*ibid.*, p. 17)

Griffin identifies the primary ground of human rights as his concept of personhood, comprising autonomy (the ability to form and pursue one's own conception of a good life), minimum provision (the baseline resources and capabilities required to make one's choices real), and liberty (being free to make those choices). This ground is supplemented by the idea of practicalities, meaning "*empirical information about... human nature and human societies, prominently about the limits of human understanding and motivation*" (2008: 38). A possible third ground, equality, is considered but rejected. Griffin stresses that justice, fairness and equality are not exhausted by or subsumed within human rights. These basic values are to some extent internal to the notion of a human right, and may be indispensable in working out its implications, he says, but are not foundational to human rights (2008: 39-44).

I find Griffin's emphasis on autonomy in accounting for human rights unsatisfactory for the same reasons will theories are unsatisfactory in accounting for ordinary rights. It cannot plausibly explain the human rights of those who are unable, in some cases permanently, to exercise any meaningful normative agency. This focus on personal liberty, to which the basic necessities of life are secondary or adjunct, is particularly questionable when it comes to accounting for human rights, which are by definition universal. While it may be a reasonable evaluative assumption for materially secure people from liberal Western societies, for much of the world the idea of trading away key liberties, or even personal dignity, in exchange for secure sustenance is a dismayingly common bargain⁹⁹ suggestive of a different prioritisation. Furthermore, I find that the exclusion of any sort of justice grounding for rights leaves any human rights account unable to explain some uncontroversial human rights, such as the right to a fair trial, or to formal equality before the law.

In my approach, as in Griffin's, the relative importance of rights and other moral considerations is determined by realisation or expression of ultimate values, namely human wellbeing, modulated for truth value by drawing on empirical evidence (this is similar to Griffin's practicalities), together with the basic requirements of justice, supplemented by compassionate regard for those whose interests matter but may not be capable of having rights, such as (for example) future persons.

The broad interests-based approach of John Tasioulas

My overall theoretical approach borrows significantly from the thinking of John Tasioulas, as set out in a number of papers published over the last two decades.¹⁰⁰

⁹⁹ Consider for example the millions of people trapped in domestic servitude and indentured labour, and the perhaps even larger number of people who stay in unhappy or abusive marriages because they would face destitution if they left.

¹⁰⁰ See Tasioulas (2007, 2009, 2010, 2011, 2012, 2013a, 2013b, 2015).

Generally speaking, Tasioulas applies a Raz-style interest-based approach to the problem of accounting for human rights¹⁰¹. Whereas Griffin focuses on normative agency as the principal ground of rights, Tasioulas takes the view that any human interest can plausibly ground human rights. What prevents the proliferation of human rights claims is not the narrowing of possible grounds *ab initio*, but the two thresholds that an interest must overcome before it progresses into a right: *possibility*, and *burdensomeness*. It must be *possible* to serve the putative right-holder's interest through a duty of certain content, and in order to be justified, the proposed duty must *not be overburdensome* towards the putative duty-bearer.

The reasons why it may be impossible for a duty to serve the relevant interest include impossibility (general or contingent), or that the duty may be self-defeating in some way¹⁰². But a proposed duty that would serve an interest may overcome the possibility threshold but be so onerous it would be unfair to impose it. The unfairness may be to the duty-bearer, or arise from the way the duty would set back the realisation of other values, including but not limited to other rights. In my approach, I reserve the term *overburdensomeness* for the former. The term seems to capture well the idea that a proposed duty is sometimes too heavy a burden to impose on the duty-bearer, whose interests and competing duties must also be taken into account. The latter conflict, which I describe as *non-compossibility* in the next chapter, is central to the problem of human overpopulation as well as to questions pertaining to what respect is owed to future persons. *Non-compossibility* speaks to proposed duties that would make it impossible for the state (or some other duty-bearer) to satisfy other duties competing for the same limited resources, or which are otherwise incompatible with comparably or more important rights and interests than the proposed right and its underlying interest(s).

Where a duty does not survive this assessment because it is over-burdensome or non-compossible, it does not follow necessarily that the proposed right or inchoate entitlement suggested by the underlying interest (or potentially, in my approach, a basic requirement of justice) then grounds no duty at all and fails to become an actual right. The proposed duty may be modified – typically, narrowed, or made less demanding – until it can be justified in light of these considerations of cost to competing moral considerations. Furthermore, it is hard to think of any right where the underlying interest or requirement of justice would ground a singular duty and no more. Most human rights are little more than articulations of the underlying interest, expressed at such a high level of abstraction that many possible versions could be argued for, with different bundles of proposed duties, each of them likely comprising many derivative duties as applying to particular contexts or eventualities.

For example, our (equal) interest in being able to earn a livelihood while pursuing the profession or occupation of our own choosing rationally cannot ground for everyone

¹⁰¹ Raz himself does not apply his own theory to human rights, favouring a political conception.

¹⁰² Tasioulas gives the example of a duty to love another romantically, which would defeat the interest in being so loved because romance is predicated on genuine and spontaneous feelings (2015).

an unconditional right to make a living from any profession, such as (say) medicine, criminal law, or civil engineering, where the risk of harm to others rationally calls for relatively restrictive regulation of entry and practice. The corresponding proposed duty correlating to such a right, that is, a duty to allow anyone who wishes to work as a doctor, defence attorney, or civil engineer without having to pass specific tests or obtain and retain professional certifications, would be non-compossible in light of the competing high-priority interests in life, a fair trial, health or bodily integrity of their would-be patients, clients, or members of the public. These interests surely overwhelm the moral importance of any interest in being free to choose these specific careers without being constrained by the cost, time, or intellectual effort required to meet entry and practice requirements. But there are other variations of the interests underlying a right to choose one's occupation. A less demanding duty to (for example) ensure each person is eligible to apply and be hired for any jobs they are able or (where applicable) qualified to do, free from unjustified discrimination, seems much more plausibly justified.

4.6 A modified interests-based theoretical approach: part II

My theoretical approach adopts and adapts Tasioulas' key ideas as described above, which as noted above themselves build on a Raz-style interest-based theoretical framework. It differs mainly by featuring explicit value commitments structured in a manner that has some commonalities with Griffin's approach, and which I believe more plausibly constrain the grounds of human rights to uncontroversial components of wellbeing and requirements of justice, as explained in the next section. I also give justice a somewhat more prominent or more explicit role. In my account, justice dynamically constrains the meaning of wellbeing while being itself constrained by it. As noted in section 4.4, wellbeing interests in the nature of other-regarding negative preferences, though quite realistically corresponding to the deeply held wishes and preferences of perhaps a majority of the world's people, are disregarded in my account on grounds of justice. The meaning of justice is itself constrained by human wellbeing. For example, a norm that endorses the setting back of human interests to no real end other than the realisation of a particular view of morality (e.g. objections to contraception, or to gay marriage) cannot be said to be just.

In addition, the requirements of justice are capable of directly grounding rights and other norms. By incorporating the value of justice in this way, my theoretical approach can better take account of rights, interests and other moral considerations which are substantially justice-based, such as the right to a fair trial or to protection from discrimination, without the need for some complicated or unrealistic story about human beings having wellbeing interests in everyone being treated fairly and equally.

Tasioulas argues that his broad interest-based account is superior to Griffin's for precisely this reason. The target of his critique are rights constructed through counterintuitive, roundabout justifications relating exclusively to our interest in normative agency (Tasioulas, 2013a). Like Griffin, Tasioulas incorporates the concept

of dignity in his account, apparently by way of switching on a deontological constraint, specifically equal respect, onto his interest-based account. But this seems counterintuitive and roundabout to me. The basic requirements of justice are not merely a side consideration or internally generated, somehow, in the construction of rights from human wellbeing interests. Instead, justice is a grounding value, integral to a robust account of what rights we have and of how moral conflicts should be resolved.

Value commitments

In this section I briefly outline what I mean by the requirements of justice and human wellbeing interests as the values capable of grounding rights claims under my theoretical approach. These values, in particular the requirements of justice, can also generate countervailing reasons, and therefore ground constraints to rights claims, reflecting the interplay of deontological and teleological arguments of ordinary moral reasoning.

The basic requirements of justice

This brief conceptualisation is intended to ascribe tolerably determinate meaning to the value of justice as a potential ground to basic rights and also as a potential counter-argument in assessing proposed rights. I regard fairness and equal respect as the most basic components of justice.

Fairness include the impartial adjudication of disputes as well as equal concern for every person's wellbeing. Where one person's wellbeing interests conflicts with those of one or more other persons, as in various procreation-related scenarios under consideration, an impartial adjudication entails resolving the conflict on considered, informed, and rational grounds.¹⁰³ As part of this, we must identify the values at stake, the extent of the conflict between interests (or between interests and other moral considerations), any qualitative ordering of priority between and within the conflicting considerations (more v less important, core v marginal), and the relative cost to each side of the conflict of any proposed scheme of resolution.¹⁰⁴

By equal concern for every person's wellbeing I mean that the wellbeing of every human being counts, and counts the same. Some interests may be more important than other interests as a function of their differing contribution to individual wellbeing - for example, interests corresponding to basic survival needs are more important than

¹⁰³ J. L. Mackie, for example, has argued that there is an absolute right to equal respect in the procedures that determine the compromises and adjustments necessary to determine the scope of other rights (Mackie, 1984).

¹⁰⁴ "There is a general requirement on the resolution of conflicts of values: if it is not to be arbitrary, one must know what values are at stake and how to attach weight to them" (Griffin, 2008). See also Lord and Maguire (2016).

interests in democratic participation. But no one's interests are more important than someone else's simply by virtue of being the interests of a different person.

Any plausible account of basic rights must also incorporate a commitment to equal respect¹⁰⁵. Equal respect supplements and supports fairness as an explicit commitment to the equal moral standing or status of each human being. For the purposes of accounting for human rights generally, I take the central requirements of equal respect to be treating each person with civility, recognising and respecting the autonomous capacity of each human being, refraining from causing harm to others, and not arbitrarily discriminating or devaluing differences (e.g. in physical characteristics, needs, or conceptions of the good).

Recognising and respecting the autonomous capacity of each human being, in turn, entails that there should be an appropriate relationship between an individual's choices and the benefits they enjoy or the costs imposed on them.¹⁰⁶ In a related manner, permitting one person's choice to create an involuntary burden on another will normally be a violation of the other person's autonomy. This, of course, is relevant in assessing claims to an autonomy-based right to procreate, where protection of the would-be parent's procreative autonomy seems to be privileged at the expense of the existential and material conditions for the realisation of the autonomy interests of everyone. Autonomy interests, of course, are not all there is to what makes life go well for a person.

Human wellbeing interests

The concept of wellbeing is standardly understood as capturing the good-making properties of human life. Reflecting the liberal standpoint of my theoretical approach, I take wellbeing to concern that which makes life good for the person whose life it is. In my view the most credible and workable approach to conceptualising wellbeing for the purposes of theorising about basic rights is an objective list identifying all-purpose goods like liberties and resources which enable individuals to pursue their own conception of a good life - be it a life of hedonistic pursuits, quiet contemplation, dedication to personally meaningful projects, the cultivation of excellence, or a combination of any of these. John Tasioulas (2012) and Ronald Dworkin (1997), among others, employ objective lists of this kind.

I take human wellbeing to comprise the following all-purpose goods, disaggregated into what I take to be their main elements or components:

¹⁰⁵ I say equal respect, and not equality, because I take no particular view on the merits of specific distributive arrangements or any scheme of compensation to mitigate or solve people's unequal opportunities, natural abilities, or material resources.

¹⁰⁶ Brian Barry (1971) makes a similar contention in relation to justice as a whole.

- Physical wellness, including life, health, bodily integrity, sustenance, shelter, and protection from harm;
- Personal autonomy, including knowledge, liberty¹⁰⁷, material resources, privacy, democratic participation, and self-ownership;
- Psycho-social wellness, including positive mental states, one's sense of self, membership and social ties, close relationships, and fair and respectful treatment.

Physical wellness captures the most vital elements of wellbeing, without which life cannot realistically go well for anyone, under any plausibly rational conception. By personal autonomy I mean independence, authenticity of values and preferences, and self-directedness. Autonomy requires an adequate scope of personal liberty to act on one's authentic and self-directed choices without undue obstruction by others, together with the material and informational resources needed to enable each person to have meaningful choice in what path to follow in life, an adequate sphere of privacy allowing us to choose what to reveal to others about ourselves, and control and ownership of ourselves and our bodies. Finally, contentment and other positive mental states are surely uncontroversial components of wellbeing; a view of wellbeing that is indifferent to how people actually feel about their lives is highly implausible. But that is not all there is to it. Humans are self-aware, social animals. Forging and expressing a sense of identity allows us to be ourselves as individuals. And we also want to *belong* to groups and communities, and maintain close relationships with family and friends.

I believe the above values can adequately account for any traditional constitutional or human right without conceptual strain or excessive idealisation of human nature.

4.7 Pre-conditions versus limits to rights

Basic rights tend to be asserted in terms of such a high level of generality that they can appear indistinguishable from the underlying human wellbeing interests (or requirements of justice). This feeds into absolutist views of basic rights, which assume they have no limits or preconditions, that they are always engaged and applicable to all circumstances, and that there is no end to what the right-holder can justifiably demand within the right's conceptual or thematic heading. But the reality of moral conflicts show that this is absurd. Real rights have pre-conditions to their engagement, or limits to their scope of protection, or both, almost always implicit.

¹⁰⁷ For example, Joseph Raz regards positive freedom (one's capacity to control and create his own life, including the possession of certain mental and physical abilities and the availability of an adequate range of options) as deriving its value from its contribution to personal autonomy, which he regards as a constituent element of the good life. (Raz, 1986, pp. 409–410)

Take the right to privacy as applying to one's personal information; it has at least one precondition, that the matters over which one is claiming protection from prying eyes have not already been made public by the right-holder. The right to privacy also has limits; it does not extend to a right to prevent a police search of one's home or person, for example, if there is credible suspicion that a sufficiently serious crime has been planned or carried out. Or consider the right to freedom of speech; while it can cover meaningful non-verbal expression, such as artistic works, the right is not engaged in relation to the mere intentional production of sounds, such as the honking of a car horn. Even where it is engaged, it does not protect all sorts of communications or examples of self-expression; for example, it does not extend to one's shouting their political views at 2am in a residential street.

In this analysis, I consider at various points whether a subject matter of purported or proposed entitlement under the heading of the right to procreate – in short, a **proposed claim** – is within scope of a right. The proposed claim may relate to a particular freedom (e.g. to create a 3rd child), provision of certain resources (e.g. access to public health care services), or to being treated in a certain way, though this is less likely to be relevant for a right to procreate. I assume that the basic rights identified in constitutional or human rights instruments exist in *some form*, including a right to procreate (though by and large it is not identified in instruments establishing legal rights). What is being assessed is whether a more specific claim is within the content of the right, here the right to procreate, or falls outside its perimeter. As a reminder, under Raz's interest-based approach to accounting for rights (which I draw from with some modifications), a right will normally entail multiple duties correlating to multiple specific claims.

As explained in the preceding chapter, I adopt components of human wellbeing interests as well as the basic requirements of justice as the underlying values capable of justifying duties and therefore grounding rights. For the sake of expedience, however, and to avoid constant caveats, I shall often refer solely to "interests" in the context of grounding rights or evaluating moral conflicts arising from a proposed claim, as shorthand for these underlying values.

A proposed claim sharing thematic commonalities with a right may nonetheless fall outside it if fails to meet the preconditions of the right, or if it goes beyond its limits of justification. **Preconditions** relate to whether the proposed claim has the requisite relationship to the underlying human interest animating a right to actually engage that right in the first place. I will elaborate on that relationship in Chapter 6. A **limit**, on the other hand, relates to a proposed claim that is not excluded by preconditions but which, but for the limit, would impose an unfair burden on others. The limit is required to make the proposed claim fair. If the burdens on others are only unfair under certain circumstances but not others, then the limit is contingent in the circumstances that would render those burdens unfair.

For some constraints on the justification of a right, however, the nature of a precondition may look like a limit. What I have in mind here, in particular, are rights to relationships of closeness or intimacy, such as a relationship between romantic or sexual partners, between parent and an adopted or biological child, or between close friends, where a constraint will reflect not only the nature of the grounding interest but how that interest relates to the relationship partner. I think any plausible grounding for a right to enter into and remain in a relationship of closeness or intimacy must include an autonomous desire to be in the relationship. We cannot plausibly have a right to relationships we do not want to be in. But that is not enough; that desire to enter and remain in the relationship must be expressed in a manner that is positive or benign towards the relationship partner, or the interest animating that right loses its justificatory potency. We cannot plausibly have a morally justified *right* to a close relationship with someone we do not care about or feel contemptuous towards, not even if we want that relationship anyway. If that positive disposition or benign motivation, this *caring* towards our relationship partner is absent, then the right is not engaged – which in my conceptualisation makes this a precondition. This is similar to a limit, in that if the right *were* engaged then there would be something unfair about it in relation to the relationship partner.

4.8 Conclusion

In this chapter I explained my main conceptual, theoretical, and evaluative commitments. I want to provide a philosophical justification for a basic right to procreate in a way that properly takes account of the inherent moral conflicts posed by such an uniquely other-affecting behaviour as the creation of other rights-holders. The right under discussion must have duties, or else it is not a right but an interest of some sort. I employ a modified interests-based theoretical approach that considers what proposed duties relating to procreation can be justified, or indeed defeated, by considerations relating to human wellbeing interests as well as requirements of justice.

Procreation does not get a pass on moral and rational judgment of its consequences simply because we are unaccustomed to thinking about the more esoteric moral conflicts it is apt to generate. These conflicts are examined and conceptualised in the next chapter, in a bid to name and tame them.

Chapter 5 – Procreative harms

5.1 Introduction: how procreation generates moral conflicts

Creating an additional human life is about the most consequential thing any of us can do, and as with all consequential things, it can be harmful. The harm may be to the physical wellbeing interests of the parents, for example the physical demands upon the body of a pregnant or lactating woman, or the suffering of childbirth. Procreation can unquestionably harm the parent's personal autonomy due to the practical burdens and costs of child-rearing, by reducing their opportunities for learning, democratic participation, and leisure, and very often by reducing a parent's career and earning opportunities while increasing their outgoings. The parent's psycho-social wellbeing may suffer, too, for example by something of an obliteration of the self for those whose lives are taken over by procreation and child-rearing. Assuming procreation was not forced onto the parent, these harms to the parent are of no particular normative significance in accounting for a *right* to procreate, and can be thought of as costs attached to a choice the parent has made (or refused to make, as the case may be).

When I refer to procreative harms, I mean harm *to others*, to people who were not involved in the decision to create a child (or to not take steps to avoid creating a child).

Procreation generally involves the following conflicts:

1. Conflict between the interests of would-be parents and those of prospective children, which may lead to creation harms.
2. Conflict between the interests of would-be parents and those of their existing children or other members of the family who are likely to take on greater housework, child-care, or other labour burdens, or have their share of resources shrink, as a result of the procreative behaviour of the parents, which may lead to familial harms.
3. Conflict between the interests of would-be parents and other members of society affected by the forced re-allocations of public resources to accommodate population growth and mitigate creation harms to children, leading to potentially unfair or irrational normative forcings.
4. Conflict between the present-time procreative right or interests of would-be parents and the fundamental rights and interests of everyone, including the would-be parents, over the longer term, potentially leading to rights retrogression and a generalised setback to interests. This refers to overpopulation, the most serious of all moral conflicts, as it poses a

catastrophic risk to the basic conditions for justice and human wellbeing, without which human rights and duties become moot.

In this chapter I conceptualise these philosophically complex moral conflicts and harms that characteristically arise from procreation. I start by considering some real-life examples by way of an intuition pump, which I believe show there is something troubling about the notion of a right to complete procreate discretion, at least when it comes to unassisted procreation. I then turn to how the above moral conflicts translate into countervailing arguments in relation to a claimed right to procreate and its purported duty of non-interference. I show that procreative moral conflicts generally engage one or both types of countervailing reason: wrongful harm and non-compossibility. Non-compossibility, too, involves harm to people's interests, so I refer to the conflicts posed by procreation as **procreative harms**. I then look at each of the above conflicts and their potential harms in more detail, before considering their normative implications. Finally, I summarise considerations from research on cognitive biases that caution us against too readily accepting excuses to overlook, or fail to address, procreative harms.

5.2 Troubling intuitions about an absolute right to procreate

Let us start by considering what it would mean for each of us to have an unconditional and unlimited right to procreate, as asserted by proponents of the Cairo consensus and its cognates. We shall leave aside, for now, the aggregate-level issues pertaining to overpopulation. An absolute right to procreate would mean that any and all of the following persons would be *entitled*, as a matter of respect for their constitutional or human *rights*, not just to create children in the circumstances below, but to create any number of children in the same circumstances:

- a) A person who suffers from a severe, lifespan-abbreviating, inheritable genetic disorder with a high risk of being passed to offspring¹⁰⁸.

¹⁰⁸ See for example an article in the BBC where a woman's choice to have a baby notwithstanding her Huntington's disease is treated as a warm human interest story (Brewer, 2021). A child has a 50% chance of inheriting Huntington's disease if one of her parents has the defective gene. Huntington's disease involves the progressive breakdown of brain and nervous tissues, causing movement, cognitive and psychiatric disorders. It is usually fatal within 20 years of onset of symptoms.

As another example, in Mediterranean, Middle-Eastern and South-East Asian countries, beta-thalassaemia is a relatively common inheritable disease and the subject in Cyprus of quasi-mandated genetic screening, which some have objected to as amounting to presumptively wrongful "eugenics" (Cowan, 2009). Couples where both partners are carriers are not required to refrain from creating children nor required to abort foetuses testing positive for the disorder. This is so notwithstanding that any child they conceive will have a 50% chance of heterozygous inheritance (a carrier with likely mild symptoms) and a 25% chance of severe, incurable disease from homozygous inheritance (β -thalassaemia major). The homozygous children are very ill from infancy, suffer shortened lifespans, and rely on regular blood transfusions in order to survive. This genetic disorder, therefore, entails a great deal of suffering for the child, and a major burden for public health services (Xu *et al.*, 2004).

- b) A husband and wife who are cattle herders and who have had ten children already, three of whom died in infancy from malnourishment and neglect. The couple have forced two daughters into child marriage, reducing the number of mouths to feed while getting valuable livestock in exchange for them. The remaining five children living at home are engaged in various forms of child labour. The couple have a general preference towards having more children because it would further bolster their social standing in their community, and because of the financial utility of having children. Having more children would increase the domestic labour burden on the five siblings at home, who already do not attend school.¹⁰⁹
- c) A 19-year-old girl with serious substance abuse and mental health issues who is trapped in a violent relationship. Her first two babies, from unplanned pregnancies, were taken into care shortly after birth, following treatment for neonatal abstinence syndrome. She accepts that she is not in a position to take care of any children, and understands that, barring a dramatic change in her circumstances, any subsequent children she bears will also be removed from her custody. Nonetheless she finds herself unable to get organised about birth control.¹¹⁰
- d) A couple who do not particularly like or want any children, but who feel contraception is against God's wishes and socially not the done thing. They therefore leave themselves open to having any number of children, be it zero or many.¹¹¹
- e) A physically mature woman with severe cognitive impairments who would be unable to care for any children she might produce. She likes the idea of babies, much as a child might like having a doll or a kitten around, but is unable to either understand or fulfil the most basic responsibilities involved in caring for a child. She has had two children already, who her own mother has had to take in to avoid the children being placed in foster care. Her mother is under

¹⁰⁹ Child marriage, child labour, child mortality, and couple preferences for very large family sizes, are all common across the Sahel, Sudanese, and Horn of Africa regions of Africa, which have experienced explosive population growth, famines, and severe land degradation over the past few decades from overgrazing and deforestation. See the discussion in Chapter 8.

¹¹⁰ See Broadhurst, Alrouh *et al.* (2015) and Broadhurst, Shaw, *et al.* (2015) on the sizeable proportion of English and Welsh women and teenage girls in vulnerable circumstances (substance abuse, mental health issues, entrapment in violent relationships) who fall into a cycle of repeated unintended pregnancies where the resulting children, one after another, are removed from their mothers and placed into care. The median interval between proceedings for removal of successive babies was found to be just 17 months (Broadhurst, Alrouh, *et al.*, 2015). Broadhurst *et al.* timidly suggest that more should be done to assist such vulnerable women, while decrying the explicitly anti-natalist efforts of Project Prevention in the US as exploitative of addicts' vulnerability to short-term gratification and disrespectful of "basic ethical tenets" (Broadhurst, Shaw, *et al.*, 2015). Project Prevention is a non-profit which offers cash incentives to men and women who are addicted to drugs or alcohol in exchange for their agreement to use long-term or permanent contraception. It is much reviled for its explicit anti-natalist efforts. See for example Erika Derkas' (2012) accusation that Project Prevention "reifies racist, heterosexist, classist, and sexist hegemony by positioning women as villains".

¹¹¹ See discussion in Chapter 8.

enormous strain and extremely distressed at the possibility that her disabled daughter might have yet more children.¹¹²

- f) A person who plans to procreate with the intention of having children around to sexually abuse.¹¹³
- g) A woman afflicted by an obsessive pursuit of a highly restrictive diet but otherwise of sound mind, who has starved her two young children against the repeated warnings of doctors and social workers, causing one of them to suffer permanent brain damage. She remains in denial about the harm she inflicted to her young children.¹¹⁴
- h) A person whose existing children have been removed from their custody following severe injuries sustained by his or her physical abuse of them.¹¹⁵
- i) A long-term unemployed woman who refuses to use contraception, purportedly for cultural/religious reasons relating to her polygamous marriage, notwithstanding that on her own account she is unable to look after her numerous existing young children, who are routinely left hungry, dirty, completely unsupervised, and not in school.¹¹⁶
- j) A man who has abandoned each of the numerous children he has already

¹¹² There are multiple cases where parents have applied to the courts to authorise the non-therapeutic sterilisation of intellectually disabled young women, or on at least one occasion, an intellectually disabled young man. Parents in such cases are typically concerned they are unable to fully protect a disabled daughter from sexual activity to which they cannot properly consent, and wish to at least prevent reproductive consequences the daughter cannot not understand or properly make decisions about. In some cases the parent is already caring for one or more grandchildren the daughter has already had, and fear they could not cope with even greater caring burdens. See the UK case of “P” as summarised in press coverage, for example Cheng (2011) “*UK mom requests sterilization of mentally disabled daughter*”, Toronto Star, 15 February 2011.

The courts have tended to opposed sterilisation unless there is a clear case that pregnancy would be dangerous to the woman’s physical health, and generally downplayed the emotional, financial, and practical cost to such patients, their parents, and to society of repeat pregnancies and deliveries of children who will be removed from them. The latter is a point made by bioethicist John Harris in the above-mentioned case of “P” (Cheng, 2011). Human rights activists, in turn, have often decried the sterilisation of mentally disabled persons with resort to the inflammatory language of “eugenics”, sometimes explicitly claiming that the interests of caregivers or of society are not relevant (Cheng, 2011; Kamenev, 2013). See also Dewson *et al* (2018) for a fairly typical (and in my view, plainly mistaken) argument that “*people with mental disorder or intellectual disability have the same rights to become parents as other citizens*”. This purported right would promote the protection of autonomy which the mentally disabled lack capacity to exercise, subordinating the interests of caregivers and any respect owed to prospective children in favour of the preservation of the disabled person’s physiological reproductive capacity, seemingly as its own good.

¹¹³ See Ed Perkins’ 2019 documentary, “Tell me who I am”, for an apparent real-life example of this scenario concerning British twin brothers Alex and Marcus Lewis, who as children endured years of sexual abuse by their mother and her friends.

¹¹⁴ See the *Pointer* case in Chapter 2.

¹¹⁵ See the *Johnson*, *Kline*, and *Salazar* cases in Chapter 2.

¹¹⁶ See the *Soares de Melo* ECtHR cases in Chapter 2.

fathered. His children live with their respective mothers, all of whom struggle to support and care for them in the absence of any help from him¹¹⁷.

I suggest the purported entitlement to child creation in any of the above real-life scenarios is, at the very least, morally troubling. I suggest further that there are two main ways the above are troubling.

First, there seems to be a major discordance between the normative agency and motivations of parents in these scenarios and the kinds of values we intuitively expect to ground a right to procreate, at least by way of an initial judgment. In one of them, the parent's motivation is altogether abhorrent. I consider what might be proper values and motivations animating a right to procreate in Chapter 6.

Second, in some of the scenarios procreation would seem to involve real disrespect to the prospective child, a non-consenting other whose likely welfare and life chances argue against their creation in what seem like unusually hazardous circumstances. In yet others, the entitlement to procreation, if it exists, would be independent from the individual's capacity or willingness to discharge any duty to provide and care for the resulting child, which also seems troubling. I suggest the disrespect, and the disconnect with duties, are a matter of moral conflict and countervailing arguments in relation to whatever right might be suggested by the proper values and motivations of procreation. It is worth understanding these conflicts and harms; they are unusual and often complex, but nonetheless key to identifying the limits of justification of a right to procreate.

5.3 Moral conflicts as countervailing reasons when considering a proposed duty

In the preceding chapter I summarised John Tasioulas's interests-based approach to accounting for human rights, from which I borrow significantly. Tasioulas proposes a two-step test for whether a plausibly universal human interest or other value commitment justifies a proposed (directed) duty, and therefore grounds a right. First we must consider whether, in the case of all human beings, it is *possible* to serve the underlying value through a duty with the proposed content. If the answer is yes, we then consider the *burdensomeness* of the proposed duty, meaning the costs imposed by the putative right on the bearers of the counterparty duty and on our ability to realise other values, including other human rights.

The example offered by Tasioulas is of a putative human right to "the highest attainable standard of health", which he deems to fail both tests. But even if downgraded into a right to *provision* of the highest attainable *standard of health care*

¹¹⁷ See the *Oakley*, *Curtis*, and *Chapman* cases in Chapter 2.

and *social conditions* of health care generally, rather than health itself, the proposed right still fails under Tasioulas' burdensomeness test. It would entail excessive costs, he says, including unacceptable sacrifices in our capacity to fulfil other human rights (Tasioulas, 2012, pp. 15–17).

I find the concept of “burdensomeness” to be very useful, as it immediately conveys the idea that a proposed duty may bear too heavily upon others. But it seems to capture rather too much under a single heading, while the possibility test captures comparatively little. By leaving one concept to do too much work, we may overlook important aspects of the problem we are trying to solve.

So in place of Tasioulas' two-step test I consider moral conflicts can generate four types of argument against the justification of a proposed duty. A proposed duty (correlating to a proposed claim) may:

- demand so much from the duty-bearer as to impose an unjust burden on them (overburdensomeness);
- cause a serious, avoidable set back to the interests of an innocent other, or cause them an injustice (wrongful harm);
- place the duty-bearer in a position where they can only satisfy the new duty or a competing, pre-existing duty, but not both, or at least, not satisfy both in full (non-compossibility); or
- require the duty-bearer to do something they are unable to do to the standard required to reasonably satisfy the underlying interest, for example because they lack the resources (impossibility).

Overburdensomeness

Under the above, more granular typology, the category overburdensomeness is reserved for moral conflicts where a proposed duty would be unfairly onerous to the duty-bearer. The unfairness could arise because the proposed duty would advance the right-holder's interest at the expense of the same interest of the duty-bearer, or because the cost to the duty-bearer cannot be justified by the interest of the right-holder which the proposed duty would protect or advance. The classical example for overburdensomeness is any purported right to a relationship where the relationship partner would be under a purported obligation to enter or remain in a relationship they do not want to be in, or to be under an obligation to love (or feign love) for someone. This might conceivably be said to describe a prospective parent's right to create children so as to have a relationship with them, as the child is placed into that relationship without their consent. But I think the better conceptual framework for the potential injustice to the child is that of wrongful harms.

5.4 Wrongful Harm

For the purposes of this analysis, a **harm** is the setting back, thwarting, or defeating of a (legitimate) human wellbeing interest,¹¹⁸ or a setback to our commitments to justice in how people's wellbeing interests are protected, satisfied, and promoted¹¹⁹. The concept of harm includes both a crystallised set back and a newly created or imposed **risk** of such a setback. All setbacks to human wellbeing interests or justice are bad things, but not all harms involve wrongdoing.

By **wrongful harm** I simply mean harm that is sufficiently serious and which we are able to avoid without causing even greater harm, and we therefore ought to do so. By avoiding the harm I mean that either it is possible for us to prevent the harm from occurring (which implies, *inter alia*, a degree of foreseeability), or failing that, we can mitigate and/or remedy its consequences rather than just let them fall where they may.

Though the concept of harm is often used to imply harm caused by morally indefensible conduct, I find that the harms here are complex enough that we should not subsume their factual existence into their normative implications or vice-versa. Moreover, where the concept of harm is synonymised with wrongful harm, what is actually meant is wrongful conduct, which is inappropriate here.

The normative questions arising from the wrongfulness of allowing the harm to occur or go unmitigated or unremedied pertain to questions of fairness and effectiveness in the regulation of conduct of individuals, groups, and organisations and allocation of public resources so as to prevent, mitigate, or remedy harm. These are quite different from the questions of blameworthiness, excuse, and desert that arise when the focus is on wrongful conduct; such questions are largely irrelevant to the present analysis, but are a central area of confusion¹²⁰ and pretext for inaction when it comes to the normative response to procreative harms. To reiterate, by wrongful harm I do not mean that a person has necessarily acted in a wrongful manner. My focus here is on

¹¹⁸ This is the basic sense of *harm* employed by Joel Feinberg in his classical volume *Harm to Others*. He distinguishes this from a *wrong*, which he regards as a narrow, normative sense of harm meaning to wrong someone, or treat them unjustly, by violating what is due to them. Feinberg argues that, on a proper interpretation, the harm principle must lie in the overlap between these two meanings: in order to justify coercive limitation of people's liberties, there must be a harm and a wrong. (Feinberg, 1984, pp. 32–36)

¹¹⁹ Joseph Raz offers various characterisations of harm: “to harm a person is to diminish his prospects, to affect adversely his possibilities”; “one harms another when one's action makes the other person worse-off than he was, or is entitled to be, in a way which affects his future wellbeing”; “one can harm another by denying him what is due to him... [or] by failing in one's duty to him.” (Raz, 1986, pp. 413–414).

¹²⁰ For example, one risks circular reasoning by building in the concept of wrongfulness into the concept of harm. In order for the wrongdoing to rely on a violation of duty, there needs to be a pre-existing duty. But where does such duty come from, if not from the facts about the harm? And if the duty is regarded as not yet existing, does it mean the harm is not wrongful, however serious or avoidable?

the appropriate normative response to serious setbacks to people's interests, where failure to do so appears to be unjust, or irrational in light of the interests at stake. I am not concerned here with what punishment people might deserve for failing to discharge their own duties and obligations.

It is surely uncontroversial that people can suffer serious setbacks to their interests due to all sorts of things that do not involve blameworthy behaviour – for example, accidents, natural catastrophes, illness, age-related disability, innocent mistakes, the conduct of those incapable of normative agency (such as children, animals, and those with mental disabilities), and most importantly here, the cumulative effects of behaviours which are not harmful in isolation, such as second-hand smoking, severe traffic jams, cutting trees from public lands for firewood, overfishing, etc. Where it is possible for us to prevent the occurrence of such harms and to do so without creating comparable or greater harm (for example, by setting back a more important interest), then our commitments to human wellbeing and to justice entail that there is a moral duty to do so. If it is not possible for us to prevent the occurrence of serious harm (for example, if it is wholly unpredictable or unstoppable) but we can mitigate it or remedy it to a significant extent, again without creating comparable or greater harm in doing so, then we ought to do so. The countervailing consideration at play, then, is that a proposed right, or some of its proposed duties, would come into conflict with a duty or obligation to avoid that wrongful harm.

This is not merely a matter of moral obligation in the sense of a duty to which we might only answer to our own consciences. Harm prevention, mitigation, and remedying is one of the core responsibilities of the state. It is a major consideration in decisions about how the state allocates public resources, and in liberal contexts at least, it is the primary rationale for the imposition of legal constraints on the freedom of individuals, groups, and organisations, under what is often described as the harm principle¹²¹.

Wrongful procreative harms

The moral conflicts arising from procreation tend to involve wrongful harm, sometimes more directly, as the harm inflicted on future children by their parents, or more indirectly, as the harm associated with normative forcings, rights retrogression, and erosion of the satisfaction of vital interests. Generally, whenever we increase human needs and human entitlements without a concomitant and equivalent increase

¹²¹ In its classical (and overly strong) formulation by John Stuart Mill in *On Liberty* (1859), the harm principle is the view that sole legitimate basis for which the law may use its coercive power to limit the liberties of individuals is to prevent them from causing harm to others. More modern conceptions of the principle would also allow accept that at least some paternalistic restrictions on liberty are justified on grounds of preventing individuals from harming themselves or, in some cases, from causing serious offense to others. See for example Raz's treatment of the subject in *Morality of Freedom* (Raz, 1986, pp. 412–420), or Joel Feinberg's quadrilogy on the moral limits of the criminal law (Feinberg, 1984, 1985, 1989, 1990).

in the resources needed to satisfy those needs and entitlements, the interests of other people will be set back, that is, harmed, at least a little, by the diminution of what resources are available to meet their pre-existing needs and entitlements.

Where a creation harm is reasonably foreseeable and sufficiently serious, it can generally be avoided by preventing the creation of a person into those harmful circumstances. Creation harms, therefore, certainly can be wrongful.

On the basis of the evidence I summarise in Chapter 8, I believe it is much too late to *prevent* the harms caused by overpopulation. But overpopulation harms need not be as severe as they will be without anti-natalist interventions. Some extent of mitigation clearly can be achieved by minimising further population growth and ultimately reversing the unsustainable growth already reached, which would also reduce the number of lives placed in harm's way. However much human overpopulation may continue to be treated as a taboo subject, or vociferously denied, the harms of a population that grows larger than its resource base can support are clearly foreseeable and clearly hold potential for catastrophic harm. So a failure by the state to act appropriately to mitigate and counter overpopulation harms through appropriate anti-natalist interventions is certainly wrongful.

5.5 Non-compossibility and impossibility

Resource non-compossibility corresponds to what John Tasioulas (2012) variously characterises as a “contingent impossibility”¹²² or as overburdensomeness.¹²³ This type of moral conflict is perhaps most familiar in the context of discussions about healthcare-related rights. There are only so many doctors and nurses available at any one time, or hospital beds, or funds to cover the cost of therapies and medication.

But in reality, resource non-compossibility plagues virtually all duties where the duty-bearer is the state, correlative or not, including all constitutional or human rights. I do not mean by this that the state is the only duty-bearer in respect of basic rights; but even where there are duties on others, the state still has duties. Whether or not correlating to individual rights, State duties always demand resources, and even the most prosperous of states has only finite resources with which to discharge their duties towards the citizenry and other right-holders. Even where the right is simply a “negative” entitlement to be treated in a certain way (say, to be free from interference with a liberty, or free from unjustified discrimination), the state must not only respect the right-holder's entitlement but also act to prevent, mitigate or redress violations by

¹²² The example given by Tasioulas is that “*There is no human right to a Rodeo Drive lifestyle given the lack of resources, now and in any realistically attainable future, to secure such a lavish way of life for everyone*” (2012).

¹²³ Ibid, p. 16-17, in relation to the purported human right to the highest attainable standard of health: “[it] would fall at the hurdle of burdensomeness, since it would entail excessive costs, including unacceptable sacrifices in our capacity to fulfil other human rights.”

agents of the state as well as by others. Where the right is an entitlement to being provided with certain resources, the state must satisfy that entitlement. If the primary duty-bearer is someone else (for example, a child's right to be cared for by their parents), then the state will normally have a duty to act as a second line of defence to mitigate a failure by the primary duty-bearer to provide the requisite resources.

Within the context of procreation, resource non-compossibility describes two types of moral conflict: normative forcings, and rights retrogression, both characteristic of overpopulation. It arguably also describes at least some aspects of familial harms, certainly in contexts of poverty, with the remainder amounting to (potentially wrongful) harm.

Finally, an **impossibility** may arise because the resources needed to discharge the duty are insufficient, or at least, insufficient to discharge the identical duties owed to everyone to even a minimal standard. Impossibility may arise from other reasons, for example where the information available to the duty-bearer is insufficient to reasonably determine what needs doing in order to discharge the duty. Impossibility is the most serious end-point of retrogression on rights.

5.6 Objections to procreative harms within the family

The reality of procreative harms is rather controversial, for largely evaluative rather than empirical reasons. In this section I briefly consider the intra-family harms, together with objections that might be raised to procreative harms having the same ability to counteract arguments in favour of recognising a right as other types of moral conflict and harm.

Creation harms

Creation harms affect the prospective child, and arise from the conflict between the interests of the would-be parent and of the prospective child. The nature of the conflict is the would-be parent's practical if not normative freedom to create a new, unconsenting and highly vulnerable other into circumstances that could be highly uncondusive to their wellbeing, and to do so because it suits the would-be parent in some way. Rationally this should strike us as very objectionable. But harm to the child generates philosophical confusion, as do questions of what respect is owed towards future persons. Should we not regard being brought into existence as a gift from the parents to the child, so that any harms that follow, however predictable or severe, can be deducted from an account which received ample credit by reason of the child's birth? Should we not assume that future and younger generations can have no complaint towards older and past generations' reckless undermining of common goods, given that if their ancestors had acted more prudently in the past then different individuals would have come into being?

These sorts of questions, or purported excuses for inaction in relation to creation harms, are at least partly attributable to our cognitive biases, which I say a little more about in section 5.7. If we endorse the moral equality of persons, that most basic principle of justice, then it is hard to see how one might possibly justify treating the interests of prospective children in a manner that is significantly less favourable than (for example) the interests of children that would be brought into the same situation via adoption. Justice requires equal concern for every person's wellbeing. While interests differ in importance by virtue of their relative contribution to individual wellbeing, no one's interests are more important than someone else's simply by virtue of being the interests of a different person. All else being equal, wrongful harm is no more or less bad, or wrong, because it happens to person A instead of person B, or to a person alive right now instead of one born tomorrow or one born 10 or 100 years from now.

This is not to say that harms anticipated to affect people only in a distant future (say, ten thousand years from now) have the same moral weight as harms to people who are currently alive. To be clear: they do not, but not because of a lesser moral standing of human lives born in a distant future. For almost all harms, the farther we look into the future, the more uncertain the harm becomes, and the lesser our ability to do anything about it. And at some point that future perspective becomes so uncertain that our duties may be limited to not causing serious irreversible damage to what future generations are to inherit from us (for example, by not causing avoidable wildlife extinctions, or avoidable depletion of natural resources).

Future vs hypothetical (or merely possible) persons

Furthermore, we must not confuse **future persons** and merely **hypothetical persons**.¹²⁴

Hypothetical persons are always merely imaginary. By definition we do not expect them to come into being, or they would be future persons. Instead, they are merely possible lives which could become future lives if we did something different, for example if pro-natalist interventions were implemented to bias a population trajectory towards more people coming into being in future.

In contrast, future persons are human beings not yet born but who we have reasonable grounds to believe *will* be alive at a future time. As with everything pertaining to the future, the identity and number of future persons is much less knowable (and it is generally not fully knowable even for people currently alive, in the here and now). We can estimate general facts about the likely numbers and characteristics of future people, and these estimates may change over time in light of more information about the relevant population's demographic trajectory, or changes

¹²⁴ See Weinberg (2008, 2013) for a similar distinction and related discussion.

to that trajectory (for example, as a result of population policies). However many and whoever they may turn out to be, future human beings *can* be harmed by what we do now, and that harm can be wrongful.

What does not harm a future person, however, is to turn them into a hypothetical person by taking steps to prevent or render unlikely their coming into being. Future people have interests now, and *will* have rights when they come into being. But their rights and interest are predicated on their future existence, which is not itself the subject of any right or interest. That which does not exist does not have a right or interest in being reified, for it is nothing. So an anti-natalist policy that reduces the expected number of future people does not offend any rights or interests pertaining to people who are taken off some existential pipeline. They were only 'people' insofar as we expected them to be created at some point in the future.

This distinction is important in addressing utilitarian arguments sometimes perceived as removing the wrongfulness of harms arising from overpopulation, such as Derek Parfit's "repugnant conclusion" theorem.¹²⁵ Whether motivated by human overpopulation or by the imperative of preventing children from being born in harm's way, it should be clear that in preventing births we are not snuffing out the lives of helpless future people who never come to be. There are no lives to snuff out.¹²⁶ There is no morally plausible sense in which the very abstract possibility of a virtually infinite number of lives makes them morally comparable, let alone equivalent, to future persons or those currently alive, contrary to the currently fashionable arguments advanced by Nick Bostrom¹²⁷ and other existential risk or long-termist philosophers.

Wondering about extra or different people who could exist if we did things differently is undoubtedly philosophically interesting; however, it is generally irrelevant from a moral or normatively perspective. Future scenarios are not parallel realities. Thinking about future scenarios is a basic tool we use for coping with thinking about the future

¹²⁵ In brief, Derek Parfit (1986, 2016) posited a series of comparison scenarios, starting with a world A with a small but very happy population vs world B with a slightly larger but slightly less happy population which overall contains more happiness (or welfare) in it because there are more people in it. Under a total utilitarian perspective world B would seem preferable. Then compare world B with world C, which has a slightly larger and less happy population than B but more happiness overall, and so on, until one arrives, inexorably, at a world in which the population is very large and very miserable, but still seemingly preferable because their lives are not yet so miserable as to not be worth living, and their enormous number means a greater amount of aggregate welfare.

¹²⁶ Christine Overall (2012, pp. 173–174) similarly defines future people as those who will exist at some point after the present as a result of our actions and choices, and possible people as those who might or might not exist, depending on what choices we make. Possible people, Overall says, "do not have a *right* to come into existence, and no one is wronged if he or she is not created."

¹²⁷ For example, Bostrom (2013) argues that "even the tiniest reduction in existential risk has an expected value greater than that of the definite provision of any 'ordinary' good, such as the direct benefit of saving 1 billion lives." The expected value arises from the gazillion (10^{16}) human lives that could exist into a distant future by reducing existential risk instead of saving one billion actual people.

– which we are cognitively badly equipped to do (see section 5.8). But there is ultimately only one timeline, only one version of the future that will be actualised, with however many people turn out to be in it. In this sense, and to the best of the information available to us, future people exist ahead in our timeline, much like formerly alive persons exist behind us, in the past¹²⁸. We can influence the future in a way we cannot do the past, and this generates moral obligations on us in relation to foreseeable hazards to future persons. But we owe nothing to imaginary people. Unlike a future person, a hypothetical person is no person at all, and cannot be harmed (or, indeed, benefited) by anything we do.

Familial harms

Familial harms include in particular setbacks to the interests of existing children of the family when parents create a(nother) child. Empirical evidence suggests it is commonplace for the interests of existing children to be seriously set back by their parents' creation of additional children.¹²⁹ To the average person in a developed country, the more obvious impact on an existing child is the reduced share of parental attention that will follow the arrival of a new sibling. But for much of the world's children, their parents' creation of additional children can be seriously damaging to their life chances, by reducing what familial resources are available to feed and educate each child, increasing a child's burden of domestic responsibilities (often including obligations to care for and support younger siblings), and a greater risk that the child will be compelled to engage in child labour or be forced into child marriage, the most prevalent form of modern slavery.

Rather like existential harms to the prospective child (and indeed, harm to women within marriage), our reluctance to consider the impact of a new child on family members is coloured by our long-standing hesitance to acknowledge the very possibility, or moral significance, of harm within the domestic sphere, or to engage with disheartening possibilities about parenthood. It is far easier to assume, as many do, that any costs to the life chances of an existing child of the family will be amply offset by the emotional enrichment of having a new baby sibling.

¹²⁸ Willard V Quine (1987) and Jan Narveson (1967) have made similarly structured arguments about the irrelevance of hypothetical lives.

¹²⁹ The inverse correlation between family size and children's schooling has been described as "one of the most consistent findings in the status attainment literature" (Downey, 1995). See also Doepke and de la Croix (2003), Dumas and Lefranc (2019), and Nakagawa *et al.* (2021). In contexts of limited resources, older children, in particular girls, generally have their domestic burdens increased by the arrival of each additional sibling (Edmonds, 2006). Younger siblings, in turn, are less likely to be schooled (Downey, 1995; Eloundou-Enyegue and Williams, 2006; de Haan, 2010), and are more likely to die (Kozuki, Sonneveldt and Walker, 2013). Sibling size has also been found to have an adverse effect on test scores and behavioural development (de Haan, 2010) and on child height (Liu, 2014; Chen, 2021). Only children, in turn, seem to be smarter, more creative, and achieve more than children who have siblings, though the latter tend to be more agreeable (Yang *et al.*, 2016). Girls seem to particularly benefit from being only children (Wang, Tian and Zhou, 2021).

I think this sort of emotional enrichment does have some justificatory power for harms to existing children, but it can only plausibly justify quite modest levels of harming. The life enrichment aspects of being brought up with a sibling are inherently speculative. Some siblings do not get on, and while some children may desire a sibling, many others would do much better as the only child of the family. In other words, the benefit to the existing child of a sibling is much less predictable than the cost to their welfare.

The harm to existing children may be very serious, for example, if a child becomes malnourished, is taken out of school, or is forced into marriage as a result of parents creating more children than they can adequately support. But we cannot reasonably assume that the benefit to children of life with a sibling is large, certainly nowhere near as it would need to be to plausibly justify serious harms to existing children. This is particularly so if the child already has a sibling, for much the same reasons as the moral force of parents' interest in experiencing biological parenthood dramatically drops off after having one child, and virtually disappears after a second (see section 7.2). It is one thing to argue that a single child of a family of modest but not strained means would have their life enriched by having a sibling. It is quite another to suggest that the existing four children in a family would have their life enriched in any significant way by the arrival of a fifth child of her parents, a decision over which they, the children, have no control at all while remaining intensely vulnerable to its consequences.

5.7 Harms to society: resource non-compossibility, normative forcings, and retrogression

A proposed right entitling individuals to generate additional demands on that same, non-expanded pool of common resources has the effect of depleting what is available to satisfy competing rights, as well as competing non-correlative duties arising from, for example, social goals. In doing so, it imposes **normative forcings** on what resources are available to satisfy other duties. All the human interests and requirements of justice underlying competing rights (and any competing non-correlative duties) would be set back by the recognition of such a right, as its correlative duties would reduce what resources are available. Those human interests or requirements of justice may well be more important than the interests or requirements of justice underlying the proposed right. So overlooking resource non-compossibilities and normative forcings, however tempting given the complexity they bring in, is apt to result in irrational and self-defeating moral prioritisations.

By way of an example to characterise normative forcings, imagine we lived in a society – let us call it Autopolis – which recognised a fundamental, autonomy-based right of each individual to drive a motor vehicle without any licensing requirements or speed limits. That is to say, it is a right rather like the Cairo-style right to procreate. Let us assume the Autopolis government abides by the general principle that the state must

promote the public good, including protecting people from serious harm or, where the harm is either unforeseeable or unavoidable, to remedy the consequences to an extent that is reasonable and fair. The motorists of Autopolis are like motorists anywhere (and rather like prospective parents anywhere): sometimes prudent, sometimes reckless, and susceptible, as social creatures, to adjusting their own behaviour to match the behaviours of others, but not so far that they would be above free-riding.

In recognising this fairly absolute right to driving autonomy, the Autopolis government would need to greatly increase the public resources allocated to emergency services, providing medical treatment to those injured in collisions, paying social insurance benefits to those unable to work following traffic accidents, monitoring levels of air-borne pollution, and building pedestrian walkways and crossings, among other reallocations of public funds (relative to a society that does not uphold a right of free driving). There would be a potentially severe cost to other public services competing for the same, ultimately limited pool of public funds. Perhaps funds would be found by abolishing public bodies in charge of consumer protection, by lowering the state pension benefits payable to the elderly, or by the national health service ceasing to provide the more expensive, cutting-edge forms of cancer treatment. Maybe there would be a dramatic increase in tax rates to replenish public fund, though there is only so much that can be fairly and realistically raised through taxes. The state might also look to subtly discourage drivers from driving at speed or erratically, while being careful not to put into question their absolute right to do so if they wished.

Of course, none of these efforts could compare with the effectiveness, and cost-effectiveness, of speed limits, or driver licensing requirements. No matter how much public money the state threw at it, the number of people (and animals) killed or seriously injured in traffic accidents would rise enormously compared to the casualties in a society that constrains the right to drive. Many of the central interests of the people of Autopolis would suffer because of public services receiving insufficient funding. An unconditional right to driving autonomy would need to justify all of these normative forcings – these reallocations of resources and their foreseeably harmful consequences to whatever would have been better resourced otherwise. These costs would need to be viewed in light of how a free-driving norm would do to advance human wellbeing interests or the basic requirements of justice, compared to how it would set back these same values.

The example of Autopolis barely touches the surface of the moral conflict posed by unfettered procreation and overpopulation. If Autopolis found that it was unable to keep basic public services running while maintaining the absolute right to driving autonomy, it could impose traffic laws and greatly reduce the normative forcings very quickly. This is not possible with overpopulation. As discussed further in Chapter 8, population growth compounds; it can take decades to arrest, and well over a century to reverse, and is made dramatically worse the longer we allow it to go on. And unlike

the present-time, largely reversible consequences of Autopolis' normative forcings, overpopulation involves long-lasting, perhaps permanent damage to what resource base is available to satisfy other duties of the state and meet competing needs of the citizenry, with a particular bias against the life chances of younger and future generations.

Normative forcings and rights retrogression

Autopolis can raise more public funds by upping tax rates, not without limit, but without doing much damage to what public funds it will be able to raise in future. But we cannot expand the natural resource base on which we depend. We can take away what little is left to support wildlife, at the cost of degrading environmental services and impoverishing what natural world future generations get to live in. Many will not object to that, because they may value human life and its expansion much more than they value nature or non-human life, or because they do not understand the realistic cost of trying to replace environmental services. But even then, there is ultimately a limit to what can be commandeered for human use. There is only so much fresh water available for irrigation and sanitation, so much agricultural soil, so much by way of raw materials we can draw on to fuel our machines or making useful things. Population growth will normally undermine the resourcing of human rights unless it is at least matched by a genuine growth in resources, that is, an expansion in available resources achieved otherwise than through a geographical or temporal transfer, or transmutation, of the same needful resources. Economic growth today that saps resources needed tomorrow or needed elsewhere, or which creates different scarcities, is not a genuine growth in resources; it's the same stuff being moved around.

On a more practical level, normative forcings mean that a society experiencing significant population growth will need to divert public funds towards expanding basic public services and infrastructure just to keep up with growing numbers of people to serve, when it might otherwise have improved those services, or applied public funds to more strategic purposes such as medical and scientific research.

Jane O'Sullivan (2012), for example, has considered the near-term economic impact of population growth (that is, not including effects on carrying capacity for example) and found that it causes "powerful diseconomies associated with the growth rate". She notes that the ability of a society to meet the needs of its population is largely dependent on its stock of what she describes as "durable assets", including infrastructure (public as well as private), industrial facilities and machinery, and a suitably skilled workforce. Some proportion of a society's economic capacity must inevitably be used to acquire and maintain those assets. In a society with a stable population, she estimates a cost of 2% pa to maintain infrastructure. But if the population is growing at 1% per annum, then to avoid an infrastructure deficit or negative impacts on access to public services a society must also increase infrastructure by an added 1% per annum, increasing its ongoing costs by 50% (from

2% to 3% pa). And this is without taking account of other effects on durable assets, such as reduction of their useful lifespan if their capacity cannot be easily expanded and the whole structure needs to be replaced with a bigger one.

O'Sullivan acknowledges the difficulties in discussing the prospect of policy measures to reduce population growth in a context where many assert both procreation and migration as a right. But she notes that the extra public costs, or the innovation used to keep up with population, could be used to deliver a higher quality of life, or to reduce humanity's environmental impact so as to tackle climate change, or to secure the rights of children to inherit sufficient means for sustenance. "At some point", she concludes, "public policy should articulate a position in these moral conflicts, rather than allowing complacency or misconception to dictate society's fate."

As resources diminish due to unsustainable population pressures, normative forcings are inevitable. A state that is truly committed to human wellbeing and justice, despite its failures to prevent or mitigate overpopulation, would then look to prioritise the fulfilment of its obligations in relation to our constitutional or human rights. For the sake of simplicity we will assume that our constitutional or human rights do correspond to our most vital interests. In reality they do not, precisely because rights are costly. Some of our most vital interests are too demanding to ground duties that adequately serve them. The result is that basic rights often cover only a very narrow aspect of a vital interest.

For example, our interest in life corresponds to a rather undemanding right to not be murdered, and perhaps a right to police protection from a clear and imminent murder threat. Where there is more reasonable (apparent) correspondence between a vital, demanding interest and a right, the right may be regarded as *controversial*, and tends to be much more difficult for right-holders to enforce or otherwise demand satisfaction (Dennis and Stewart, 2004). This includes most socio-economic rights, e.g. to adequate food, housing, health, education, social security, etc. Instead, the underlying vital interest tends to ground non-directed, non-correlative duties on the state that are much more explicitly resource-contingent, in the nature of social goals or the protection of the common good as opposed to individual rights. For the moment, however, let us park these pragmatic normative realities and go along with the idealised notion that basic rights do correspond to our most important interests.

The doctrine of non-retrogression refers to the permissible direction of change when it comes to the realisation of socio-economic human rights. It is the counterpart to the principle of progressive realisation, which acknowledges the limitations in institutional and resourcing capabilities of states in meeting their obligations in relation to more resource-intensive, "positive" rights. Progressive realisation exhorts states to prioritise the satisfaction of at least the core minimum content of everyone's human rights, without discrimination, while taking deliberate steps towards the full realisation of rights. Non-retrogression, in turn, in theory prohibits the rowing back of whatever has

already been achieved (Scheinin, 2013; Young, 2019).

That is, states are supposedly under a duty to not allow the current level of realisation of rights to be retracted or dismantled. This duty, of course, is rather meaningless if a state simply is incapable of stopping retrogression because its right-holders have become more numerous while the resources available to meet their entitlements have not grown in pace, or have become scarcer. Population growth not only makes it increasingly unlikely that the basic rights will ever be fully satisfied where they are only partially or inconsistently secured, it makes it increasingly likely that what protections there are will be eroded and diminished over time.

The ultimate risk is that society itself may fall into disarray and become unable to guarantee any rights at all, that is, that it will become a failed state. This is not some distant, theoretical prospect. A number of countries, or large regions of countries, have already fallen into lawlessness and civil war, including Somalia, Yemen, Syria, Central African Republic, Democratic Republic of Congo, Chad, Afghanistan, and Northern Nigeria. These are all high-fertility, high population growth countries. In fact, nearly all countries assessed as under greatest risk of becoming failed states share these demographic characteristics; the vast majority are in Africa, the Middle East, and Southern Asia (FFP, 2022). Figures 2 and 3 below illustrate the significant correlation between population growth and a country’s vulnerability to becoming a failed state.

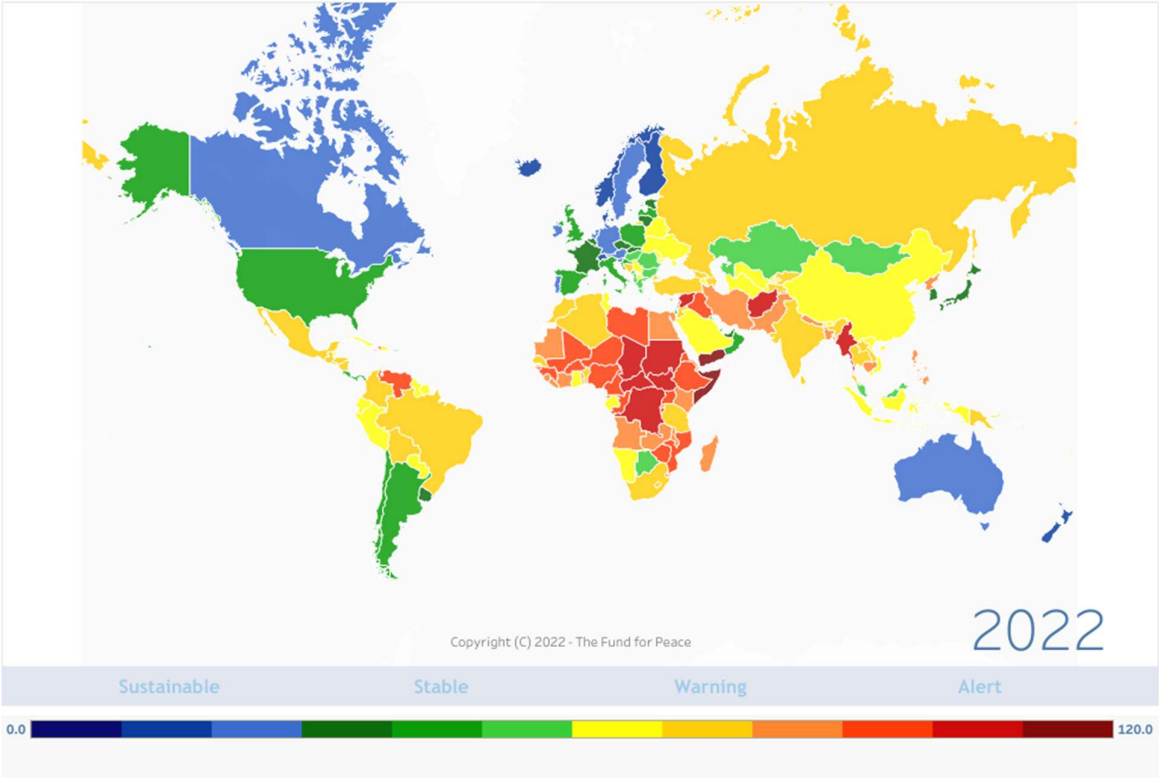
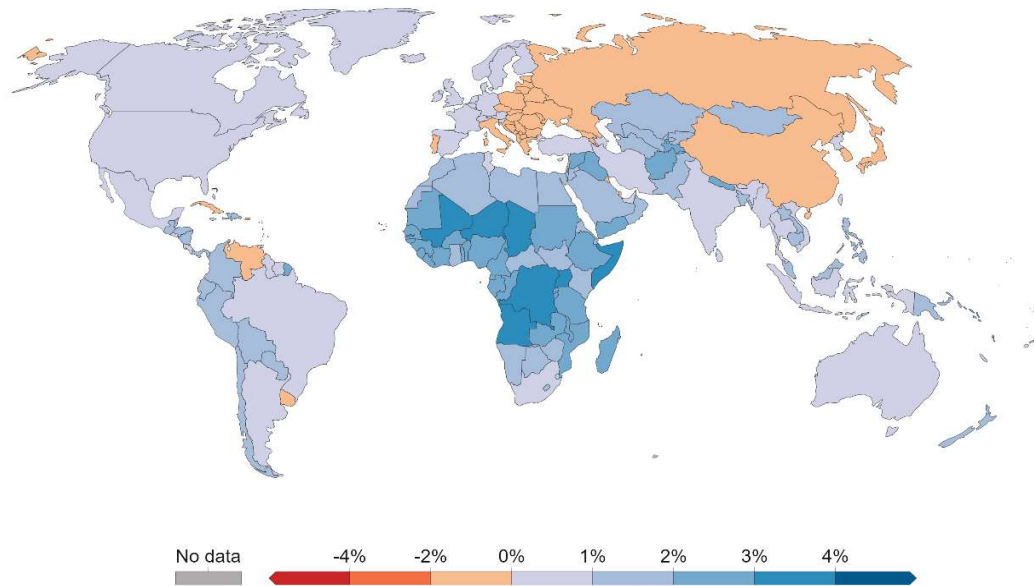


Figure 3: World countries by level of instability (risk of conflict or collapse). Source: FPP (2022)

Population growth rate, 2021

Annual rate of population change from 1950, including UN projections to 2099 based on its median scenario. This takes births, deaths and migration into account.



Source: United Nations - Population Division (2022)

OurWorldInData.org/world-population-growth/ • CC BY

Figure 4: Population growth rates across different countries.

There are a great many discursive stratagems for challenging the reality of overpopulation or the moral case for acting to mitigate it. I discuss the philosophically more important ones in Chapters 7 and 8.

5.8 Procreative harms and cognitive biases

As indicated above, we should beware of our tendency to dismissiveness towards procreative harms, which is so clearly expressed in the Cairo consensus. We tend to overlook these unusual harms as though of they were not serious, or as if they had no moral importance. I suggest this is a product of two influences. First, the eons in which humanity has existed in circumstances of no real control over our fertility, which taught us to think of procreation and whatever fate befell children in fatalistic terms, rather than in terms of parental responsibilities. And second, our well-documented cognitive weaknesses when it comes to caring about persons we (literally) cannot see, thinking about the future, or rationally assessing and reacting to risks.

Engaging with risks of any kind requires probabilistic thinking, at which human beings in general are notoriously poor (Tversky and Kahneman, 1974; Dawes, 2001). We tend to inappropriately focus on specific rather than general information, neglecting base rates (Tversky and Kahneman, 1982; Welsh and Navarro, 2012) – for example focusing on the fall in fertility rates while ignoring the rise in overall population. We are prone to overestimating the probability of positive events and underestimating the likelihood

of negative ones (Sharot, 2011), in particular when predicting what will happen to ourselves (Weinstein, 1980, 1989; Weinstein and Klein, 1995) or those we care about (Kappes *et al.*, 2018). We tend to be particularly optimistic in predicting outcomes that will not be known for some time (Armor and Taylor, 2002), and our optimistic beliefs tend to persevere even in the face of contrary evidence (Garrett and Sharot, 2017). Faced with information about a risk, we tend to assume that it will not actually materialise, or that its consequences will not really be catastrophic. We often disregard probability altogether, leading us to treat dramatically different levels of risk as worthy of the same response, to treat serious risks as though they were non-existent, or to overreact to less serious risks which are more emotively resonant (Sunstein, 2002; Sunstein and Zeckhauser, 2010).

Procreative harms require us to consider the welfare of people who are distant from us geographically, in time, or both. But whether we like to admit it or not, in practice our moral horizon tends not to stretch much farther than our visual horizon. We are not quite the morally sophisticated creatures we might like to think we are. We seem to care disproportionately more about the suffering of specific, identifiable and ideally visible victims than about much more numerous but faceless “statistical” victims enduring a similar or worse plight (Loewenstein, Small and Strand, 2006; Daniels, 2012). A single child known to be in distress tends to receive far more attention and donations than information about the plight of hundreds of thousands of children. Dog and cat charities tend to be enormously more successful in raising funds than those campaigning for the prevention of cruelty to industrially farmed or working animals, though such animals, hidden from the view of donors but known to them, are far more numerous and typically endure considerably worse suffering than homeless pets. Finally, overpopulation and existential harms require that we think about, and value, the future. The costs of mitigating overpopulation, or preventing existential harms by forgoing child creation, are more certain and located at or close to the present time, while the benefits of mitigation, in the form of avoided harms, are comparatively uncertain and located in the future – for overpopulation, the worst harms lie perhaps far in the future, when we will be long dead.

This intertemporal trade-off is a near perfect recipe for inaction, aggravating the myopia of our present bias to the above-mentioned difficulties in thinking probabilistically and to our limited concern about what happens to those we cannot see. Human beings tend to favour immediate rewards even if they are modest, and to downplay the importance of the future – even our own (O’Donoghue and Rabin, 1999). We seem to mistakenly perceive a surplus of resources in the future compared to the present, leading us to conclude that resources are more needed now than they will be in future (Zauberman and Lynch, 2005). We are inclined to prefer avoiding a small pain now – the costs and closed off options involved in constraints to our liberties - than avoiding an enormous amount of future pain, such as the crystallisation of catastrophic harms driven by overpopulation.

We ought to be mindful of the cognitive biases at play when tempted to conclude that efforts to mitigate overpopulation can reasonably be delayed or foregone, e.g. in hopes that a cost-free technological solution will be developed in future¹³⁰, or that we should not interfere in relation to procreative behaviour that is clearly hazardous to the children being created. We must also take into account the fundamental moral hazard involved in procreative harms. The people who are most likely to suffer the consequences procreative harms are generally voiceless and powerless in any deliberation about mitigation: today's children and teenagers, future generations, and those not yet born but likely to be in harm's way.

5.9 Conclusion: moral conflicts and moral priority

As discussed in Chapter 4, when we assert a right, we assert that the interests protected or advanced by that right are more important than the interests that would be set back as part of the cost imposing correlative duties corresponding to that right. This must be shown and justified; it cannot be assumed. And in order to show and justify the content of a right, we must first map out (in so far as possible) the relevant moral considerations, and look under the normative hood to identify the underlying values – the human wellbeing interests or requirements of justice – which animate them. Our assessment operates at that level, of comparing contributions or setbacks to those underlying values. We then proceed to identify ways in which those moral considerations may conflict.

Having identified the moral conflicts, the next step will inevitably involve assigning relative weights or priorities to the elements of the interests which would be advanced versus those which would be setback by various potential solutions to the conflict. There is no sense in assuming a “winner takes all” solution; interests can be advanced or set back in many different ways, not all of them equally important. Most if not all moral conflicts are solvable by *partially* curtailing the demands of one or both sides of the conflict, pushing them back until they no longer conflict. This push back must reflect the relative importance of one interest against another as well as the relative cost, or benefit, to each of the interests in conflict of one solution versus another. So establishing the reality of moral conflicts and harms arising from procreation does not commit us to a conclusion that there can be no right to procreate. But it does mean that the right to procreate as understood under the Cairo consensus cannot be right. It is absurd, and a contradiction in terms, to suppose that we have a human interest that can justify threatening the very viability of human rights protections, as discussed above in relation to retrogression of rights.

¹³⁰ For example, Toby Ord (2014) argues that we should pay more attention to the benefits of larger populations, including the greater pool of innovators of a larger population and what he claims is the intrinsic value of additional hypothetical lives. Ord argues that even just properly accounting for the intrinsic value of hypothetical lives may be enough to suggest that the planet might be underpopulated, in essence suggesting that increasing the risks and costs of overpopulation to real, living people is, or may be, justified by the value of reifying hypothetical people.

The following principles, then, guide my approach to resolving moral conflicts arising from procreation as part of establishing the substance and limits of the right to procreate:

- Some moral considerations are more important than others, and some elements of a moral consideration (e.g. proposed claims, particular expressions of an interest, particular harms) are more important than others.
- What makes a moral consideration or one of its elements more or less important is its relative contribution to securing or expressing the ultimate value(s) grounding the moral consideration – here, these are assumed to be the components of human wellbeing as well as basic requirements of justice.
- As a matter of basic rationality, if we must give up on something to solve a conflict, we give up the least important elements first, and hold on to the most important ones for as long as we can.

In the next chapter I consider the interests that might plausibly ground a right to procreate, and the normative implications of those interests.

Chapter 6: Grounding a right to procreate

6.1 Introduction: the requisite relationship between grounding interests and proposed claims

In working out the interests that ground a right and what content they imbue that right with, there is inevitably an element of to-ing and fro-ing between the kind of right we think we might have and the kind of interests, or requirements of justice, that would be an appropriate foundation for it.

As a necessary but not sufficient starting point, the interest must have a sufficiently close conceptual relationship to the proposed claim, and vice-versa. But that is not enough. The interest must be actually expressed in the proposed claim, such that a right, if it can be justified, would principally serve *that* interest rather than something that is merely conceptually adjacent to it, or indeed, some unrelated other interest for which the proposed claim could be seen as one possible expression, for at least some people. If we do not insist on this requisite relationship of conceptual relevance and fittingness to the proposed claim, we defeat the very task of establishing a philosophical justification for a purported right, by smuggling its proposed claims into the content of other purported rights we are not seeking to account for. Even if we do attempt to account for these other purported rights, we make our task needlessly more difficult, by trying to justify disparate normative elements grouped together simply because they sometimes, or for some people, coincide under a single heading.

Consider for example the right to privacy; it must be grounded in the element of our wellbeing that is advanced when we are allowed a sphere of intimacy that is shielded from prying eyes, enabling the uninhibited exploration and development of close relationships and of our personality. But a right to privacy cannot encompass protection of (for example) information about ourselves that isn't private, that is already in the public domain; the requisite relationship between that which would be protected and the underlying interest(s) is missing. We might have a right relating to information in the public domain - for example, to control it in some way, for example to ensure it is not inaccurate or defamatory. But that right is not grounded in our interest in that protected sphere of privacy, so its grounds must be located elsewhere. But a right to keep private that which is sensitive in nature and which we do not wish to disclose to the world (and have not disclosed to the world), such as the content of love letters and personal journals, or what we might do in the bedroom with another consenting adult, has the requisite relationship with our interest in privacy.

The same applies to a right to procreate. Any underlying interests animating it must be conceptually relevant and actually served by the proposed claim and its correlative duties. For example, it would be inappropriate, and I suggest ultimately futile, to attempt to justify a right to create other persons with reference to our interests in

bodily autonomy, or in being free to act according to what we believe our religious faith requires of us. Our interests in bodily autonomy are conceptually adjacent to our interests in biological procreation, but bodily autonomy covers all sorts of things that have nothing to do with procreation. And ultimately, our bodily autonomy interest uncontroversially does not ground a right to do whatever we want with our bodies *if it affects other people*. Procreation necessarily affects other people. Religious freedom has a comparably remote conceptual relationship to procreation, though it may be invoked by some people as justifying a freedom to have many children or to not use contraception. But our interest in religious freedom cannot provide a moral foundation for a right to procreate in relation to the large proportion of the world's people whose family-making decisions are not determined by religious beliefs.

It might be argued that a freedom to procreate might nonetheless serve these interests. Surely being free to do what we want with our bodies advances our bodily autonomy, as does living our lives in accordance with religious precepts we believe in. But procreation would serve these interests in a highly tangential and either partial or contingent way which is unsuited to the justificatory task of its unique and morally salient other-affecting aspects. The far more promising approach is to zoom in on what is distinctive about procreation, and to seek to locate human wellbeing interests (and requirements of justice, as the case may be) that would seem apt to explain why it would be a good or right thing for individuals to have at least some degree of freedom to use their bodies to create children.

In this chapter I start by considering plausible grounding interests of the would-be parent and a justice-based constraint relating to the interests of the prospective child suggested by the problematic examples mentioned in section 5.2. I argue that these considerations, taken together, start to reveal the general outline of a right to procreate, having regard to the substance of proposed claims and correlative duties suggested by these interests. I check the robustness of these plausible grounding interests by considering other interests that have been suggested in the literature, before turning to the moral conflict between the procreative interest of the would-be parent and prospective parents harm-based duties towards a prospective child.

In this section I consider the alternative grounds sometimes identified in the relevant literature by way of testing and refining the initial judgments outlined above.

6.2 Generating initial judgments: is an absolute right to procreate plausible?

In section 5.2 I set out some practical examples that seem like troubling entailments of an absolute right to procreate. They included procreation that involves a high risk the resulting child will have a serious disease, and cases where the child would likely be removed from the parent upon birth to avoid a serious risk of abuse or neglect. In some cases the would-be parents did not particularly want to have children, or did not

intend to care for them, or lacked the capacity to make reasoned decisions about procreation. In other cases the birth of the child would not only pose a risk to the child but increase harms to their siblings, or to other family members. In a number of them the would-be parent seems indifferent to harm to their child; in one of them the child would be created by a parent who intended to harm them.

As noted in section 5.2, the purported entitlement to child creation in any of these real-life scenarios is morally troubling. There seems to be a major discordance between the normative agency and motivations of parents and the kinds of values we intuitively expect to ground a right to procreate. In addition, in some of the scenarios procreation would seem to involve real disrespect to the prospective child, insofar as there is a right to create them into unusually hazardous circumstances or independently of the would-be parent's capacity or willingness to discharge any duty to provide and care for the child.

If I am correct that these are troubling inferences about a purported basic entitlement, then it seems to me that the following initial judgments do a reasonable job of explaining why they are troubling. They also suggest the outlines of plausible grounds of a justified right to procreate:

1. Creating another person is a very serious, uniquely other-affecting matter. We do not take the creation of persons seriously unless we require **active normative agency**, by which I mean intentional decision-making by agents capable of moral reasoning and consequently of taking responsibility for the decision made. The decision should directly pertain to the creation of children, and not some other matter leading to the creation of children as a side effect, which would irrationally trivialise it.

But normative agency is not enough. Surely we cannot have a right to *create other people* simply because we are able to and we want to. That would seem grossly disrespectful of children's equal humanity, in particular when we consider the inherently risky, and morally hazardous, nature of bringing someone into existence. So something else must be at play.

2. The **reasons, or motives**, of the prospective parent are crucially important to whether child creation is a prima-facie legitimate exercise of their normative agency. Creating a whole, vulnerable other person needs to be have a morally sound reason behind it; it cannot be a trivial or casual thing for any of us to do, not if we are claiming to have some moral entitlement to do it. Not all motives are valid, and the most problematic motives involve treating children as mere means to their parents' ends.

The kind of motive that seems most likely to be fruitful as a justifying ground of a right to procreate relates to the **relationship between parent and biological child**. This still inevitably involves treating the child as instrumentally valuable to the parent, as the parent wants the relationship and creates the child so as

to have it. But the relationship between parent and biological child does seem to have plausible moral worth, and can only possibly be incepted through procreation and through no other way. So if there is a justification to using one's ability and desire to create children to do so, the initial judgment is that it must involve this relationship as a central consideration.

3. Even if the parent-child relationship is morally worthy, it may still be unjust or wrongful to the future child. The future child cannot choose to enter the relationship, will not be free to leave it, and unlike the parent, has no control whatsoever over the circumstances under which the relationship is incepted through their creation. Respecting children's equal humanity must require, as a minimum, that their creation does not take place in circumstances involving unusually circumscribed life chances, or an unusually hazardous existence – at least, not if their creation is supposed to be a matter of right for the would-be parent, anyway.

The prospective child's interests must feature in the grounding of a right to create them, even if only **as a justice-based constraint** tempering the uniquely other-affecting powers of the would-be parent towards the prospective child. Without such a constraint there is no moral mitigation of the inevitable treatment of the child as means to an end for their parent, or as the object of their parent's entitlement.

6.3 Plausible and implausible autonomy interests

The activist literature on the Cairo consensus tends to frame the right to procreate almost entirely in terms of a personal autonomy, inhering in particular to women, to realise their personal procreative preferences or otherwise be left alone in how they choose to use their reproductive capacity.

Another way of saying this is that the activist literature seems to presuppose the right to procreate is grounded in a liberty interest, or possibly a privacy interest, relating to how people choose to use their own bodies to create children for motives that are solely their own, and circumstances suiting their own judgment. This does seem to have some intuitive appeal; after all, procreation is normally achieved via intercourse, and sex between consenting adults is properly a private matter. The entirety of US jurisprudence, so influential in the generation of the Cairo consensus, is based on the idea that we have a right to procreate because of an underlying privacy interest, or as a derivation of a prior right to privacy.

But sex is not procreation, and procreation is not sex. The creation of children is most certainly not a private matter. For one, it inherently affects other people beyond the couple having sex, in particular a non-consenting, highly vulnerable other, the child. And furthermore, the existence of a child is not something one can or should keep

secret and at home, at least not for long. The creation of a whole other person is not some private affair.

Indeed, a child is uncontroversially treated as an incipient member of its society even before personhood is attained, which is usually assumed to happen at the time of birth. Well-ordered societies ensure pregnant women receive prenatal care and counselling to boost the chances of a healthy baby. Some US jurisdictions enforce obligations on the expectant mother to refrain from imposing excessive hazards onto the developing foetus (so as long as the mother is intending to carry the foetus to term), by penalising such behaviours as the abuse of heavy drugs or alcohol. And after the baby's birth, even though the child is still fairly universally treated, in many ways, as the property of their parents, there are limits to what the parent is permitted to do to them, as well as obligations to ensure some minimum conditions for the child's healthy development and welfare. In well-ordered societies, the parent is not permitted to physically or emotionally abuse the child, for example.

There are parental duties pertaining to the care and support of the child, duties on parents and the state pertaining to healthcare (mandatory vaccinations, regular medical checkups), and minimum schooling requirements. And the child will, from birth, have legal rights with correlative duties imposed on the state, persons in certain roles or occupations (e.g. teachers or social workers), and sometimes practical or legal duties on family members beyond their parents, initially focusing on protecting the child from any shortcomings in what the parents are able or willing to do to safeguard their welfare. Nothing about this suggests our interest in privacy has the requisite relationship to a purported right to create children¹³¹.

Liberty vs normative agency

It seems to me that there is certainly a liberty interest involved in the grounding of a right to procreate, reflecting the potential of parenthood to so dramatically alter, for better or worse, the nature and course of our lives. Whether or not parenthood is part of someone's conception of the good, and specifically biological parenthood, they will have a strong interest in being free to realise that conception – of life as a parent, or life as a non-parent. But that interest cannot be simply a liberty interest, in being permitted to realise that conception. The intensely consequential and other-affecting nature of procreation argues for this to be a particular type of autonomy interest: the interest in exercising responsible normative agency.

¹³¹ James Griffin (2007) has argued, with reference to US constitutional rights, that properly considered, a right to privacy only covers informational privacy. In his view it does not extend to, for instance, one's choice to use contraceptives or have an abortion, which Griffin regards as issues of liberty, not privacy. Griffin also takes any liberty-based right to be limited, or limitable, if there is a substantial enough public interest to outweigh the liberty interest.

Though this may sound similar to the freedom asserted under the Cairo consensus-style versions of the right to procreate, it is not. The Cairo right does not require agency, responsibility, or even choices to be made. This is so notwithstanding that the actual wording of the right as formulated in the ICPD Programme of Action and preceding documents asserting a right to contraception explicitly reference a freedom to make responsible decisions about the number and timing of children. This responsibility, as a normative reality, is no responsibility at all; the right-holder is answerable only to him or herself for their judgment, if any was exercised, about whether having a child was a responsible choice. It is not simply that Cairo-type absolutist versions of a right to procreate are seen as entitling the would-be parent to create children at will; the parent is not even required to exercise any will at all for the purported right to be engaged. The kind of freedom protected by an absolute right to procreate is not a freedom to make choices about having a child or avoiding pregnancy; it is a lower kind of freedom, of action, of *doing* that which we are supposedly free to do.

Consider what in countries of the continental legal tradition is referred to as the basic right to come and go (or *le droit d'aller et venir* in France). That is, being free to move, go about town, or stay, without constraints and without authorisation from the state. This right is not conditional on the right-holder making reasoned decisions about where they are going, or any decisions at all. The right-holder might be walking around aimlessly, listening to music and not even aware of their surroundings; they could be intoxicated and stumbling down a sidewalk, or going where their Pokémon Go phone app indicates they should go to capture virtual creatures. Their freedom to come and go is still engaged, because it is not predicated on normative agency.

The Cairo consensus-style right to procreate is a similar right, to make babies, without there needing to be a good reason or any reason, or any decision, by the right-holder. It is standardly held to bar anti-natalist interventions which might require, for example, sexually active people of reproductive age who are not actively looking to have a child to use contraception. As already noted in section 2.5, such non-intentional procreation constitutes nearly half of all pregnancies, even in countries such as the UK or the US. This is an astonishing proportion, but it is nevertheless almost certainly an underestimate. It does not address the wide, grey zone where pregnancy and child creation is neither wanted nor unwanted, as is characteristic of the fatalistic attitudes towards procreation that are common in strongly pronatalistic and/or very poor countries and communities worldwide.

But children are highly vulnerable and needy people, and they are *people*. It would seem intensely disrespectful to children *qua* persons to accord anyone a moral entitlement to create them without considered intentionality by an agent prepared to not only make a choice, but to take responsibility for it. Again, this does not mean that procreation resulting from accidental pregnancies are necessarily wrongful, but it

would mean that in order for there to be a *right* to create children one must specifically intend to create them.

It might be argued that the reason anti-natalist interventions to incentivise or compel people who do not specifically want to have children to use contraceptives are supposedly impermissible is because they would violate individual rights to refuse to take pills or use condoms as a matter of respect for our bodily autonomy or general liberty. But this is not plausible. The freedoms grounded in those interests are uncontroversially subject to limitations under the harm principle. Measures mandating vaccinations, requiring those exposed to serious contagious diseases to quarantine, or criminalising HIV-positive people who have unprotected sex with partners unaware of their status¹³² are plainly capable of moral justification.

The plausible freedom-related interest at stake, then, is not a general interest in liberty, but a more specific interest in normative agency, in being free to make considered choices in pursuit of one's conception of the good life, of which the decision whether to become a parent unquestionably plays a major role.

If this is right – and I cannot see how it could be wrong, provided we endorse the value commitments underpinning this analysis – then one central normative implication is that the right to have children is not engaged if there is no normative agency at play.

This includes situations where the would-be parent is *unable* to exercise normative agency, as is the case with children who are physically capable of creating children but too young to have capacity to make decisions about sex or parenthood, as well as persons with sufficiently serious psychiatric disorders, mental disabilities, or intellectual impairments. And more importantly from a population-level perspective, it is also the case where the would-be parent is *unwilling* to exercise normative agency, as with any case where children are not actively wanted but the would-be parent is sexually active and does not take steps to avoid pregnancy. Anti-natalist interventions incentivising or compelling such persons to use contraceptives would not violate a right to procreate.

6.4 Children as means and motivational interests

For some of the choices open to us, our motivations matter in establishing the morality of the choice that we make. Procreation is unquestionably one such choice. A right to create others cannot be grounded simply in an autonomy or liberty interest,

¹³² Some 68 jurisdictions criminalise the knowing exposure of an uninformed partner to the risk of contracting HIV, including the UK, Canada, US, Switzerland, Sweden, France and New Zealand (Pebody, 2019; Ng *et al.*, 2020).

even a more morally substantive one as normative agency¹³³. It would be absurd to suggest, for example, that one has a *right* to create children to fulfil a promise to a friend or relative, or to sell the resulting child, or out of boredom, or a desire for attention, or any a myriad possible motivations. A right to create another can only possibly be justified if normative agency is exercised in pursuit of a kind of motivation that is appropriate and appropriately respectful of that other.

A range of motivations are commonly mentioned in academic as well as popular discussions by way of purported justification for why we have a right to use our bodily capabilities (and presumptive freedom) to create children. The motivations generally turn on children’s instrumental usefulness to their parents, and commonly include:

1. Self-realisation or self-expression by the prospective parent, including for example a (particularly objectionable) view that procreation is a way for a parent to express optimism about the future¹³⁴ in the face of depressing news about global warming, natural resource depletion, and other creeping catastrophes¹³⁵;
2. The strengthening of (heterosexual) romantic relationships, the general idea being that a couple who have a child are more likely to stay together;
3. The preservation of one’s dynastic line by passing on one’s genes and family name (this seems to be an almost exclusively male motivation);
4. Enjoying the services or financial benefits provided by children, either while the children are young, or when the parents are elderly – for example as extra hands to work a farm or take care of domestic chores, as child labourers bringing in an income, or as adults who might feel moved to provide their parents with financial support, companionship, and practical care in their old age;
5. Experiencing the special relationship between parent and biological child;
6. Rearing a happy, flourishing child as a special, purpose-giving personal project.

¹³³ Onora O’Neill might agree. Whether achieved through natural means or ART, reproduction, she says, “can never be justified simply by the fact that it expresses the individual autonomy of one or two (or more) would-be reproducers. An adequate future for children and their long dependence must aim to ensure that each child is born not just to an individual who seeks to express him or herself, but to persons who can reasonably intend and expect to be present and active for the child across many years.” (O’Neill, 2002, p. 62)

¹³⁴ For a recent example, see philosopher Tom Whyman’s (2021) argument that having children in the face of climate change and catastrophe expresses “radical hope”, and that moreover one’s child might conceivably make the world a better place.

¹³⁵ Onora O’Neill argues that while reproduction allows people to express themselves, or enact their beliefs, it does not follow that a right to self-expression can establish a right to procreate (O’Neill, 2002, pp. 61–62, 66). Catherine Mills similarly objects to the notion that a right to create another rights-bearing individual can be subsumed into a right to self-expression, saying this would lead to “a form of moral narcissism” (Mills, 2011, p. 41).

Of the above, it seems to me that only motivations 5 and 6, which are closely related and arguably inter-dependent, are capable of plausibly justifying a right to create children. Every other motivation involves a seriously problematic objectification of children, and trivialisation of their creation, in a manner plainly contrary to equal respect for them as human beings¹³⁶.

I suggest what distinguishes motives 5 (the special parent-child relationship) and 6 (child rearing as a special personal project) from these other objectifying reasons is that they are substantially centred on the child as a person rather than on what the child can do for the parent. Rivka Weinberg similarly argues for a motivation restriction on permissible procreation, namely that “procreation must be motivated by the desire and intention to raise, love, and nurture one’s child once it is born” (Weinberg, 2016, p. 176). Weinberg frames this condition as relating to the permissibility of procreation, which implies that if the condition is not met, then the parent does not have even a bare liberty to procreate, subject to ordinary constraints of policy-making; instead, they are acting wrongfully. This is a stronger claim than I am willing to make.

In my view the motivation and normative agency preconditions (the latter of which is only implicit in Weinberg’s motivational condition) only pertain to the question of whether the right to procreate is engaged. Provided a child’s circumstances at birth are generally conducive to their wellbeing and flourishing, and devoid of any serious, foreseeable harms such as to render existence unusually hazardous for them, then it seems to me that it is possible for a person to procreate without doing a wrong (though they cannot be said to be exercising a right to procreate). For example, it seems to me that a person who carelessly conceives a child, without any intention of raising them, but decides to take the pregnancy to term while arranging for the child to be adopted by loving, suitable parents able to properly care for them, has probably not engaged in wrongful procreation (though they did not exercise an entitlement to procreate). It is principally the circumstances of the prospective child’s birth that are capable of making procreation wrongful.

The most obvious objection to these two motives as grounds for a right to procreate would be that they could substantially served by adoptive parenthood. It would not be exactly the same, but it would be close. I readily accept that the case for claiming that we have a right to do something really consequential and other-affecting just because the alternative is just not *quite* the same is far from morally or philosophically robust. But insofar as we have *any* entitlement to create children, however qualified, it seems to me that the right motivation, that is, the morally justifiable one, has to be the desire to enter the relationship between parent and biological child together with the desire

¹³⁶ See for example Dwyer (1998, pp. 67–69) for a more detailed articulation of this concern.

to pursue a special personal project which a large proportion of people believe is capable of giving life purpose and meaning. That project is of rearing a child and doing so well, trying to ensure their healthy development, happiness, and flourishing.

These two preconditions are not enough, however. One can countenance a situation where a parent wants to experience creating and bringing up a biological child under conditions where this would be incompatible with equal respect for the child's interests. For example, the parents could be huddling in a fallout shelter, expecting death within the next few years from radiation contamination or famine or any other consequence of a nuclear war, and feel it would give them joy in their final years to have a child, even if the child, too, would perish at a young age for the same reasons that have doomed the parents. In a more realistic, present-time example, the parent could be simply very poor, or carry genes for a terrible genetic disorder, such that procreation would involve the imposition of hazards well beyond the usual harms of existence. It is neither here nor there that these hazards are not the parent's fault. What matters is that it is within the parents' power to refrain from imposing such unusual hazards onto a helpless child. They can do it by simply refraining from procreation.

We turn to the question of existential hazards, and of how to think about the interests of the prospective child, in the next section. Before then, however, I shall touch on one final potential 'motive' for procreation: the idea that procreation (at some level) is socially useful, or necessary for the species to survive. Within reason (i.e. disregarding growthist ideation), these can be perfectly valid motives to guide *social policy*. They cannot, however, be grounds of individual basic rights. Social utility is what autonomy-based basic rights are supposed to resist, to at least some extent. It would be illogical to suggest that the reason we have a basic individual right to X is *because* is socially useful for people to be free to do X.

6.5 Countervailing considerations, or the moral implications of a right to have biological children

In this section I consider whether the presumptively universal desire to enter this relationship might justify granting to each of us a *right* to create the other person for the purposes of that relationship. Can we have a right to the parent-child relationship, considering its existential and normative hazards?

As discussed below, the existential hazard is that the relationship between a parent and a biological child requires the creation, and the inevitable imposition of risk onto another person, so as to satisfy a preference or interest of the would-be parent. The normative hazard lies in the impossibility of consent by the person created to either the risks of existence nor to the relationship with the parent. Procreation forces the child into both. I will argue that, as a matter of respect for persons, these hazards require procreative behaviour to be approached with a considerable degree of

wariness and caution, which argues for a precondition to a right to procreate relating to the seriousness of foreseeable harms in a prospective child's likely life, should they be created.

Our obligations to future persons

Before proceeding, a clarification: by **prospective child** I mean a person who the would-be parent is considering or open to creating. From the point in time when the wheels are in motion to create that child, the prospective child should be assumed to be a future person (an actual person not yet born). But before the wheels are in motion, or if the would-be parent takes steps to prevent conception or abort a pregnancy, the prospective child is or becomes a hypothetical person - which as discussed in section 5.5, are merely imaginary. We do not owe anything to hypothetical persons, as they are not persons at all¹³⁷.

I take it that we owe it to future persons not to knowingly place them in harm's way by creating them into circumstances unconducive to their wellbeing and to the full development of their capacities as human beings. This obligation comes from our ability to assess circumstances and either change them so they are sufficiently conducive to a future person's wellbeing, or to prevent a future person from coming into existence. After all, future persons do not just come into being as some natural event over which we have no control. Future persons are created as the consequence of present actions, or inactions, of persons already alive, actions which are generally within their agential control. And in my account, only those able and willing to exercise normative agency have any claim to a right to procreate; such persons are able to make considered decisions about whether or not to create a child.

As discussed in the previous chapter, we can influence the future in a way we cannot do the past, and this generates moral obligations on us in relation to foreseeable hazards to future persons. A future person can have no interest in being made to exist – they are not a person now, and do not have interests now¹³⁸. If we turn a future person into a hypothetical (i.e. imaginary) person, no one has 'missed out' on the boon of existence, not only because existence cannot be fairly or reasonably assumed to be a boon, but because there is no one to benefit or harm if we do not create them¹³⁹.

¹³⁷ Joel Feinberg similarly argues that the foetus has future interests, contingent upon its being born, which can or perhaps ought to be protected in advance for it on the expectation that it *will* be born. But the foetus does not have an actual interest now that it be born later, because it is not yet capable of having any actual interests (Feinberg, 1980).

¹³⁸ David Benatar, for example, says that accepting that the interests of future persons should count the same as the interests of present people does not entail that future persons have a right to be created, or that preventing future people from coming into existence harms them (2010, pp. 78–80).

¹³⁹ Christine Overall (2012, pp. 173–174) holds that mere existence is not itself a beneficial or harmful property, and children are neither benefited nor harmed by coming into existence. This is not quite my view; certainly children *can* be harmed by coming into existence in unusually hazardous or unsuitable circumstances. Elsewhere Overall seems to agree, as she thinks parents ought not to create children in

So the most obvious and most effective way of addressing harms to future persons is to take steps to not create those persons in the first place. This is guaranteed to avoid harming persons, and guaranteed to avoid wronging anyone. Conversely, knowingly creating or recklessly failing to take steps to avoid creating a person into seriously adverse circumstances is a wrong, not only to that person but to all others negatively affected by their creation.

The distinctive parent-child relationship, or children as the object of a right

I have discussed above how normative agency seems capable of grounding a justified right to procreate if combined with the right motivations, namely to experience the unique relationship between parent and child and to rear a biological child as a special purpose-giving personal project. This is much more credible than the suggestion that we are entitled to create children because we are able to, or because children are useful, or perhaps because women have been oppressed for long enough (true) and therefore should not be subject to constraints on their most distinctive capacities (non-sequitur). But it still leaves us with thorny ethical questions, which I suggest can only be resolved by resort to a justice-based qualification on a right to procreate concerning the interests of the prospective child in being created in circumstances conducive to an open future.

One of the unusual features of the right to procreate, and I suggest its more prominent one, is that it is a right to create a person *so that* the right-holder may enter into the special relationship between a parent and their biological child. This relationship can be approximated by a variety of close relationships of care, nurturing, and mentorship between an adult and a child, most notably adoption and step-parenthood. But it cannot be fully replicated. For a substantial proportion of people, the only form of parenthood they are interested in is biological. There is unquestionably something factually different about the relationship between a biological parent and their biological child. For starters the latter is necessarily created by the former, a wholly unique situation. And a biological child is necessarily more similar – in appearance, aptitudes, or personality traits – to their two parents than a non-biological one, which many people find emotionally compelling.

While some authors are sceptical that biological parenthood is morally distinctive from parenthood more generally¹⁴⁰, there is broad agreement that the relationship between parent and child is very special and a potential ground for a morally

overly risky circumstances such as intentional pregnancies of triplets, nor to deliberate create children into a life of suffering.

¹⁴⁰ Harry Brighouse and Adam Swift, for example, argue compellingly that the distinctive goods of the parent-child relationship do not depend on any biological connection between parent and child (2014). However their focus is specifically on parenting, not on procreation and what might legitimately motivate it.

justifiable right. For example, Rivka Weinberg argues that “*the desire to engage in the parent-child relationship as a parent is... a valid and morally acceptable procreative motivation*” (Weinberg, 2016). Christine Overall thinks that no other connection, however intimate, can provide a substitute or replacement for the parent-child relationship (Overall, 2012, 2018). Though focusing on parenting, not procreation, Harry Brighouse and Adam Swift find that “*parenting a child... cannot be substituted by other forms of relationship, and it contributes to the parent’s well-being so substantially... that it grounds a (conditional, limited) right to parent*” (Brighouse and Swift, 2014).

I think it is uncontroversial that as human beings we have a strong interest in being able to enter into and sustain close relationships. Indeed, as explained in section 4.6, I take such relationships to be a component of psycho-social wellbeing, one of the three cornerstones of human wellbeing. But such an interest does not ground any right to such relationships, as any relationship always involves at least one other person. A’s genuine and strong interest in being in close relationship with B does not mean B must enter into a relationship with A. A is not entitled to that relationship, because to impose that sort of obligation on B would be incongruent and overburdensome, and therefore unjustly harm B’s interests, which count just the same as A’s. Instead, what seems just, and justified, is for there to be a right of A to enter into a relationship with B so as long as both A and B wish to be in that relationship. This seems a good explanation of our relationship-based basic rights, for example the right of consenting adults to marry, to have sex, or our general freedom of association. We are free to choose our romantic partners, friends, and the people with whom we undertake joint projects, and can have those relationships provided they choose us too. But what of parents and children?

A right to be a biological parent seems to involve a morally problematic objectification of children. After all, if a child is created by a person who wishes to become a biological parent, the child’s very existence is the means to the would-be parent’s end. This is central to the parent’s ability to pursue their child-rearing project as part of their conception of the good life. Whether adoptive or biological, a child must be *acquired* so as to enable the would-be parent to become a parent. This may not seem problematic in itself; after all, one must acquire a spouse if one is to become a husband or wife, or a business partner if one does not want to go into business alone, or a friend if one wants to be in a friendship. But in none of these examples do we create our relationship partner so as to create the relationship, or enter the relationship with a partner *unable to consent* to being in them.

The existential hazard and the harm-based precondition

Evidently a child cannot possibly consent to being created and to entering the parent-child relationship. But this is not just some neutral fact of life we can shrug away. Given sufficiently pressing circumstances where prior consent cannot be obtained, a person might ordinarily receive another into a provisional arrangement which the

other may change upon arrival if they are not happy with it. But this is not possible for a child. The person created undergoes an irreversible change of position, a change that makes them intensely vulnerable to harm. This is not a novel argument; similar contentions have been presented, in rather more depth and detail, by Rivka Weinberg (2016), David Benatar (2006), and Seana Shiffrin (1999), among others. Creating a person inevitably involves an imposition of significant risk on them for the benefit of the would-be parent, who wishes to have their life enriched by becoming the parent to a biological child.

The change of position pertains to the reality of being made to be. It may be thought that death and non-existence are symmetrical, because in either case the person is not alive. This is a mistake. Non-existence means there is no one at all, alive or dead or in limbo; it is not an absence of harm, as much as the absence of the *possibility* of harm. Death, however, is the loss or termination of life, and however inevitable, it is one of the most serious harms to befall any living thing. Human beings of normal psychology, as all creatures, are wired to seek to avoid and delay death, and to try to remain alive for as long as we can, though we could never possibly have wished to come alive in the first place. A person brought into existence has no option to “go back” into non-existence; but death is always in their future, and perhaps quite a lot of suffering before then. Some might think this change of position is not particularly troubling, on the grounds that most individuals of normal psychology do not appear suicidal, except when overwhelmed by despair. But that is an altogether unreasonable bar. Our brains are very poorly equipped to dispassionately consider existential counterfactuals, or to ignore our survival instincts. One might regret their existence, and still feel compelled to strive to survive even in thoroughly miserable circumstances.¹⁴¹

In his 2006 book *Better Never to Have Been*, David Benatar argues – quite correctly, I believe – that the absence of harm is a good thing even when there is nobody to enjoy that good. But the absence of a benefit is bad only where there is somebody who is deprived of that benefit. There is nothing bad, or wrong, about non-existing, imaginary “people” not benefiting from the potential joys of life. But it is certainly a good thing to avoid having a person (or, one might say, any sentient being) suffer severe harm, even if the way we achieve this is by not creating them in the first place. Weinberg similarly (and correctly) argues that it is a mistake to regard existence, which every person has and no person needs, “*as a good bequeathed to you by your ancestors, that is capable of offsetting or outweighing other life burdens*” (Weinberg, 2016). Existence, she argues, is a prerequisite to a person being the subject of benefits and harms, but it is not itself a benefit. Life is often replete with hazards and suffering. In

¹⁴¹ Popular culture, at least, seems to be well aware of this. See for example the lyrics to *Bohemian Rhapsody* by Queen: “Mama... I don’t wanna die, I sometimes wish I’d never been born at all...”. See also the recent Lebanese drama film *Capernaum* (2018), by director Nadine Labaki, depicting a child who seeks to sue his parents for creating him and his numerous siblings in conditions wholly unsuitable to their welfare.

order to stand a chance at an enjoyable life, significant effort is required – by the parents, by the child, by society. And even where those efforts are undertaken to the requisite degree, we cannot be confident that the created will be able to avoid a great deal of suffering. We need to accept that parents’ motivation for procreation is essentially selfish.¹⁴² Creation is no gift to the created. Parents do not get a net positive balance in creating a child, against which foreseeable harms inflicted onto the child can be deducted and forgiven.

Here the differences become clear between Benatar’s antinatalism and the position of authors such as Rivka Weinberg and myself. Benatar considers that coming into existence is *always* a serious harm. Life is an endless procession of frustrations and irritations, discomfort and need, effort and unfulfillment, pain, suffering, and decay. Procreation, Benatar argues, is therefore inherently wrongful¹⁴³. In contrast, Weinberg holds (and I agree) that, while parents do not benefit a child by creating him or her, and though existence is necessarily risky, it does not follow that procreation is always wrong or morally impermissible. Weinberg argues for two conditions: the motivational constraint (see above) as well as the principle of procreative balance, whereby we must consider “whether is it rational for us to risk being born with disadvantage X in exchange for the permission to procreate under condition Y” (Weinberg, 2016, p. 179). This is intended as a balancing exercise between the parents’ interests in procreation in what could be very unreasonably harmful circumstances to the prospective child, and the prospective child’s interest in being born in optimal circumstances for their flourishing.

I propose a comparatively simpler precondition, which leaves the would-be child less vulnerable to the imposition of harm to their global interests on the grounds that the costs to the procreative interests of the would-be parent would be too great if procreation were not permissible. I propose simply that a child should not be created into unusually hazardous circumstances, those involving foreseeable harms well beyond the ordinary harms of existence, whatever the interests of the parents in creating them. This is not about disregarding the parents’ procreative interests; it is about recognising that their interests in procreation are narrow compared to the

¹⁴² Jim Crawford (2010) argues, perhaps more forcefully, that *all* types of reasons for having children are a form of selfishness: “utilitarian selfishness” (seeing children as useful to the parents or to society), “motivated selfishness” (feeling pleasure or achievement in having and raising children), and “self-deluded selfishness” (the quest for immortality).

¹⁴³ There are also overpopulation-based arguments for the wrongfulness of *any* procreation under present circumstances. Thomas Young, for example procreation is indistinguishable from other forms of “eco-gluttony”. “Reproduction and procreation often have identical motivations: cultural expectations, improved status, elevated self-esteem, increased happiness, or an altruistic desire to share with others”. If we oppose extravagant over-consumption, then in order to be consistent we must also oppose procreation in most cases, for the environmental impact of even one child in an affluent household is comparable to “an intuitively unacceptable level of consumption, resource depletion, and waste” (Young, 2001).

impact on the child's general interests if the child is born into serious risk or disadvantage.

I assume that a justified right cannot include an entitlement to inflict wrongful harm on a vulnerable other. As discussed in Chapter 5, the imposition of serious, avoidable harm is normally wrongful. Inflicting such harm on a prospective child is always avoidable by not creating them. To endorse the imposition of wrongful harms on others as the cost of satisfaction of a relatively narrow interest of their would-be parents would certainly seem to go against the basic requirements of justice, in particular the requirement for equality. The father of the harm principle, John Stuart Mill, would probably endorse this precondition. According to Mill, "the fact itself, of causing the existence of a human being, is one of the most responsible actions in the range of human life, which may be either a curse or a blessing, unless the being upon whom it is bestowed will have at least the ordinary chances of a desirable existence, is a crime against that being." (Mill, 1859, p. 99).

David Archard similarly holds that parents' procreative liberty is subject to a threshold condition: the prospective child must be secure in the enjoyment of "*a good number of those rights that are listed in the United Nations Convention on the Rights of the Child*". According to Archard, "*A parent does wrong in knowingly bringing into existence a child who will not enjoy most of these rights. Acting in this wrongful way she does not exercise a procreative liberty right, since that right is internally constrained by the obligation to ensure that any child will be guaranteed at least the adequate life which these rights circumscribe*" (Archard, 2004). This is broadly compatible with my view. Bringing a child into conditions that are seriously unfavourable for their wellbeing and flourishing is a wrong¹⁴⁴, and well outside the justified scope of a right to procreate. It does not matter that the unfavourable circumstances may not be within the power of the parent to alter. The parent can avoid creating the child, and thus can avoid placing an innocent other in harm's way so as to use that person to satisfy an interest of the parent.

Possible objection: is the duty to refrain from harmful procreation too existentially indeterminate?

¹⁴⁴ This precondition is about preventing the birth of children into unusually disadvantageous circumstances. It does not require would-be parents to take steps to provide the prospective child with unusually advantageous life chances, such as might be implied by Julian Savulescu's principle of procreative beneficence. Savulescu has genetic selection in mind; he conceives of the PPB as the moral obligation on parents to select children (where selection is possible) with the best chance of the best life due to their genetic endowment (Savulescu, 2001; Savulescu and Kahane, 2009). Consideration of this argument is outside the scope of the present analysis. My harm-based precondition, however, bears some similarities to Ben Saunders' principle of generalised procreative non-maleficence, according to which the primary obligation on parents is not to cause harm to other people through their reproductive choices (Saunders, 2017).

The most obvious objection to my view might be that while we wrong future people by creating them into harm, which we ought not to do, this leaves us with what Laura Shanner describes as “an irresolvable metaphysical puzzle”, in that our duty in this situation depends on the future person remaining a future person and on us not desisting from our plan to create them (Shanner, 1995). Shanner takes it to be necessary that there is someone whose interests are being protected by a duty to refrain from doing something that will harm them. So if that person is a future person, the duty would seem to disappear the moment we no longer intend to create that person (i.e. the moment the future person becomes merely hypothetical). Shanner isn't arguing against the duty; she is arguing against the framework of a right to procreate as problematic and inappropriate, for not providing a way to appropriately deal with the interests of the prospective child by way of limiting parents' procreative entitlement.

There are two reasons, I think, that we need not treat this puzzle as irresolvable. One of them operates within Shanner's argument. We can accept that a duty not to create someone because existence would be wrongly harmful for them disappears if the future person ceases to exist in the future timeline, if we have already decided or taken steps to avoid creating that person. That does not create metaphysical problems for us. The duty is not necessary for as long as we remain true to the decision to not expose a future person to wrongful harms. There is no need for there to be someone whose interests ground the duty.

The other reason makes different assumptions about the possible grounds of duties. If we accept that we may have abstract duties, on grounds of justice, to not do something that will foreseeably result in serious harm to another human being, then it should not matter that our obligation is conceived in terms of respect for human life in the abstract. Indeed it seems to me that any future-oriented duties we, or the state, might owe, e.g. for example safeguarding the future wellbeing of people presently alive, ought to be at least partly grounded in such respect for persons in the abstract.

It is strictly true that any of us might not be alive to benefit from the discharge of any future-oriented duty; any of us might die at any time, and our continued existence becomes less and less certain the farther into the future we look. If the continued existence of the person whose interest a duty benefits were a condition for the imposition of any duty, then arguably we could not, strictly speaking, have any future-oriented duties at all. Our duties to avoid wrongfully harming a person by creating them into hazardous circumstances is a more extreme version of this, but then there is much that is metaphysically unusual or extreme about the claim that each of us has a *right* to bring other persons into being because we want to, or because procreation can follow naturally from behaviours which, when consensually engaged in by adults, are an important and healthy part of life. This metaphysical strangeness seems far from a good enough reason to overlook or tolerate the infliction of serious harm onto

an intensely vulnerable other person when that harm clearly can be avoided by not creating them into it.

6.6 Additional countervailing considerations: The impossibility of consent

In addition to being made to want to remain alive in spite of what could be objectively terrible circumstances, the child created is unable to have a say on whether they *remain* in the relationship they were placed in through no choice of their own. A child's ability to meaningfully *assent* or *dissent* to anything lags their own creation by several years. Moreover, their normative capacity to *consent* lags longer still. The power is entirely on the biological parent's side, to create another who is automatically placed into a relationship with him or herself – and a not terminable relationship at that. As Elizabeth Whelan has pointed out, “you cannot have an ex-child” (Whelan, 1975).

The parent alone has the practical, and thus far normative, freedom to create the child who is placed into a relationship with them. For years thereafter, the parent will be relatively free to exit the relationship, for example, by abandoning the child or placing it for adoption. The child, in contrast, will have no comparable freedom to leave, especially while very young and most vulnerable to the parent's abrogation or neglect of their caring responsibilities towards the child. An abandoned or neglected infant can die within a matter of minutes from hyperthermia or accidental suffocation; any young child will face a risk of death within hours or days from dehydration, hypothermia, hunger, injury, accidents, or assault. While the vast majority of children survive childhood, worldwide a very large proportion of children experience seriously substandard care or abuse during their early life, with lasting consequences to their wellbeing (World Health Organization, 2020a, 2020b).

Even where the child is old enough to at least express a preference about the relationship with the parent, they are likely to be unable to form a view that is genuinely their own while still children (Schapiro, 1999, pp. 717, 729). Children are intensely dependent on their parents or guardians, not only materially but also emotionally and psychologically. This is true even of children subjected to neglect or abuse by their caregivers (Sullivan, 2010). Children are also distinctly vulnerable to the inculcation of their parents' values (Lotz, 2018), values which may not be edifying or conducive to a good life, healthy relationships, or responsible citizenship. And children's practical reasoning is lacking or impaired. Children generally lack the knowledge as well as rational and emotional capacities to make good decisions, as well as a stable and reasonably well developed view of what is a good life for them (Brighouse and Swift, 2014; Hannan, 2018; Lotz, 2018).

All of which is to say, children are distinctively and especially vulnerable *qua* children. As they grow older, children's distinctive impairments and vulnerabilities become less

and less intense, and eventually disappear with maturity, if the child enjoys normal health and development. The difference between a child and someone with cognitive or physical disabilities is that a child's impaired capacities are a temporary (albeit many years long) state. But we never fully outgrow our vulnerabilities, not just to the vicissitudes of existence but to the circumstances of our birth and early life. A child's life chances will, to a material extent, be actively moulded by the parent's choices, in particular how well the child is looked after and educated. As argued by Harry Brighouse and Adam Swift (2014) and demonstrated by substantial empirical evidence¹⁴⁵, the quality of children's lives as a whole, and not just their childhoods, is heavily dependent on the way in which they are raised by their parents or guardians.

Seanna Shiffrin (1999) argues that procreation is always morally problematic because it involves the imposition of a huge risk onto a non-consenting other. I do not disagree with Shiffrin, though I am less confident that procreative wrongs lend themselves to demands for compensation to the child by the parents, as Shiffrin proposes. Procreation involves an inherent moral conflict between the parents' procreative interests and the prospective child's interests in not being created into a hazardous existence – and all existence is hazardous to a significant degree. It seems to me there is no neat, or fully satisfactory solution to this moral conflict. But this does not mean we should not try to at least mitigate the injustice and disrespect to children as future persons that is characteristic of the Cairo consensus and of our social arrangements and cultural assumptions towards children.

Biological children as their parents' property

From the discussion above it should be clear that from its inception and for many years afterward, the relationship between parent and biological child is characterised by a deep asymmetry between the parent's overwhelming power on the one hand and the child's intense vulnerability to the decisions and behaviour of the parent on the other. This asymmetry has no parallel in other normal human relationships. A closer comparator may be the power and vulnerability dynamics inhering in the relationship between humans and domestic animals, where the animal's very existence, and whether it is a reasonably good existence or one full of suffering, is overwhelmingly within the power of their human owner. The similarity, I suggest, goes a little deeper than that. As a rule we allow parents to bring children into existence, and to retain their custody, in circumstances where we would never allow them to adopt or retain custody of a child who they did not create. The only rational explanation for this is that

¹⁴⁵ See for example Carrasco *et al.* (2018) on the psychological maladjustment consequences for children of parental hostility, aggression, indifference, or neglect; Shonkoff *et al.* (2012) on the lifelong effects of early childhood adversity and toxic stress; McDaniel and Dillenburger (2013) on the difficulty of agreeing adequate standards for parenting and the lifelong effects of childhood neglect; Kessler *et al.* (2010) on the high prevalence of childhood adversities and its association with all classes of mental health disorders at all life-course stages; and Berens *et al.* (2018) on the impact of childhood psychosocial adversity on brain and behavioural development.

we continue to think of human children as the property of their makers (Lafollette, 1980; Dillard, 2010a; Brighouse and Swift, 2014, pp. 9–10; 114; Godwin, 2015).

Most of the cases mentioned in section 2.4 involve parents who did not have custody of their existing children, who they had physically abused or failed to support. Yet those parents were held, or at least argued, to have a right to keep creating more children, who would presumably be placed in the care and support of others, involving significant forced costs on the state and therefore normative forcings, depleting the resources available to protect or advance other rights and interests. In such cases, whatever right to procreate was being invoked had nothing to do with the parent-child relationship, and moreover, was indifferent to the fate of children. And as already noted in section 1.3, taking a child away from a parent who is likely to abuse or neglect them is not only an expensive remedy, it is a far from sufficient one, in so far as we care about what happens to the child. Children who spend time in institutional or foster care generally suffer lasting impairments to their wellbeing (Turney and Wildeman, 2016; Murray *et al.*, 2020); they are rescued from more immediate and severe dangers by being placed into care, but still do not avoid circumscribed life chances.

One way the courts and policy-makers try to justify the way parents' interests are treated with such obvious priority over those of their children is to erase the interests of biological children and treat parent and child as more or less a single entity, with children's interests subsumed into those of their parents¹⁴⁶. The idea is, what the parent wants is good for the child, in particular when it comes to custody arrangements or the children's education and religious upbringing.

One clear example of this is the *Soares de Melo* case (see section 2.4). The mother in that case was in no position to provide for or look after any children at all, yet kept creating more, seemingly in a bid to hold on to her polygamous husband's affections. Though she did not work, her numerous young children were constantly left to fend for themselves in a tiny, rubbish-filled apartment, often without food, running water, or electricity. It would be absurd to suggest that the mother in that case could be permitted to adopt or even foster a single child, let alone ten. But not only was she assumed by the courts to be entitled to refuse contraception and thus to continue creating more children into harm's way, the ECtHR held that her children should not have been removed from her custody. In doing so, the ECtHR explicitly held that the Portuguese courts had placed too much weight on the interests of the children:

“The child's best interests rule cannot be interpreted as a rule excluding the fundamental rights of the parents. (...) The best interests of the child come into

¹⁴⁶ See for example James Dwyer (1998, p. 66). John Eekelaar (1986) argues that the idea of a child's best interests represents a “total reversal” from a long history where children's interests were made subservient to those of their parents.

play where the obligations inherent to parental rights are not discharged by the parent, or when the parent exercises their rights in an abusive way. (...) In the origin of a *unilateral and absolutist* understanding of the notion of the best interests of the child is ignorance of the need to interpret this notion in a harmonious manner with other fundamental rights. (...) The history of mistreatment of and discrimination against children is a history of public and private services provided by “saviours”. So as to avoid this history repeating itself, it is of the highest importance that child protective services fully respect the fundamental rights of everyone, including those of the parents, even when well-meaning persons are convinced that they are acting in the best interests of the children.” [Soares de Melo judgment, concurrent opinion by Judge Sajó, emphasis added]

At this point one might object that the relationship between parent and biological child does have a parallel in the relationship between a parent and an adoptive child. This is mostly true, in that an adoptive parent of a young child will hold enormous power over that child, while that child will be intensely vulnerable to the parent’s power and freedoms. Young children cannot consent to being adopted, either. But individuals are not generally held as entitled, as a matter of legal or moral right, to adopt, however much they may wish to become adoptive parents, and however many children there may be in desperate need of adoption. At best, would-be adoptive parents have a right to have their application to adopt a child fairly considered, without discriminatory or arbitrary rejections. And in well-ordered societies, would-be adoptive parents are carefully *vetted* for personal suitability as well as in relation to the living conditions and care they would be able to provide to a child. In comparison, under a Cairo consensus-style right to procreate a would-be biological parent has an unconditional entitlement to acquire a child by *making* one, even if they are living in circumstances in which many pet shelters in Western societies would not allow them to adopt a cat or dog.

We must recognise that our way of thinking about biological children is primitive, atavistic, and unworthy of validation in moral reasoning. Children cannot be less worthy of protection depending on the identity of the person who might cause them harm, or put them in harm’s way. They are not, in fact, their parents’ property. If there are conditions in which we would not find it morally permissible for a willing parent to adopt a child, we must also hold that the prospective parent is not entitled to create a child into the same conditions.

Those of a utilitarian inclination might suggest that the non-identity problem is the reason why we should disregard harms to children that are packaged together with their creation, and which might therefore justify allowing children to be born into conditions we would not countenance having them adopted into.

In brief the non-identity problem, as proposed by Derek Parfit (1986), argues for something approaching a *carte blanche* absolving parents of any wrongdoing when creating a child under unusually hazardous or disadvantageous conditions. As a typical scenario, a woman with rubella is advised by her doctor to wait a trivial amount of time – three months - until she has recovered, before trying for a baby. Otherwise she faces an elevated risk of miscarriage or stillbirth; if the pregnancy is sustained to term, the baby faces a high risk of being born with congenital deafness. Parfit suggest that the woman does no one any wrong by going ahead and trying for a baby straight away. If the child is born deaf, they can have no complaint against their mother; had she waited, she would have had a different child.

Parfit’s argument is philosophically interesting. But from a normative perspective, the non-identity problem is a red herring. Our obligations to avoid causing serious, avoidable harm to others are generally not dependent on the identity of the victim. They are not even dependent on the timing of the victim’s birth, if the causation of the hazard precedes it. As Rivka Weinberg argues, not a single one of our prevailing ethical theories determines moral permissibility on the basis of an act’s effects on a particular individual (Weinberg, 2016, pp. 4, 81–119).

For example, consider a sniper who takes up position in a barricaded top floor apartment and shoots at strangers in the street below; it is simply irrelevant that the sniper does not know the identity of those he is shooting, the most basic facts about them, or even their number.¹⁴⁷ Or consider a murderous misanthrope who sets up spiked trap pits in forest paths commonly walked by hikers, intending to cause someone to fall in and die. Five years later, a four-year-old child falls into one and is killed. It would be absurd to suggest that the wrongfulness of what was done is reduced in any way by the fact the perpetrator did not know the identity of who would eventually fall into his trap, or that the victim was not even born when the trap was set.

Knowingly creating a child in harm’s way is, in fact, a wrong; it amounts to trapping an innocent other into a hazardous existence.¹⁴⁸

6.7 Conclusion: the pre-conditions to a right to procreate

In this chapter I have identified **three grounding interests** which, in combination, appear to plausibly ground a justified right to procreate, namely:

¹⁴⁷ For a real life example of this scenario, see the US case of Stephen Paddock, who on 1 October 2017 barricaded himself in the 32nd floor of a hotel in Las Vegas with vast amounts of ammunition and opened fire on a crowd attending a music concert, killing 58 people and injuring over 500 others (Keneally, 2017; Turkewitz and Goldman, 2017).

¹⁴⁸ See also Rivka Weinberg’s (2013) compelling arguments in support of the common-sense view of those who matter morally: only those who do, did, or will exist.

- (1) our interest as capable and responsible individuals to exercise normative agency in making decisions to pursue our own conception of the good while being mindful of the impacts of those decisions on others,
- (2) the interest in experiencing the unique relationship between parent and biological child, and
- (3) the interest in rearing of a happy, flourishing child as a special personal project.

Together with a justice-based constraint requiring respect for the prospective child, these interests translate into **three preconditions** to a right to procreate being engaged:

First, the **normative agency condition**: the would-be parent must be able and willing to make a considered, intentional decision to procreate for which they are morally responsible, and actually make such a decision, in order to claim the protection of a right to procreate. Those unable or unwilling to make such a decision do not necessarily do wrong by procreating, but their right to procreate is not engaged; they are exercising a mere bare liberty if they do procreate. But I do not see how one could have a justifiable protected liberty to engage in behaviour so intensely other affecting without making a specific, reflected-upon decision about it for which they can be, and are prepared to be, held responsible.

Second, the **motivational condition**: the would-be parent must have morally appropriate, child-centric motivations that temper the otherwise problematic objectification involved in a right to another person: the would-be parent must be specifically motivated by the desire to experience the special relationship between parent and biological child, and not simply in a 'cheap', notional way of having a biological child with whom they have some degree of contact. The relevant interest grounding a right to procreate is not in sowing one's wild oats, but in a particular, close relationship that is inherently laden with responsibility for a highly vulnerable other person over whom the would-be parent inevitably yields enormous power. The would-be parent must at least intend to be the child's parent and plan to provide the child with adequate care and support. As with the normative agency condition, if the would-be parent lacks the appropriate motivation they do not necessarily do wrong; but their right to procreate is not engaged.

Third, the **existential hazard condition**: The parent must genuinely and reasonably believe that they are able to provide the child with conditions conducive to their wellbeing and flourishing. It is implausible that there would be a morally justified right to choose to bring a human being into existence in a situation where the would-be

parent knows (or should know) that the child will have a life characterised by hunger, serious illness, fear of violence, or severely limited life choices. Creating a child into serious and predictable risk or harm is a moral wrong.

Unlike the normative agency and motivational conditions, if the existential hazard condition does not obtain then not only is the right to procreate not engaged, procreation is wrongful and morally impermissible. If a person intentionally or recklessly places a highly vulnerable other into unusually hazardous circumstances, they are not only acting outside the scope of a right, they are acting wrongfully; this is so notwithstanding that the way they placed that person into serious harm's way was by creating them. This third precondition is partially grounded in the valid interest in raising a happy, flourishing child as a special personal project, together with an equal respect constraint requiring us to take proper account of the interests of the prospective child *qua* future person. This constraint operates to prevent the parent's overwhelming and morally hazardous power towards the intensely vulnerable child to lead to wrongful harm, or to the objectification of the child by allowing them to be predictably placed into hazardous circumstances we would not allow a child to be brought into via adoption. This equal respect constraint is resilient to arguments only those currently alive have rights and interests that generate present duties on us. Our commitment to justice, supplemented by compassion, calls on us to not disregard the interests of those to whom we may not formally owe duties under a particular account of justice.

We owe to a future person distinctive obligations reflecting equal respect for their humanity, for they will be equally human as we are¹⁴⁹. What is distinctive about these obligations is that they depend on our ability to predict and influence future events. This greatly limits our obligations, such that they are of much greater moral import the closer a future person is to us in time. Furthermore, we do not owe future persons a duty to create them. We can turn 'them' into merely hypothetical persons by avoiding their creation. In doing so we are certainly doing no wrong, and may be doing what we ought, if it means avoiding wrongful harm that would otherwise be inflicted on a future person. Until such time as a future person is actually created, there is no person, and no interest in life or anything. This is philosophically complex, and different to our standard way of thinking about persons and obligations. But when considering procreation, this level of abstraction and complexity is inevitable. We do not get to avoid hard questions simply because they are hard; they are ultimately answerable in a manner coherent with our value commitments.

¹⁴⁹ Except, of course, if the future under consideration is so far into the future as to make it less certain that our descendants will still be human, the kind of future contemplated by those interested in "long-termism". But such a distant future would be so far beyond our ability to forecast and influence that we cannot possibly have any meaningful obligations in relation to it.

This chapter identified the preconditions that must be met before the right to procreate is engaged. But this is not enough to resolve moral conflicts involving procreation. The preconditions are intended to resolve creation harms, but do not address the other unusual harms I have characterised in Chapter 5, that is, familial harms and harms to society such as normative forcings and rights retrogressions arising from population growth. These harms are not solvable through preconditions to the right, but through its limits, as set out in the next Chapter.

Chapter 7: Overpopulation and the limits of the right to procreate

7.1 Introduction: non-compossibility and aggregate harms, or why preconditions are not enough

In Chapter 6 I argued for three grounding interests and three preconditions for a plausibly justified right to procreate. The interests at play in relation to the preconditions are those of the would-be parent and the prospective child. If the normative agency or motivational conditions are not met, then the right to procreate is not engaged, but procreation is not necessarily wrongful. This is not the case for the third precondition. If the existential hazard condition is not met in the circumstances, then procreation is not even a matter of the bare liberties of the parent; it is morally impermissible.

Let us assume the prospective parents in any given case *do* meet the preconditions, and that a right to procreate is therefore engaged. Does it follow that they have a basic individual right to have as many children as they like, so as long as the three preconditions are met? In this Chapter I argue that the answer must be no. In order to be plausibly morally justified, a right to procreate must be preconditioned, yes, but also limited, or at any rate *limitable*, as necessary to resolve moral conflicts which the preconditions can do little or nothing about. As discussed in Chapter 5, these moral conflicts are typically in the nature of resource non-compossibilities and normative forcings. They arise as procreation expands the number of right-holders without any concomitant expansion in the collective pool of resources needed to meet the additional obligations generated by their rights, needs, and interests.

These resource non-compossibilities and normative forcings can occur within the family, by parents unfairly imposing material costs and burdens of their own procreative choices onto others - typically existing children of the family. Space constraints do not allow for familial harms to be properly considered in this thesis. The focus in this chapter is on non-compossibilities arising at the societal level from the aggregate, cumulative effects of too many people having exercised their practical procreative freedom over a long period of time, resulting in depletion, degradation, and dilution of resources indispensable to the just satisfaction of everyone's wellbeing interests, including their basic rights. That is, the focus here is on the harm to society posed by overpopulation. I argue in Chapter 8 that the evidence available shows that overpopulation is not some distant concern, but an ongoing and potentially

catastrophic threat to the realisation of basic rights and to the conditions for human flourishing.

Before proceeding, a clarification. At the national or regional level, overpopulation can be caused or aggravated by immigration. Population policies which permit or encourage inflows of people in a way that generates unsustainable population growth are just as capable of undermining the conditions for human wellbeing and rights as policies which condone unsustainable growth via procreation. However, the moral questions relating to migration and immigration policies are distinct from those relating to procreation-caused population growth, and beyond the scope of this analysis. My focus here is on procreative harms. At any rate global overpopulation is driven by fertility, not migration, and this is what I endeavour to explain in this chapter.

7.2 The limits of moral justification of a right to procreate

The moral limits to the right to procreate arise when further procreation comes into conflict with other interests (or requirements of justice) to an extent which the moral force of the interest of the parent in procreative freedom cannot plausibly justify.

As noted above this can and frequently happens within the family, but our particular interest here is on the conflicts at the level of the society. These moral conflicts are in the nature of resource non-compossibilities that lead to setbacks to general interests of everyone, including their most vital interests, by forcing reallocations of collective resources away from where they are needed to protect or satisfy those interests and towards the more or less automatic accommodation of population growth. These normative forcings have the effect of prioritising parents' narrow procreative interests against the interests being set back. This would be problematic enough, seeing as the interests being set back include such basic interests as in food and livelihood security, adequate housing, access to health care, education and sanitation, security in one's person, and their general ability, which is so resource-sensitive, to choose their own path in life. What is particularly problematic is that the interests of the parent which are mechanically prioritised by normative forcings are not even the interests deemed important enough to ground a right to procreate, unless the parent is having a first child.

The justificatory difficulty for additional procreation is that the moral force of the motivational interests grounding a right to procreate – an interest in experiencing biological parenthood and rearing a happy, healthy child – are substantially or fully met by having one child. If one wishes to have a life as a biological parent, having a biological child is the *sine qua non* for realising that version of the good life. A non-parent who creates a child acquires the relationship they wished to have, and is able to pursue the child-rearing project they hoped for; they become a biological parent. But having additional children does not have this transformative quality. A life in

which one creates and raises a biological child is qualitatively very different¹⁵⁰, for better or worse (depending on one's inclinations and circumstances) from a life in which one remains childless, or childfree. But creating and raising two biological children is only somewhat different from creating just one, and having three children is even less distinctive an experience from raising two siblings¹⁵¹.

Here we venture into the realm of idiosyncratic preferences or even personal whims, which can be perfectly legitimate expressions of autonomy without for that reason grounding any normative entitlement. The problem is that the cost to the public good of these idiosyncratic preferences rises at a higher than linear rate with ever more children, while the moral force of the grounding motivational interests become rapidly weaker. And if my account is accepted, all three interests need to be engaged; the justification for a right to procreate flounders if its grounding is sought solely in individual autonomy, even if modulated by the existential hazard precondition, for the result seems a deeply objectionable treatment of children as objects, as mere means to their parents' ends.

The reason costs rise at a higher than linear rate with more children is that the costs of procreation are not limited to the immediate burdens of rearing a child, or even the lifetime costs and burdens to society at large of meeting the needs and discharging obligations towards additional persons, which at the aggregate, cumulative level in which population dynamics operate can be enormous. It is that each child is him or herself a potential parent of yet more future persons, who will themselves be potential parents of yet more persons. By way of example, my two maternal grandparents had 9 children, who in turn, with their respective spouses, created 43 children. The costs to society of extra children, therefore, do not fall with each child; there is no 'economy of scale'. Instead, costs to society more than double with the second child, more than triple with the third, and so on. Meanwhile, the strength of argument for the moral justification of these costs becomes increasingly tenuous.

7.3 Can we have a right to create multiple children?

Because the motivational interest is met by procreating once, some slightly different motivational interest must be found to justify having a second or subsequent children,

¹⁵⁰ I readily accept that a life in which one becomes a biological parent is not necessarily very different from one in which one becomes an adoptive parent. The question here is whether there is a morally relevant difference between creating a biological child once versus more times.

¹⁵¹ Dan Brock seems to agree, arguing that "different aspects or components of reproductive freedom will typically have different moral importance". He suggests that whether to have children at all is a fundamental issue for most people, "since for most parents this is a central, if not the central, project of their lives". On the other hand, Brock says, "whether to have, for example, 3 or 4 children typically is of less importance because it has less far reaching effects on their lives. This means that typically the component of whether to procreate at all has more moral importance than the component of how many children to have." (Brock, 2005, p. 84)

one that is child-centric and attenuates the problematic objectification of children that is a fairly inescapable characteristic of an entitlement to create other persons. I suggest the most plausible replacement motivational interest is the one in rearing children who are siblings, in the assumption that this is not only a richer parenthood experience for the parent but also for the existing child, whose emotional life might be enriched by having and being brought up with a biological sibling¹⁵².

But how much can such an interest possibly justify? After all, there is something idealised about the assumption that a sibling will enhance the life of an existing child, or something potentially demeaning to children in the idea that raising just one is not good enough by way of a personal project, or that they may grow up “spoiled” without the ongoing attrition provided by a sibling competing for their parent’s attention and the family’s resources.

The moral force of this interest seems comparatively much more speculative than that of the interests in experiencing biological parenthood and raising a happy, healthy child as a special personal project. Overall, this additional interest which we seem to invoke in order to potentially justify a right to procreate more than once seems rather less plausible as an argument to justify the costs of procreation that are imposed on others, and particularly less plausible when the compounding nature of these costs is considered.

A weak, heavily contingent right to creating two children

I think the best we can say is that parents’ interest in rearing children who are biological siblings is robust enough to ground some sort of presumptive but comparatively much more easily rebuttable entitlement to have a second child.

The initial right, to have one child, is only engaged where the would-be parent is able to meet the preconditions for the right. In relation to creating a second child, the right would remain engaged provided the would-be parent continues to meet those same preconditions in respect of a prospective child but only **if** circumstances do not yet warrant an anti-natalist intervention. The intervention may be warranted either to protect the existing child from sufficiently serious and foreseeable harm that would be caused by the arrival of a sibling, or in particular to prevent, mitigate, or reverse human overpopulation. After all, an individual entitlement to create two children would tend to defeat efforts to undo unsustainable population growth, which ordinarily require the average family size to be brought below replacement level (as a minimum). It is not necessary for all persons to exercise such a right and create two children each in order for such a right to cause problems with the requisite anti-natalist population interventions. It is enough that individuals would be supposedly

¹⁵² Again, the motivational interest in creating a second child is not necessarily very different from an interest in adopting a second child. The first child would still be brought up with a sibling. In a world where the preconditions and limits to the right to procreate were given effect by anti-natalist policies, however, there would be a much smaller number of children in need of adoption.

entitled, as a matter of basic or universal right, to have more children than the family size conducive to preventing or mitigating overpopulation harms.

We need not assume that overpopulation is occurring right now in order to realise the problem with such a right – though I argue in Chapter 8 that the evidence seems quite clear that overpopulation is, indeed, a present problem posing catastrophic risks. If we accept that circumstances could *ever* warrant an anti-natalist intervention to bring about population de-growth, then a universal right of individuals to create two children cannot plausibly be justified. The individual interest in creating and raising a pair of siblings instead of a single child just does not seem sufficiently morally compelling to come close to justifying the tolerance of severe threats to society's ability to meet people's basic needs. Whatever right to have a second child, if it exists, is necessarily situation-dependent and therefore heavily contingent, much more so than the already conditional right to one child.

A bare liberty (not a right) to create three or more children

I do not think a *right* to create three or more children can be plausibly justified under *any* circumstances. This would amount to a norm endorsing an individual right to over-reproduce. Even in a scenario where there is (say) an abundance of resources such that large families turn out to be particularly well suited to the bringing up of happy, flourishing children, this would necessarily be a time-bound set of circumstances unsuitable for a purported basic, universal right. I suggest the more plausible and rational understanding is that, subject to the preconditions to the right to procreate obtaining, there is a mere *bare liberty* to create additional children beyond the one or two which one may conditionally be entitled to create as a matter of right. As a mere bare liberty, it would be subject to general management by policies designed to optimise the common good, for example to avoid or mitigate unsustainable population growth, or to mitigate inter-generational poverty traps, or to promote higher parental investment in fewer children for the good of those children, in the normal way as our general bare liberties, that is, without requiring the robust justification for interfering with a right.

In other words, there is no right of any kind to the creation of three or more children. Individuals may be *permitted* to have large families (as distinct from *entitled* to), but this permission may be withdrawn on general grounds of public policy. Avoiding overpopulation is critical to the viability of basic rights generally, and to the prospects for human wellbeing and justice. It cannot be a matter left hostage to there being enough individuals willing to refrain from exercising their (supposed) entitlements out of an altruistic desire to advance the common good. If a proposed right depends, for its justification (that is, the resolution of moral conflicts), on the expectation that not many people will actually exercise it, then logically it cannot be a universal right. We simply cannot have an individual, universal right to do what would invite catastrophe if all of us did it.

The right to (mostly) one child

I propose, therefore, that the right to procreate is mostly a right to one child, and potentially a right to create two children *if* circumstances are propitious enough that overpopulation is not a concern. I do not think *current* circumstances allow for the view that there is a morally justified right to create two children anywhere, in particular if we accept some measure of duty on countries less afflicted by overpopulation and its consequences to accept immigrants from areas more seriously affected by it.

This view of the scope of the right to procreate is similar to the conclusion reached by Sarah Conly (2016), who argues that we cannot have a right to more than one biological child per couple because overpopulation is a major driver of climate change and other environmental catastrophes that need to be mitigated. As with Conly, my conclusions on whether we are at the two-child or one-child stage are contingent on the soundness of my reading of the empirical evidence. If my reading is somehow incorrect and we are nowhere near at risk of overpopulation, then each of us has a right to two children until my argument becomes correct. Any further procreation is not a matter of right but of a bare liberty, that which we are free to do until it is forbidden.

Elizabeth Cripps similarly argues that, if we accept that a genuine, secure opportunity to create and parent at least one child is a central human wellbeing interest for very many people, it does not follow, at least not necessarily, that the “scope to parent more and more children should be ring-fenced”. There is a difference, she suggests, between being able to realise one’s conception of the good and being able to realise *unlimited* lifestyle choices. This is so even for those who might argue that having a large family is especially important for them because of their religious beliefs. What is owed to everyone as a matter of right must reflect a reasonable demand, rather than a socially expensive or intergenerationally ruinous preference (Cripps, 2015).

7.4 What does overpopulation mean?

A basic source of error when thinking about overpopulation arises from how it is commonly conceptualised.

For example, overpopulation is routinely conflated with crowding. One oft-repeated canard goes that Earth cannot possibly be overpopulated because the entire human population could stand, shoulder to shoulder, inside an area the size of Los Angeles. This would be very crowded indeed, but it is beside the point. From an environmental sustainability perspective, the physical space human bodies occupy is inconsequential. Even the space occupied by our buildings and roads is only a minor consideration. What matters is our ecological footprint, that is, the vast resources required to provide each of us with food, energy, clothing, housing, medicines, consumer goods, and to take in or disperse the various wastes and pollutants we produce. Under one estimate

(Kastner *et al.*, 2012), the average amount of cropland required to sustain one person for a year is 1,700m², taking account only of their caloric needs¹⁵³, that is to say, only the food they need and not any other material or sanitation needs. One could only fit enough plots of these size for around 765,000 people in Los Angeles¹⁵⁴, or fewer than 0.01% of the global population¹⁵⁵.

Another misleading error is to characterize overpopulation as an apocalyptic situation where collective goods are already so degraded and depleted as to cause famines, violence, and general chaos. This is akin to characterizing dangerous driving by describing car crashes. It confuses the problem with one of its most severe potential outcomes, leading to serious and predictable evaluative mistakes. Most notably, this kind of conceptualisation disregards the accumulation of risk and sub-catastrophe harms as though of no normative significance, while focusing on too late a stage to be of any use.

As explained in Chapter 8, due to demographic momentum it can take many decades to arrest population growth, and well over a century to reverse it – whether or not the relevant society can wait that long. Because of the compound nature of population growth and the long shadow of population momentum, anti-natalist interventions are most effective at averting catastrophe when implemented while overpopulation remains a somewhat distant and abstract concern. Reserving anti-natalist interventions for some 11th hour intervention on the eve of disaster, as implied by the population denialist position and suggested by such respected and well-meaning scholars as Amartya Sen¹⁵⁶, would mean ignoring what we know of the risks and allowing the population growth trajectory to run its course, however catastrophic the consequences. This is not to say that anti-natalist interventions are only worth considering if implemented far in advance from potential catastrophe; anti-natalist interventions would still reduce the number of extra lives put in harm's way even if it is too late to avert catastrophe.

¹⁵³ The FAO estimated in 2012 that the amount of arable land per person in developing countries will fall to only 1,400m² on average by 2050. See Nikos Alexandratos and Jelle Bruinsma, *World agriculture towards 2030/2050: The 2012 Revision*. ESA Working Paper no. 12-03 (Rome: Food and Agriculture Organization of the United Nations, 2012).

¹⁵⁴ Assuming an overall area of 1,300 square kilometres.

¹⁵⁵ In spite of differences in diets, agricultural intensity, and soil productivity, regions as distinct as Western Africa and Northern Europe were found to have the same per capita cropland requirements (based on 2005 data) at approximately 2,350m² per person per year. The lowest cropland requirements were found in Southeast Asia, at 1,300m² per person per year. (Kastner *et al.*, 2012).

¹⁵⁶ Speaking of the case for coercive anti-natalist interventions to avert food insecurity, environmental deterioration, or “residential overcrowding”, Sen opines that “*Given the intrinsic importance of rights, including reproductive freedom, the problems would have to be very severe (and rather unmanageable otherwise) in order to justify coercive intervention in private life and in reproductive decisions. **None of the carefully presented scenarios indicates that things are disastrous right now, or that they will become disastrous very soon.***” See Sen (1996) (emphasis added). Of relevance to the discussion in the next chapter, Sen refers to government incentives for contraceptive uptake as arguably coercive.

Overpopulation is neither about crowding nor about apocalyptic situations, though both are possible expressions of the problem. Let us consider the analogous (if much simpler) problem of overfishing. The concept does not describe a situation where a fishery has already collapsed, or a high value fish species has become extinct. It does not even describe a situation where there is a noticeable reduction in the quantities of fish being caught. Fishers' overall catch may remain the same or rise due to increased fishing effort, even as fish stocks become seriously compromised. Instead, overfishing describes the *underlying pattern* of damage to a collective good, caused by a **collective action problem** that plays out over time. Overfishing arises when fishers catch fish at a faster rate than stocks are able to regenerate, progressively depleting fish stocks, heading towards a point where the fishery is incapable of providing the livelihoods on which all the fishers depend.

Collective action problems

In a collective action problem (CAP), the harm is in the nature of aggregate and cumulative damage to a collective good perpetrated by a large number of people, each of whose contribution is too small to cause, or resolve, the problem on its own¹⁵⁷. The damage is against the interests of all potential beneficiaries of these collective goods, typically including the interests of the same persons causing the harm. CAPs, then, are a more complex kind of moral conflict to what we are used to thinking about.

In its classical formulation by Mancur Olson (1965), the nub of a CAP is that *"unless the number of individuals in a group is quite small, or unless there is coercion, or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests"*.

A good way of understanding CAPs is as a multi-person (or n-person) prisoner's dilemma (Hardin, 1971, 1982). Say I am a fisher, and like all the other fishers in the region, my livelihood is under threat because fish stocks are being depleted through overfishing. If each of us continues to fish as much as we can to make as good living as possible - which is in the interests of each of us as individual fishers - then in a few years there will not be enough fish for any of us to make any living at all. And none of us fishers, as a group, want that. We would prefer to reduce our individual catches if that means we get to preserve our longer-term livelihoods as fishers. But I will not limit my own catch unless I have a real assurance that the other fishers will make an equivalent sacrifice, or else I will be a fool. My individual contribution harms the fishery, but in too small a way to make a difference in the grand scheme of things, as there are so many other fishers. Even if I completely stopped fishing, someone else might take my place in plying the same waters, or increase their take and catch the

¹⁵⁷ See *infra* note 12 for a definition of collective goods.

fish that I would have otherwise. I would have made a sacrifice for nothing. This is the worst possible outcome for me, and it is the same for every other fisher.

None of us will volunteer to take fewer fish. None of us want the fishery to collapse. All of us would like, indeed desperately need, a fishery that is viable over the longer term, to provide us with a livelihood through our working lives, and perhaps the working lives of our children or other young people we care about.

But even if there is shared agreement on what needs to be done, and save for the moral angels among us, most of us would prefer to go on catching as much fish as possible while (we think) the fishery is saved by the diligent efforts of everyone else. We would rather free ride if we can. Or at the very least, we are troubled by how easy and how tempting it would be for others to free ride. Each of us objects to the very idea of being taken for a ride on something so important. As a group, the solution to our collective problem requires us to mutually agree to limit our individual freedom to fish. We enjoy our freedoms, but we want compliance to not be a matter of individual choice. We have to coordinate our actions to reduce our individual catches to whatever level is required so that the aggregate take allows the fishery to recover and become or remain sustainable for our collective benefit.

Conceptualising overpopulation

A sensible conceptualisation of overpopulation must focus on the underlying pattern of aggregate, cumulative harming and risking over time¹⁵⁸. I suggest overpopulation is best understood as a state of affairs where all of the following conditions obtain:

- (1) one or more collective goods necessary to satisfy minimum wellbeing requirements of a given population are becoming strained, sustaining damage, or undergoing depletion;
- (2) the downward resource trend is primarily or wholly caused by the ordinary consumption of the collective goods by the general public; and
- (3) a reasonable extrapolation of the downward resource trend reveals a risk to the satisfaction of minimum wellbeing requirements that becomes serious

¹⁵⁸ Under Joel Feinberg's influential typology in *Harm to Others*, "aggregative harms" refers to "generally but not necessarily harmful" activities where specific instances of the activity are sometimes by themselves quite harmless. Feinberg suggests the general approach to addressing this kind of harm is a system of "state enforced licensure" in a bid to restrain the more harmful instances while avoiding unnecessarily impinging upon the harmless ones (1984, pp. 194–198). His meaning of "accumulative harms" is of actions that by themselves cause little or no public harm; some types of behaviour, Feinberg says, are harmful if widely done, harmless if done by only a few, and in almost everyone's interests to do, though many may refrain out of moral scruples or civic spirit (1984, pp. 225–227). An obvious example of a cumulative harm is environmental pollution. I use these terms in a slightly different manner, with "aggregate harms" meaning harms that are only serious because a sufficiently large number of people engage in the causative activity, and "cumulative harms" to mean harm that builds up over time. The harms from overpopulation are both aggregate and cumulative.

within a period of time corresponding to the life expectancy of the youngest people within that society.

Thus understood, overpopulation is about the systemic risks generated by the persistent degradation and depletion of a wide range of needful resources, brought about by the ordinary aggregate demands of the population – by people just living their lives as they ordinarily do - and which generates serious risks within a moral time horizon of the lives of people already in existence.

This conceptualisation is intentionally very undemanding. It assumes only a minimalist standard of protection of human wellbeing, and does not take account of the interests of future generations. It would allow severe decay in the condition and availability of collective goods, such as to deprive younger and future generations of the chance of living the kind of life we might take for granted. All that is required is that there is still safely enough to see people who are children today though their lifetimes without excessive hardship. There need not be enough to meet the minimal needs of *their* children.

The same conceptualisation could be easily adapted to reflect a more expansive - and I would argue, more plausible - moral outlook, for example, replacing minimum wellbeing requirements with the considerably higher standards reflecting the conditions for human flourishing. It could accord at least some normative force to collective goals such as a principle of progressive realization, including as a minimum non-retrogression, of fundamental human rights protections. And ultimately all rights require significant resources to give them effect, otherwise they are just nice ideas. A more plausible version would also expand the moral time horizon to take account of the interests of at least a few future generations. It might also take the interests of non-human animals into account, if we were to accept an even slightly less speciesist moral outlook. The more expansive the moral outlook, the more critical the current stage of overpopulation.

I believe the evidence summarised in Chapter 8 suggests that even on these perhaps implausibly minimalist standards of prudence, overpopulation as conceptualised is occurring already. A very wide range of natural resources are clearly strained, increasingly damaged, or undergoing serious depletion. This is principally caused by the aggregate effects of billions of people simply going about their lives, as accumulated over several decades of unsustainable population size. There is a clear and serious risk to food security and livelihoods within the lifetimes of people already alive.

Due to their cumulative nature, each of the key facets of overpopulation – catastrophic global warming, food insecurity, overfishing, mass extinctions – pose even greater threats to younger generations, in particular children, hostage to whatever

decisions their elders make, or fail to make. This intergenerational moral hazard is characteristic of creeping catastrophes caused by collective actions. It demands a particularly robust justification if the risks created, worsened or multiplied by population growth are to be tolerated and not acted upon.

Overpopulation and committed consumption

As discussed below, those adopting a “population deflection” position seek to characterize the environmental¹⁵⁹ facets of overpopulation as overconsumption, specifically overconsumption by the privileged few. Traditionally the privileged few were framed as the totality of consumers in industrialized nations, with typically vague exhortations that such people ought to lower their consumption. Alternatively, one might blame very large corporations, as though they alone were accountable for the environmental footprint of their operations, rather than the millions or billions of people consuming their products. Finally, one might seek to narrow the blame down to the miniscule percentage of the world’s population representing the ultra-rich, as though their personal consumption, however extravagant or unconscionable, could possibly dwarf the collective impact of eight *billion* people.

Overpopulation can, indeed, be understood as systemic overconsumption of collective goods. This in no way diminishes the relevance of demographic factor; it merely reflects the structure of the problem, with population as a multiplier of per capita consumption. There is one important difference, however, between the risk contribution of population growth and of increases in per capita consumption. Population growth always entails an increase in committed consumption. The commitment corresponds to the minimum resources required to meet (at least) aggregate subsistence needs of all the individuals within the population through their natural lifetimes. If one prefers to approach this from the prism of rights, this could be understood as the resources required to meet at least the minimum or core human rights owed to each person. Lest we fall victim to a moralistic fallacy, we should be mindful that the committed nature of this type of consumption tells us nothing about its feasibility.

In contrast, increases in per capita consumption are normally non-committed. Reversing these increases in consumption is likely to be deeply unpopular from a political perspective, and would almost certainly impair wellbeing. But if need be, some degree of rolling back of consumption is very possible and can be achieved at short notice – for example, war time rationing. But population growth that proves to be unsustainable cannot be rolled back until several decades have passed, however dire the unforeseen challenges or resource shortages may be. A society which accepts population growth is undertaking a long-term commitment to an increased baseline of

¹⁵⁹ The socio-economic aspects of overpopulation, such as fiscal unsustainability or the impacts on the quality and availability of employment, are standardly handwaved away with assumptions of infinite economic growth.

minimum consumption needs that it may not be in a position to honour.

7.5 Standard objections to anti-natalist population policy-making

There is no rhyme or reason to the normative forcings or rights retrogression caused by overpopulation; it operates by forcing public and collective resources to be diverted towards new and additional urgent needs created by procreation (and at the national level, potentially also immigration), at the expense of better fulfilling pre-existing needs or better supporting human flourishing and justice.

No one could reasonably suggest, for example, that what is most important to the wellbeing of people in Uganda is the ability to have many children (leaving aside, for the moment, the preconditions to a right to procreate). The total fertility rate in Uganda is currently about 5 children per woman; about half the population is 15 or under (United Nations, 2019b). An estimated one million young people try to enter the job market each year, in a context where most young people simply cannot afford to be unemployed. Some 90% of Ugandan workers aged between 18 and 30 are engaged in highly precarious, informal employment, struggling in a socio-economic system overwhelmed by jobseekers (Ahaibwe and Mbowe, 2014; The Challenge Fund for Youth Employment, 2021). It seems much more likely that the wellbeing of the average Ugandan would be best served by improved access to sanitation¹⁶⁰, housing¹⁶¹, and healthcare¹⁶², by greater food security¹⁶³, or more educational¹⁶⁴ and employment opportunities, or being able to live in a society less marred by crime¹⁶⁵,

¹⁶⁰ According to the international charity Water.org (2022), some 15% of people in Uganda lack access to safe water; 62% lack access to proper sanitation facilities. High population growth places severe stress on the water and sanitation services that do exist. Three out of ten Ugandan households do not have a latrine; diarrhoea kills 33 Ugandan children every day (UNICEF, 2019).

¹⁶¹ Uganda has a housing deficit of 2.4 million housing units (against a current population of around 45 million), rising by an estimated 200,000 units a year. An estimated 900,000 homes are in slums and do not meet minimum standards, and need to be replaced or upgraded. (Hashemi and Cruickshank, 2015; Habitat for Humanity, 2022).

¹⁶² See for example Kiwanuka *et al.* (2008), who unsurprisingly found that the poor and vulnerable in Uganda experience a greater burden of disease as well as greater difficulty accessing health services. See also Cylus and Hodgson (2021).

¹⁶³ Some 39% of Ugandans are undernourished (Terfa *et al.*, 2022). In 2016, malnutrition was the top risk factor contributing to death and disability among Ugandans, with children and women of reproductive age the most vulnerable (Filipponi, Jarvis and Harris, 2018).

¹⁶⁴ Only one in four children in Uganda go on to attend secondary school. Child marriage, teenage pregnancy, abuse at schools, and school fees keep many teenagers, in particular girls, from school (UNICEF, 2020). The quality of education children receive is often very poor, so that only about 40% of students are literate by the time they finish primary school (Qiao, 2020).

¹⁶⁵ Uganda is regarded as a regional hub for human trafficking, drugs and arms trade, and environmental crimes (Global Initiative Against Transnational Organized Crime, 2021). The average Ugandan faces high rates of criminal victimisation, with theft of livestock the most frequently experienced crime,

with a less corrupt political system¹⁶⁶, where women¹⁶⁷ and gay people¹⁶⁸ are not such open targets of violence and discrimination.

Nevertheless, there are at least three main lines of reasoning, often engaged in combination, which are identifiable in arguments opposing policy efforts to tackle unsustainable population growth.

The first is *population denial*.¹⁶⁹ Implicitly, this viewpoint argues that the harm principle is not engaged because there is no real harm meriting prevention, mitigation, or remediation. In its more brazen and speculative versions, population denial involves the claim that human overpopulation is impossible on various utopian grounds, for example due to boundless human inventiveness, infinite resource substitutability, or the supposed inevitability of humanity's profitable colonization of outer space. In more circumspect versions, it is suggested that overpopulation must not be happening yet, as we do not appear to be on the verge of global apocalypse. On the contrary, the thinking goes, though environmental problems may lead to some loss of amenity or cause wildlife to suffer, humanity is doing rather well. Most people's standards of living are the highest they have ever been, and our global population's massively enlarged food demands are being comfortably met at this time. We should therefore wait and see, is the typical argument; it would be inappropriate to consider anything as intrusive or "extreme" as an anti-natalist intervention until we are in real trouble. Virtually all objections to anti-natalist population intervention involve an element of population denial, most notably with regard to socio-economic problems such as increasingly precarious employment, rising living costs, stagnant or reduced wages, and worsening trends on social inequality, migration, and displacement.

The second line of reasoning is *population deflection* or diversion.¹⁷⁰ It involves

followed by theft or vandalism of cars and burglaries of homes (United Nations Office on Drugs and Crime, 2008).

¹⁶⁶ Corruption in Uganda is seen as a severe and growing problem by both Ugandans and the international community (Wamara, 2017).

¹⁶⁷ Uganda is still in the process of overhauling legislation entrenching discrimination against women and girls, for example laws favouring men over women in matters of inheritance and land ownership (UN Women, 2021). Every year, some 13% of girls and women aged 15 to 49 experience sexual violence in Uganda (Ssenkaaba, 2017).

¹⁶⁸ In 2014 Uganda signed into force a law criminalising homosexuality and imposing sentences of life imprisonment for homosexuality, same-sex marriage, and "aggravated homosexuality", in addition to criminal penalties for the "promotion" or "aiding and betting" of homosexuality. For more details see for example (Office of the High Commissioner for Human Rights, 2014).

¹⁶⁹ For a more detailed typology see Diana Coole (2012). For related discussions see also Turner (2009), Kopnina and Washington (2016), Kuhlemann (2019), and Coole (2021).

¹⁷⁰ For further discussion on what I describe as population deflection see Mora (2014), Beck and Kolankiewicz (2000), Clark (2016), and Heinberg (2017). For examples of population deflection see the following articles in UK newspaper *The Guardian*: George Monbiot, "Cutting consumption is more

acknowledging, often quite forcefully, the severity and multiplicity of environmental damage caused by human pressures on natural resources and ecosystems. Current and growing negative impacts on humanity, in particular on the world's poor, are emphasized. A population deflector will typically be keen to highlight the urgency of acting to mitigate climate change, mass extinctions, freshwater depletion, or some other anthropogenic creeping catastrophe. But where the population denialist will deny there is harm, the deflector will deny that human overpopulation is its cause. This line of reasoning characteristically argues that our environmental problems have nothing to do, or too little to do, with human population growth, or that even if they do, they are adequately solvable by doing something other than implementing policies to reduce fertility rates. The argument goes, we should prioritize tackling the inequitable features of socio-economic arrangements, because the environmental damage we are concerned about – whatever it may be - is principally or solely caused by unjust, wasteful, or otherwise reprehensible consumption by a relatively small subset of the global population. This was the typical argument of advocates for the Cairo consensus, and remains in popular currency today.¹⁷¹

The third line of reasoning in objections to anti-natalist interventions might be characterized as *moralised indifference* to harms arising from overpopulation, or in any case from procreation. From an ethical and philosophical perspective, this is the most interesting and least tractable line of objection. Population denial and population deflection ultimately dispute the reality and causation of harm severe enough to justify interferences with people's liberties. These lines of reasoning are liable to rebuttal via open and honest engagement with empirical evidence, for example the evidence I summarise in Chapter 8. But moralized indifference is rather more impervious to facts. The standard argument here is that it does not matter how serious a problem overpopulation may be, because each of us has a virtually absolute right to procreate and this rules out anti-natalist interventions. So however concerned we may be about overpopulation, we must limit our efforts to boosting family planning provision and pursuing social measures capable of anti-natalist effects, and hope this is enough.

important than limiting population" (25 February 2009), "Stop blaming the poor. It's the wally yachters who are burning the planet" (28 September 2009), and "Population panic lets rich people off the hook for the climate crisis they are fuelling" (26 August 2020); Fred Pearce, "It's not overpopulation that causes climate change, it's overconsumption" (19 September 2014); and Charles Eisenstein, "Concern about overpopulation is a red herring; consumption's the problem" (28 March 2014).

¹⁷¹ By way of an example of the objections typically raised in respect of anti-natalist population policies, see Stanley Warner's response to Carol Kates' paper arguing that anti-natalist population policies are morally required. Warner accepts Kates' argument that the right to procreate is not infeasible and must be open to balancing of individual freedom against collective interests. But he objects to her proposals for three Cairo consensus-flavoured reasons: (1) Kates does not abide by the "**emerging consensus** for **voluntary** population reductions through policies that empower women"; (2) instead of countenancing coercive measures we should urge people to curtail their **consumption**; and (3) Kates' proposal is politically unfeasible.

If my account of the grounds of the right to procreate and of procreative harms is accepted, then the moralized indifference line of reasoning must be rejected. Our justifiable entitlements in relation to something as other-affecting as procreation cannot possibly be absolute, and must be sensitive to facts. To ignore the moral conflicts posed by procreation, or the wrongful harms it may cause, is contrary to any sincere evaluative commitment to justice and to human wellbeing. Our interest in procreative liberty simply cannot be plausibly supposed to be so important as to override every other human interest, or our moral obligations to future persons.

7.6 Conclusion: The implications of collective action problems

Overpopulation is caused by behavior we find troubling to problematize, and even more troubling to address. It arises from the cumulative, aggregate impacts of ordinary people going about their lives in ordinary ways, in some cases doing what we have come to believe individuals are entitled to do: have as many children as they like, pursue as good a livelihood as they can manage, and consume resources not only to live but to live well, with as many comforts and conveniences as they can secure for themselves and their loved ones. As a collective action problem, the contribution of each individual is relatively trivial, and addressing it requires social coordination, *and at least some degree of compulsion*.

Let us return briefly to overfishing, that simpler analogue to overpopulation. The collective action problem arises because it is individually rational for each fisher to catch as much fish as they can. If any of them were to unilaterally reduce their catch or adopt a moratorium on fishing, they would harm their own livelihoods while the fish they did not catch might just be caught by somebody else anyway. Their individual impact, on its own, is not enough to save, or indeed doom, the fishery. The solution to the problem requires coordination across all fishers; they must collectively agree to reduce their individual catches to the degree required to allow fish stocks to recover. This reduction will unquestionably hurt the fishers' livelihoods, so the temptation to free-ride will be strong. Compliance cannot be voluntary or optional, or the whole response to the problem falls apart. But without a high level of compliance, the solution will fail, and those who have limited their catch will have done so for nothing: their livelihoods will still disappear along with that of those who did not limit their catch. Participants may quite reasonably demand assurances that fishers exceeding catch limits will face appropriate sanctions.

On a more practical and pragmatic level, solving collective action problems generally requires mutual agreement to restrain our individual liberty to pursue our own individual self-interest as reasonably necessary to safeguard and advance our collective interests. The limitations we agree upon must ultimately be subject to at least some degree of enforcement as necessary to secure sufficiently high levels of compliance for the solution to work and to minimize scope for free riding. In some contexts, social pressure, perhaps developed over appropriate public messaging

efforts raising awareness of the issue, may be enough. But we cannot, and should not, rule out more assertive anti-natalist population interventions on the basis that other interventions might work. The problem we are trying to solve is an extremely serious one, and we must have all our options on the table.

Armed with a robust conceptualization of overpopulation we can now, in the next Chapter, consider what the weight of empirical evidence has to say about whether human overpopulation is looming in the horizon or, indeed, already occurring.

Chapter 8: Overpopulation: Empirical considerations

8.1 Introduction

In Chapter 7 I set out the philosophical basis for a right to procreate limited to two children, in favourable conditions where overpopulation is not a concern, or to one child, under what I believe are prevailing conditions worldwide, which call for population degrowth so as to safeguard the very possibility of human rights.

In this section I summarise empirical evidence that is highly suggestive that overpopulation is a present and severe problem under the conceptualisation I set out in section 7.4, which aims to correct empirically untethered understandings of the problem that ignore population momentum and the lag of potentially well over a century between actions to reduce fertility rates and actual reductions in population size. I also highlight evidence suggesting that our interest in procreative freedom is much less important to our wellbeing than commonly assumed, and that oft-asserted alternative remedies to overpopulation focusing on consumption are doomed to fail. While it is necessary to curb individual consumption, and this requires constraints on liberty that are standardly ignored, limiting consumption logically cannot possibly offset population growth. Population growth multiplies lifetimes of consumption as well as the pool of potential procreators, while reductions in consumption can only ever be marginal. Each of us needs to consume resources to survive, and much more in order to thrive. But none of us needs to procreate in order to survive.

I conclude with a summary of evidence about relevant human cognitive biases that should put us on notice of our tendency to downplay or temporise in relation to procreative harms, in particular overpopulation.

8.2 Overpopulation: demographic trajectory

Economists and political commentators tend to frame human population growth in terms of socio-economic effects. But human beings are ultimately animals, with needy bodies in need of reliable food supplies, protection from the elements, sanitation, intellectual stimulation, and much more. Our material needs are realised in what is ultimately a closed and limited system. As bluntly put by the lauded ecological economist Herman Daly (Marchese, 2022), *“Earth is not expanding. We don’t get new materials, and we don’t export stuff into space.”*

The problem of resource depletion has plagued human societies for as long as there have been human societies. There were an estimated 27 million of us around 2,000 BC, when Egyptian civilisation was approaching its peak and the last woolly mammoths died out in an Arctic island, perhaps hunted by paleo-eskimos (Arppe *et al.*, 2019). By the traditional onset of the Christian era in 1AD, there were perhaps 285 million of us.

By then deforestation and accompanying soil erosion and drier climates were already besetting Mediterranean civilisations (Hughes and Thirgood, 1982; Kaplan, Krumhardt and Zimmermann, 2009). Our numbers kept on gradually rising for the next several centuries, past the occasional dip, notably during the mid-14th century, when the Black Death wiped out between 25% and 50% of Europe's population. In the century or so that followed this major outbreak of the plague, forests grew back in much of Europe (Kaplan et al, *ibid*). Peasants were able to demand higher wages and better treatment, ultimately bringing feudalism and serfdom to an end in Western Europe, and a temporary increase in economic efficiency (Bridbury, 1973; Haddock and Kiesling, 2002; G. Clark, 2016).

By the 18th century, the increase in our global numbers was starting to accelerate into the hockey stick-shaped trajectory of exponential growth that has led to our current predicament. We reached our first billion around 1804. Within just 123 years, our global population had doubled in size: there were 2 billion of us in 1927. By the time the birth control pill became available in 1960, we were 3 billion, then 4 billion in 1974. From then on, our numbers have grown by one billion people every 12 to 15 years. The very latest UN population projection (United Nations, 2022) estimates that we will reach 8 billion on 15 November 2022. The extent and speed of all this growth means someone in their 90s, such as broadcaster, natural historian and population concern activist Sir David Attenborough (b. 1926), would have lived through three consecutive doublings of the global population.

From around the early 1990's until relatively recently, population discourse has assumed that our global numbers would peak at 9 billion around 2050 and that this further population growth, while presenting severe challenges for food security and for the health of key ecosystems worldwide, would be manageable overall. Meanwhile we would find a way to eradicate food waste, persuade the global public to eat less meat, and develop technological solutions to the manifold threats to food security¹⁷² and livelihoods wrought by natural resource depletion. Then the expected population peak moved to ten billion. The discourse among food security experts became yet more tentative and caveated; the United Nations started promoting insects as the protein source of the future.¹⁷³

The year 2050 happened to be the time horizon of the standard biennial UN population projections issued up to 2010. From 2012 onwards, UN projections started running to 2100. Though the estimates oscillate from one revision to another, these projections show the population in the year 2100 at around 11 billion, give or take a few hundred million people, and still growing as we enter the 22nd century (United

¹⁷² See for example Godfray *et al.* (2010) and Foley *et al.* (2011).

¹⁷³ Von Huis and Food and Agriculture Organization (2013). See also BBC News (2013), Vidal (2013), and Welsh (2013) for a taste of how these entomophagic proposals were covered in the press.

Nations, 2013; Gerland *et al.*, 2014; United Nations, 2015, 2017, 2019a) The very latest UN projection still estimates a global population between 9.4Bn and 12.7Bn in 2100, but with a 50% chance it will plateau at 10.4Bn in the 2080s and into the 22nd century, making its assumptions the most optimistic in at least a decade (United Nations, 2022)¹⁷⁴.

Though the estimate of a population of around 11Bn by 2100 was first received by the mainstream press as an alarming surprise in 2012, it is in keeping with population projections going as far back as the 1970s (Frejka, 1981). They closely resemble long-range estimates from the UN and the World Bank published in the early 1990s (McNicoll, 1992), which were quietly shelved and forgotten as hostility to population concern hardened into a population taboo. That is to say, the overall trendline has remained fairly stable over at least 30 years of modelling and observations. In fact, the number of people added to our global numbers every year has not changed much since the late 1970s, at around 80 million. As the overall population has about doubled since then, this absolute annual increase translates into an ever-smaller rate of population growth relative to an ever-larger total. Commentators commonly interpret this to mean that population growth is therefore not a problem, or at any rate, no longer a problem. But the sustainability of our numbers has little to do with how rapidly they change, and everything to do with whether our aggregate demands match, or overshoot, the regenerative capacity of the resources on which we depend. By way of analogy, no one would reasonably suppose that overfished North Atlantic cod stocks could be preserved or restored by slowing down the growth in the number of fishing boats plying those waters, or reducing the rate at which cod catches increase.

A further source of confusion arises from widespread mis-readings of UN projections, in particular with regard to the nature of the medium variant projection. It is often supposed that the medium variant represents a “business as usual” extrapolation of the current population trajectory into the future, assuming fertility rates¹⁷⁵ remain broadly unchanged relative to today’s. Under this mistaken understanding, the low variant projection would represent a possible future where people have, on average, fewer children than today, whereas the high variant would represent a future where people tend to have more children than they do now. In the 2019 UN projections, the high variant illustrates a 2100 population of near 16 billion, whereas the low variant shows a population close to 7 billion (see figure 4).

¹⁷⁴ The UN 2019 revision places the likelihood that the global population will peak before 2100 at around 27%. This is in keeping with the probabilistic projection by (Gerland *et al.*, 2014), which rated the chances that population growth would end this century at 30%.

¹⁷⁵ In general terms, a country’s total fertility rate represents the estimated total number of children, on average, that a woman will have during her lifetime. In contrast, the birth rate simply represents the number of babies born per 1,000 population in a given year. The birth rate may spike, or drop, without necessarily affecting the total fertility rate, for example if many women choose to have their babies in a particular year, or conversely to wait before having a baby, due to (say) prevailing economic conditions, but without changing the overall number of children they go on to have. (World Bank, 2022).

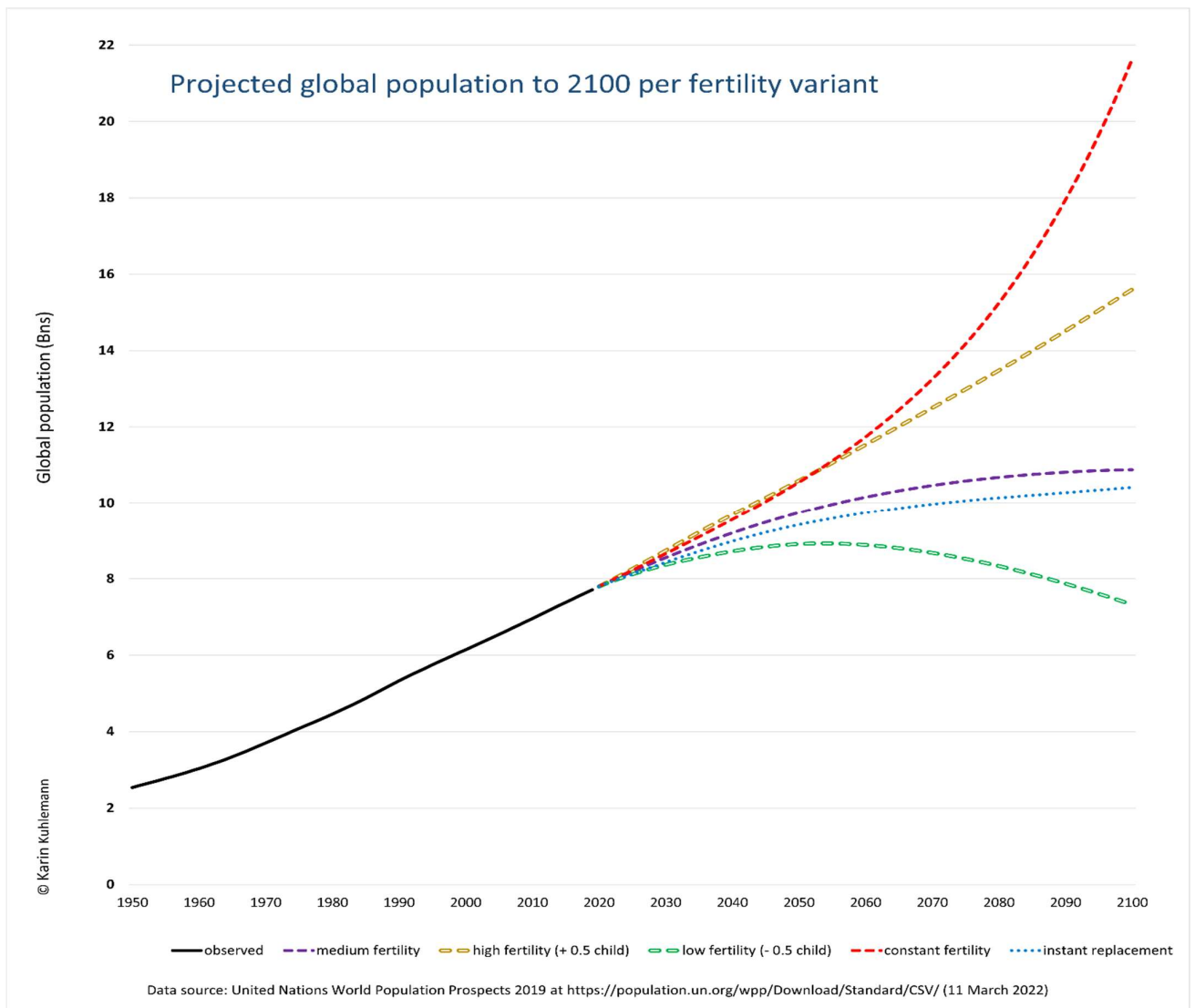


Figure 4 - UN Population projections, 2019 revision, including the constant fertility variant.

In reality, however, the medium projection is not a “business as usual” extrapolation from current fertility rates; it assumes *substantial* reductions in future fertility rates relative to today’s levels¹⁷⁶.

The UN does, in fact, also produce a constant fertility variant as part of its revisions, typically buried in the more technical publications accompanying each revision. The constant fertility variant makes broadly the same assumptions about the future as the medium variant, *except* that it assumes no change in patterns of family formation. That is, it assumes that in future people will continue having as many children, on

¹⁷⁶ The medium variant is based on a complex matrix of assumptions about the interaction of cross-regional trends in fertility, mortality, and migration. However, assumptions about fertility rates are by far the most critical element in estimating future population size.

average, as they do now. In doing so, the constant fertility variant illustrates a *dramatically* different trajectory from that of the medium variant.

Whereas the medium variant estimates a population of around 11 billion by 2100, the constant fertility variant yields a global population in 2100 of *over 20 billion* (United Nations, 2013, p. xv, 2019b, p. 48)¹⁷⁷. This is several billions more than even the high variant, which assumes family sizes remain, on average, half a child larger than what is assumed in the medium variant. The low variant does the opposite, assuming family sizes on average half a child smaller in relation to the assumptions of the medium variant, which would produce an end of century population a little smaller than today's.

The true position, then, is that the high, medium, and low variants *all* assume future total fertility rates¹⁷⁸ that are *substantially lower* than current rates.

8.3 Evidence of overpopulation

In 2014 the Intergovernmental Panel on Climate Change (IPCC) acknowledged that greenhouse gas emissions, and by extension climate change, is primarily driven by population growth and economic growth (2014a, 2014c, 2014b, 2022).¹⁷⁹ Economic growth is standardly and not unreasonably assumed to be necessary to prevent impoverishment in the face of population growth. Quite unreasonably, however, the permanent pursuit of economic growth is also assumed to be a valid goal in a bid to promote infinite improvements in affluence and living standards. Population growth, in turn, is generally welcomed as supporting economic growth. The two main drivers of climate catastrophe, then, are each used to justify the other.

It is difficult to see how greenhouse gas emissions can undergo anywhere near sufficient abatement without a large contraction in the size of the global economy.

There is simply no evidence that economic growth can be meaningfully decoupled from carbon emissions or other environmental impacts (Jackson and Victor, 2019). While it is conceivable that technological measures such as energy efficiency, renewable energy sources, and some sort of mass carbon capture and storage may yet

¹⁷⁷ The comprehensive tables have not yet been published for the UN's 2022 projection.

¹⁷⁸ In general terms, the total fertility rate represents the estimated total number of children, on average, that a woman will have in her lifetime. In contrast, a country's birth rate simply represents the number of babies born per 1,000 population in a given year. The birth rate may spike, or drop, without necessarily affecting the total fertility rate, for example if many women choose to have their babies in a particular year, or conversely to wait before having a baby, due to (say) prevailing economic conditions, but without changing the overall number of children they go on to have.

¹⁷⁹ The IPCC's most recent assessment and mitigation report (2021; 2022) acknowledges population growth as a primary driver, but in a much less explicit way – one has to search the full scientific report for mentions of “population”, which is not mentioned in the more widely seen Summary for Policymakers. See philosopher Phil Cafaro's (2022) critique of this specific aspect of the report.

succeed in making it possible for any country's economy to be fully decarbonised, as of yet, such technological solutions simply do not exist. Even if they become available in future, it would be reckless to assume they will be implemented in as comprehensively or timely a manner as they would need to be to avoid catastrophic global warming. They might turn out not work well enough or at all, or to create problems as serious as they are intended to mitigate. The desire for a technological solution, however intense, will not make possible what turns out not to be.

Avoiding or indeed reversing population growth would, however, be a guaranteed way of mitigating emissions. There is nothing an individual can do to reduce their carbon footprint that even remotely compares to the impact of forgoing having a(nother) child. Over the short term, the effects on greenhouse emissions would tend to concentrate in developed countries. A 2017 study by Seth Wynes and Kimberly Nicholas (2017) found that having one fewer child reduces annual personal emissions of greenhouse gases by 58.6 tonnes *per year*, the equivalent of 36 roundtrip transatlantic flights. In contrast, living car-free and eating a plant-based diet would generate relatively paltry reductions of 2.4 tonnes and 0.8 tonnes of greenhouse gases per year respectively.¹⁸⁰

This research built on an earlier study by Paul Murtaugh and Michael Schlx (2009), who found that each child in the United States adds on average the equivalent of 5.7 times the parents' lifetime emissions to their impact. Their calculation takes account of the child's estimated emissions over their lifetime (half of which is assigned to each parent) as well as the emissions likely to be produced by the child's own descendants (assigned to each parent in proportion to relatedness, e.g. 25% for a grandchild's emissions etc). In a similar vein, a 2010 study by Brian O'Neill *et al* (2010) used an energy and economic growth model accounting for a range of demographic dynamics and found that reducing population growth could provide 16-29% of the emissions reductions thought necessary by 2050 to avoid dangerous climate change. The same research team reported that empirical analyses of historical trends tend to show CO₂ emissions from energy use responding almost proportionately to changes in population size, and that alternative population growth trajectories could have substantial effects on global emissions of CO₂ (O'Neill *et al.*, 2012).

In one of the reports from its most recent assessment exercise, the IPCC concluded that escape from human-caused climate change is no longer possible (2021). It is already too late to prevent warming that will almost certainly result in deadly heatwaves, flooding, droughts, collapse of ecosystem services, and other natural catastrophes. The Earth has already warmed by about 1.1°C above pre-industrial levels. Global warming of 1.5°C, the hoped-for limit under the 2015 Paris Agreement,

¹⁸⁰ There are, of course, robust ethical reasons for reducing consumption of animal products quite independently of greenhouse gas emissions or other environmental impacts.

is already a foregone conclusion; we will reach this level of warming within another 20 years. Temperatures will keep on rising until at least 2050, no matter what reductions we are able to achieve in CO₂ emissions. And to date we have achieved none at all. Global concentrations of greenhouse gases are at the highest level ever observed, in spite of a modest, brief dip in emissions during the COVID-19 pandemic (Blunden J and Boyer, 2021). The imperative to grow more food, build more housing, produce more basic consumer goods for ever more people, cannot lead to anything other than a worsening of the climate crisis, as all these things are major drivers of greenhouse gas emissions (Lamb *et al.*, 2021).

Indeed, food production alone contributes a larger shares of greenhouse gases than all of the transport sector – more than all cars, trucks, planes, ships, etc combined. This includes such varied contributions as deforestation and other land use changes, methane emissions from cattle and from rice cultivation, the burning of fields, and GHG emissions, in particular nitrous oxide¹⁸¹, from the production and use of synthetic fertilizers on which modern agriculture is overwhelmingly reliant (Smil, 1999; Erisman *et al.*, 2008; Kolbert, 2013). Climate change is not the only problem; current food production has been unsustainable for some time (GO-Science, 2011). In addition to its contribution to greenhouse gas (GHG) emissions, food production is the dominant force behind defaunation, deforestation and biodiversity loss, degradation of soils, and depletion of freshwater sources, among other potentially catastrophic environmental impacts (Zika and Erb, 2009; Wyman, 2013; Maxwell *et al.*, 2016; Poore and Nemecek, 2018; Springmann *et al.*, 2018; IPBES, 2019).

The Food and Agricultural Organisation identifies population growth and economic growth as the primary drivers of the loss and degradation of agricultural soils, which in turn is a major threat to food security (Blum, 2013; Intergovernmental Technical Panel on Soils, 2015b). Global marine fisheries landings have been declining since the late 1980s due to overfishing (Mora *et al.*, 2009). The FAO's analysis of assessed stocks has found a downward trend in biologically sustainable fish stocks since 1974; some 30% of fisheries are already overfished and a further 60% are “fully fished” (Food and Agriculture Organization, 2016), with pressures on fish stocks largely driven by population growth (and also economic growth).

Around 1.4 billion people live in areas where ground water is being drawn at a faster rate than it can be replenished (FAO, 2012). Water scarcity is driven principally by population growth and economic growth, is set to be worsened by climate change, and is thought to be a major driver of armed conflict, in particular in Africa (*ibid*). Some of the most water stressed countries are also experiencing very high population

¹⁸¹ Nitrous oxide has about 300 times the heat trapping potential of carbon dioxide. It is also the dominant anthropogenic driver of depletion of the ozone layer. The IPCC estimates it comprises around 6% of GHG emissions, of which three quarters come from agriculture. Anthropogenic nitrous oxide emissions have increased by 30% since the 1980s (Tian *et al.*, 2020).

growth rates (UNDP, 2006; UN Water, 2009; UNESCO, 2012). At least partly because of this, the UN projects that almost half the world's population will be living in areas of high water stress by 2030, potentially displacing as many as 700 million people (UNCCD, 2014). The UN also estimates that nearly 80% of the jobs constituting the global workforce depend on access to an adequate water supply (UN Water, 2016). On the subject of employment, the International Labour Organization (ILO) has been chronicling a global trend towards higher unemployment and underemployment for decades, due to job creation not keeping up with growth in the number of “new labour market entrants”. This has particularly affected younger workers¹⁸².

Insofar as one cares about wildlife or biodiversity, or thinks that the suffering of animals matters, then our massively expanded numbers pose even greater reasons for alarm. Humanity has already eradicated 83% of wild mammals and half of plants (Bar-On, Phillips and Milo, 2018); nowadays the vast majority of vertebrate land life are animals we keep to eat. Some 70% of all birds left in the world are poultry chickens and other farmed birds, while only 4% of mammals are wild animals. It is estimated that between 1970 and 2016, population sizes of wild mammals, birds, amphibians, reptiles and fish decreased by 68% (WWF International, 2020). During the same time period, the global human population doubled. Unsurprisingly, the causes of wildlife decline are anthropogenic: habitat loss as land is converted to agriculture, waterways are polluted, and wetlands are drained for ‘development’, together with the more direct hunting, fishing, trapping, and poaching of wildlife, where humans act as “super predators” (Darimont *et al.*, 2015; Worm, 2015). About three quarters of Earth's land habitats (including 85% of wetlands) and two-thirds of oceanic environments have already been severely altered or lost due to human activities; as a result, over one million species of plants and animals face extinction (IPBES, 2019).

In much of the world, those struggling to find opportunities in the formal economy often turn to extrativism,¹⁸³ which can have devastating results: empty, silent forests where virtually all vertebrate wildlife has been hunted down,¹⁸⁴ rampant deforestation for wood, fuel, and agriculture,¹⁸⁵ overfished rivers, lakes, and seas.¹⁸⁶ People desperate for work too often end up toiling under semi-slavery conditions (Tickler *et al.*, 2018) in industrial operations seeking to catch every last fish in the ocean (Biello, 2012; Roberts, 2012).

Agriculture is the most weather-dependant of all human activities, and extensively

¹⁸² International Labour Organization (1996, 2007, 2012, 2014, 2017, 2020, 2022a, 2022b).

¹⁸³ See for example Nasi *et al.* (2011); Duffy and St John (2013); Kerr *et al.* (2014).

¹⁸⁴ See for example Harrison (2011); Nasi *et al.* (2011); Long *et al.* (2017).

¹⁸⁵ See for example Hosonuma *et al.* (2012) ; Kerr *et al.* (2014); Sedano *et al.* (2016).

¹⁸⁶ Stobutzki *et al.* (2006), Salayo *et al.* (2008), Keskar *et al.* (2017).

reliant on the same natural resources, ecosystem services, and stable climate being rapidly degraded by agriculture itself, along with other anthropogenic causes. Rising temperatures are already reducing the yields of major crops (Zhao *et al.*, 2017; Jägermeyr *et al.*, 2021), and are expected to have severe destabilising effects on food supply over coming decades. The ongoing degradation of agricultural soils¹⁸⁷ from overuse leads to a greater reliance on inputs and more pressure to deforest remaining arable soils, thus worsening greenhouse gas emissions from agriculture and further degrading ecosystems. The depletion of ground and surface sources of freshwater¹⁸⁸ for agriculture, in turn, will be worsened by climate change-driven droughts and shifts in precipitation patterns. Through it all, our population is set to keep on growing, increasing the demand for food (though not its supply¹⁸⁹), fuel, housing, consumer goods, and all sorts of things human beings require for their survival, wellbeing, and prosperity.

There is only so much arable land around the world, and only so much edible matter that plants can produce even with the best conditions. We have been using a suite of very useful technological hacks - fertilisers, high-yield crop strains, pesticides, and irrigation – to extract far more food than can be produced with natural sources of plant nutrition. Even then, there are limits, and those limits are shrinking, not rising. The same intensive farming that has allowed our enormous population to (mostly) meet their nutritional needs is greatly damaging our ability to grow food, by degrading and depleting already scarce soil and water resources and by making a large contribution to climate change. The FAO estimates that soil erosion alone is knocking off 0.3% of annual crop yield each year (Intergovernmental Technical Panel on Soils, 2015a); at this rate, we will have lost 10% of soil productivity by 2050. Global warming is expected to knock off an additional 10% during that time (Tai, Martin and Heald, 2014). A 20% drop in productivity may sound manageable, but let us not forget: as

¹⁸⁷ Topsoil is now being lost 10 to 40 times faster than it is being replenished by natural processes. Since the mid-20th century, 30% of the world's arable land has become unproductive due to erosion. The FAO estimates 25% of the world's agricultural land is highly degraded; another 8% has moderate degradation, 36% is classed as slightly degraded, leaving only 31% in good condition (FAO, 2011).

¹⁸⁸ A quarter of the world's population, across 17 countries around the world are already under extreme water stress, meaning they are using almost all the surface and ground water they have. Twelve of these countries are in the Middle East and North Africa. Around 1.4 billion people live in areas where ground water is being drawn at a faster rate than it can be replenished. The UN projects that almost half the world's population will be living in areas of high water stress by 2030, which is likely to have severe effects not only on agriculture, which accounts for some 70% of water use, but also broader economic activity. The UN estimates that nearly 80% of the jobs constituting the global workforce depend on access to an adequate water supply (United Nations World Water Assessment Programme, 2016).

¹⁸⁹ See for example Molotoks *et al.* (2021), who examined future global impacts of climate variability, population, and land use on food security. The researchers found that “*countries with a projected decrease in population growth had higher food security, while those with a projected rapid population growth tended to experience the worst impacts on food security*”. They note that “*although climate scenarios had an effect on future crop yields, population growth appeared to be the dominant driver of change in undernourishment prevalence.*”

things stand by then we will have an extra billion mouths to feed, with two more billion on the way to 2100, by which time even more damage to productivity will have been accrued.

Looking further ahead to the end of the century, and on current trends, the yield of such staple crops such as wheat, rice, and maize could be halved. This would have catastrophic consequences for a human population that will likely be 50% larger by then. Of course, we cannot rule out that advances in (for example) genetic engineering could lead to crops that are better able to withstand a warmer, more erratic climate system. But realistically, technology cannot give us crops that will survive extended droughts, flooding, or being uprooted by tropical storms. This is all grim enough, but there is more. On current trends, vast tracts of the planet are set to become uninhabitable, either too hot for humans (and most animals) to withstand (Mora *et al.*, 2017), or else swallowed by rising sea levels (Dutton *et al.*, 2015), causing mass displacement and human misery on a scale that is difficult to contemplate.

This is not a remote future we are talking about. On current life expectancy trends, we can reasonably expect that many people who are children or teens now will still be alive in 2100, elderly denizens of a chaotic, hungry world of perhaps more than 11 billion people.

8.4 Population momentum

There are currently two primary elements driving population growth. One is **demographic momentum**, the baked-in growth caused by high fertility rates in the past having created large cohorts of young people who have not yet had any children. These young cohorts can be confidently expected to generate further population growth over the medium term. The only way to avoid this is for these large cohorts of young people to have so few children that their fertility rate is matched, or outpaced, by mortality. This is a tall order, given that mortality concentrates in older cohorts, which are typically much smaller in countries that have undergone fast population growth. Babies replace not their parents, but people of their grandparents' or great-grandparents' generation. The global cohort of under-15s (25.6% of population) is currently two and a half times larger than the cohort of people aged 65 and over (9.1%); in Africa, there are ten children under 15 for each person over 65 (United Nations, 2019c, p. 58).

Population momentum explains how countries such as China and Iran, where fertility rates have fallen to and remained at sub-replacement fertility levels for decades, have yet to stop growing, let alone start population deflation - which in the case of Iran, is a prospect being fought by increasingly extreme pronatalist policies (Roudi, 2012; PDR, 2014; Safi, 2020).

China first introduced anti-natalist interventions in 1971, culminating in the one-child

policy which applied to most Chinese couples from 1980 until 2015. The one-child policy, based on a combination of negative incentives (financial penalties) and public messaging efforts, is credibly estimated to have averted some 400 million births (Goodkind, 2017), the equivalent of the entire population of South America as of 2014. China's total fertility rate reached sub-replacement levels in the early 1990s, but its population (1.4bn as of 2019) is still a few years away from peaking; only then will it start falling. By 2100, the UN projects China's population will be just over one billion, about the same as it was in 1980, when it first introduced the one-child policy (United Nations, 2019b). If these projections are accurate, China will have taken ~50 years to get through demographic momentum, and 120 years to return to the same population size it was when its anti-natalist policies became strictest. Its fertility rate remains at sub-replacement level, as the pronatalist habit of thought seems to have been largely displaced by a pro-child ethos where parents focus their limited resources on a single child in hopes of boosting their life chances (Nie and Wyman, 2005; Cai, 2010; Swanson, 2015).

Some two-thirds of global population growth up to 2050 is driven by momentum, reducing the scope for what growth avoidance can be achieved by anti-natalist population policies over the next few decades. In order to realistically mitigate nearer term population growth, a sharper limitation of people's family sizes would be required to counteract the heat built up in the demographic system after decades of policy neglect. This is not a speculative proposition. Anti-natalist policies are likely to be the most effective approaches to climate change mitigation and adaptation, in a context where we realistically have little else. Our food production systems are deeply reliant on fossil fuels, and as of yet, hoped-for technologies such as carbon capture remain unproven in spite of massive levels of investment (Chivers, 2021; Harvey and House, 2022). But in order to be most effective while less intrusive, anti-natalist policies need to be implemented several decades ahead of any anticipated crisis point. It is simply not possible to address unsustainable population growth in a dynamic, "just-in-time" fashion as we realise (for example) that supplies of food or energy are falling short. As the examples of China and Iran exemplify, the ballooning of a population takes decades to arrest, and well over a century to undo. But it is never too late to reduce the number of extra people put in harm's way.

8.5 Family size preferences

The other element of population growth is the relatively modest number of countries, mostly very poor, where pronatalist cultures remain strong and fertility rates remain high because people there, on average, want to have large families. These remaining pockets of high fertility are the primary drivers of global population growth over the longer term. If fertility rates there were drop just a little slower than assumed by UN projections, the 2100 population would reach a figure closer to the upper bound of the prediction interval of the medium variant, at more than 12 billion, or 50% more than today's population. Falls in the fertility rates in many of these countries have all but

stalled. This remains the aspect of greatest uncertainty for UN projections. Simply put, fertility rates there may stay high.

There is nothing inevitable about a decline in fertility; it does not just happen with the passage of time. In 1973 demographer Ansley Coale articulated three basic pre-conditions for sustained fertility decline, often referred to as “ready, willing, and able” (Coale, 1973; van de Kaa, 2004). Briefly:

- (1) children must be within the calculus of conscious choice, as opposed to a matter left to God to decide, for example;
- (2) means of fertility control be available - essentially, there must be access to contraception; and
- (3) controlling fertility must be perceived by couples and individuals as something that it is in their interests to do.

These three preconditions falter, to varying degrees, in places such as Somalia, the Democratic Republic of the Congo, Mali, Pakistan, Burundi, South Sudan, Angola, Iraq, Afghanistan, Nigeria, or Papua New Guinea, where fatalistic attitudes towards family size often prevail, family planning services may be difficult to access or poorly accepted, and having a large number of children is commonly seen as a reliable way of enhancing one’s social status and securing support in old age. The result are families trapped in cycles of poverty, with low investment in numerous children who go on to struggle with ever more thinly stretched familial and community resources such as agricultural land, water, schools¹⁹⁰, and decent jobs. Many of those children will feel compelled to migrate as young adults in search of opportunities to make a living, facing an increasingly hostile reception in destination countries. If those children are girls, they face a high risk of ending up trapped in child marriage, perhaps the most prevalent form of slavery in the modern world (International Labour Organization and Walk Free Foundation, 2017), and a strong predictor of early and frequent child-bearing (Raj *et al.*, 2009).

The mainstream, Cairo consensus discourse on population generally assumes that, to the extent that some countries have a problem with high birth rates, it is solvable by greater investment in family services provision and by sticking to policies that are merely *capable* of anti-natalist effects. Let us consider two examples that I suggest show the mistake of ignoring and failing to counteract cultural pronatalism and

¹⁹⁰ For example, Monica Grant (2015) found that a substantial increase in female schooling attainment in Malawi between 1992 and 2010 did not raise the age at which girls and young women first become mothers. This may be because the expansion of school enrolments came at the expense of school quality, as educational and teaching resources are spread thin to cope with ever-larger cohorts of children. Another contributing factor is that the jobs market has not grown nearly enough to keep up with population growth, such that the majority of young Africans with any secondary schooling will be unable to find wage work (Filmer and Fox, 2014).

preferences for large families.

Niger has the world's highest total fertility rate, at nearly 7 children per woman on average. Fertility rates in neighbouring Chad are similarly high, at just under 6 children per woman. These Sahel countries with rapidly expanding populations have long struggled with desertification due to freshwater depletion and degradation of fragile soils from deforestation, overgrazing and agriculture (Westing, 1994; Darkoh, 1996; Arsenault, 2014). Global warming is exacerbating these pre-existing population-driven pressures. In both countries, only a small share of land area is arable – 11% in Niger, and only 4% in Chad. In common with other Sahel countries, food production has not matched population growth and rural families are routinely malnourished. Chad and Niger register the world's highest rates of child marriage. The majority of Nigerien and Chadian children aged 5 to 14 are engaged in child labour, including commercial sexual exploitation and forced labour in domestic work and herding cattle in Chad, and hereditary slavery and mining in Niger (Bureau of International Labor Affairs, 2020b, 2020a). Chad and Niger are each estimated to have had a population of only about 2.5 million in 1950. Chad's population is now 16 million; it is predicted to reach 61 million by 2100. Niger's is now 24 million, estimated to reach 164 million by 2100 (United Nations, 2019b). By that time, vast portions of the Sahel may have become altogether uninhabitable due to desertification or extreme temperatures (Abdou and Goebel, 2010; Potts *et al.*, 2011; Arsenault, 2014; Abdi, 2017; Sylla *et al.*, 2018; Vargas Zeppetello, Raftery and Battisti, 2022).

Surveys of people in Niger and Chad have consistently found a desire for very large families of more than 8 children. So on average, couples there are having fewer children than they would prefer (Potts *et al.*, 2011; Institut National de la Statistique (INS) and ICF International, 2013; Westoff, Bietsch and Koffman, 2013). Simply improving access to and even education about family planning is unlikely to significantly lower fertility rates in a context where couples are not looking to limit their families. The need for procreative restraint tends to be starkest exactly where demand for family planning is weakest – whether due to pronatalist attitudes, poverty-induced apathy and fatalism, or both.

8.6 The myth of virtuous procreation and reprehensible consumption

I mentioned in Chapter 7 three main lines of objection to policy efforts to mitigate unsustainable population growth: population denial, population deflection, and moralised indifference to harms from overpopulation. I concluded that the moralised indifference position is not tenable.

It should be clear by now that the population denial position is also untenable. Rebutting the population deflection position, though, requires sorting out a further question: even if one accepts that population growth is the cause of serious harm, *could* we address those harms by focusing on consumption? After all, some people's

“ordinary” consumption is *much* higher than others. This kind of question presupposes that there is something morally reprehensible about consumption, or at least consumption of the kind that is ordinary in wealthier, developed countries.

Wrongful consumption

I suggest there *are* forms of consumption that are indeed per se unacceptable and wrongful. I would include under this heading consumption that involves disproportionate or extravagant waste (e.g. fishing discards, appliances and electronics that are cheaper to replace than to repair, fast fashion, single use glass bottles and jars), unjustifiable environmental fouling (e.g. single-use plastics, ozone-depleting CFC-containing products), cruelty to animals (e.g. industrial animal farming, wet markets, bear bile farming), dependence on exploited labor (e.g. clothing from sweatshops, produce picked by miserably paid workers), or something akin to environmental vandalism (e.g. palm oil cultivation, bottom trawling, the logging of tropical hardwoods, whaling, the trade in rhino horn and ivory; ghost fishing gear, bushmeat from endangered species, and arguably grain-fed beef and dairy). Each of these types of “bad” consumption is independently a problem, and would be even if our global population was much smaller. But bad consumption is only a relatively small component of our global population’s systemic overconsumption. Even if it were possible to introduce and enforce international standards effectively eliminating all unacceptable forms of consumption, we would almost certainly still have an overpopulation problem, albeit with a little much-welcomed relief to its severity and speed.

The consumption that is driving catastrophic risks to human welfare and to the survival of our societies is substantially of a kind that is not per se objectionable. There is nothing intrinsically reprehensible about wanting to enjoy the kind of materially secure, comfortable life commonly which average people in developed countries take for granted, and to which billions of people aspire. There is nothing per se wrong with wishing to fly to a far-away location to experience a different culture or enjoy beautiful sights during a nice holiday, or to want to own and drive a well-designed car. Similarly, there is nothing reproachable in desiring for oneself a reasonably sized house that is not too hot in summer nor too cold in winter, comfortably furnished, equipped with labor-saving appliances as well as entertainment devices, a well-equipped kitchen, a clean bathroom. These are ordinary human aspirations. What makes them problematic is that we have allowed our numbers to balloon to several billion.

Flying has a very high environmental cost; it would not be problematic in a world with a small population, but that is not the world we have created for ourselves. Building new homes, manufacturing and powering vehicles, and producing and distributing consumer goods are all major drivers of climate-wrecking GHG emissions and other forms of environmental degradation. And given our numbers, virtually any raw material one can think of is being used up at unsustainable rates. Even something as ordinary and seemingly plentiful as sand, used to make all sorts of things modern life

relies on, such as concrete, asphalt, glass, silicon chips. As Pascal Peduzzi, a researcher with the United Nations Environment Programme has put it, “we cannot extract 50 billion tonnes per year of any material without leading to massive impacts on the planet and thus on people’s lives” (Beiser, 2019).

The standard of living that could be sustainably and equitably secured for 8 billion people is likely *quite* low. A 2018 study (O’Neill *et al.*, 2018) looked at this question, applying the “safe and just space” framework proposed by Kate Raworth (Raworth, 2012), which conceptualizes sustainability in terms of resource use that meets people’s needs in a just manner and without transgressing critical environmental boundaries. The researchers found that a population of 7 billion could have their basic physical needs, such as nutrition and sanitation, met at a level of resource use that did not significantly transgress planetary boundaries (Steffen *et al.*, 2015). However, they found that securing for all such luxuries as a healthy life expectancy and a secondary education would require a level of resource use 2 to 6 times higher than what can be sustained.

This is roughly in keeping with the Global Footprint Network’s empirical assessment, based on United Nations or UN affiliated data sets, of how much biologically productive area it takes to provide for all the competing demands of people – food production, materials, fuels, waste absorption, all of it. As of 2022, humanity overuses our planet’s resources by at least 75%, eroding the prospects for human wellbeing and livelihoods.

Given our current population size, the lifestyles that would be globally sustainable are those of the average person in countries such as Swaziland, Vietnam, Burkina Faso or Chad, and on a declining trend (WWF and ZSL, 2022, p. 68). Yet many of the countries where the per capita consumption is so low as to be globally sustainable are nonetheless running comparable or worse ecological deficits than countries where the per capita consumption is high. This is because those poorer countries have very large populations, very limited natural resources, or a combination of both. For example, aggregate consumption in China, India, and virtually all the countries in Northern Africa and the Middle East currently exceeds those countries’ biocapacity by at least 150%, which is a worse level of overshoot than the United States or France’s, and much worse than Canada or Australia. Kenya and Uganda run a higher ecological deficit than Ireland, and much more than New Zealand (Global Footprint Network, York University, and Footprint Data Foundation, 2023).

Should procreation take priority over consumption?

At this point, it may be argued that we should nonetheless refrain from interfering with people’s procreative behavior on the basis that we can, and should, seek to resolve unsustainability by reducing per capita consumption in developed countries. After all, the majority of future population growth is set to take place in the least developed countries, where levels of consumption remain very low. Some version of

this argument has often been made by, for example, prominent UK environmentalist and journalist George Monbiot. There are at least two reasons to reject this argument.

First, it presupposes that people born in poor countries will remain poor for life, and that even the consumption impact of their (potentially very numerous) descendants will not amount to much at all¹⁹¹. This clearly is not the case, or at least not necessarily the case. As a notable example, up until the 1970s and well into the 1980s, China was a very poor country. But nowadays, while most Chinese people continue to subsist on a low income, few are poor. According to an analysis by the Pew Research Centre, over the course of a single decade – between 2001 and 2011 – China’s middle class jumped from 3% to 18%, while the poverty rate fell from 41% to 12% (Kochhar, 2015). Given the overall size of China’s population, these figures represent hundreds of millions of people who became significantly more affluent over a few short years. At any rate, our solution to overshoot cannot rely on the permanent immiseration of billions of people as well as their descendants.

Second, to ignore population growth in the least developed countries is to be indifferent to the fate of hundreds of millions of people who would be predictably placed in harm’s way, in addition to the chronic and sometimes lethal hazards faced by children born into poor, large families. It amounts to ignoring the severe poverty trap posed by population growth in contexts of scarcity¹⁹². Many of these countries are already facing severe food security challenges because of population growth, in addition to high rates of youth un- and under-employment – an altogether explosive combination (Thayer, 2009).

A possible variation of this argument, implicit in purportedly rights-based moralized indifference towards overpopulation harms, is that people value procreation more highly than consumption, and therefore would suffer a greater harm if induced to limit their families than if subjected to a limitation upon their freedom to consume. This is not quite how this argument is usually formulated. Generally speaking, where it is argued that consumption needs to be reduced in lieu of considering population policies, no suggestion is made that there would be any cost to this, any limitation in individual freedoms. Indeed, typically there is no concrete proposal of any kind for how consumption might be substantially reduced. Here one might make a vague suggestion that we look to make improvements in efficiency. This speaks to our cognitive biases; implicitly, the suggestion is that if we hold on and wait for technology to solve this, someone will figure out a way for people to keep on consuming as they do now but with a smaller impact. This has been described as the resource efficiency

¹⁹¹ On a similar line, Elizabeth Cripps takes the position that “*If the lifestyles of the increasingly numerous global poor must be improved, the environmental impact of any such improvement cannot be ignored. To assume that they are entitled to a decent life is to assume that their numbers matter too.*” (Cripps, 2015)

¹⁹² See Omer Moav (2005) for a useful analysis.

improvements fallacy (Akenji *et al.*, 2016).

Logically, it is fundamentally impossible – not just difficult, but impossible – to offset population growth with lower per capita consumption. Population growth involves the multiplication of entire lifetimes' worth of consumption, while per capita consumption can only ever be reduced marginally. And then there is the further problem that, to date, improvements in efficiency have reliably led consumption to *rise* rather than *fall*. This disheartening phenomenon is known as Jevon's paradox (Magee and Devezas, 2017), whereby greater efficiency causes lower prices and higher consumption, often via the creation of new or more extravagant uses for the same resource – for example, feeding grain to cattle, or wrapping homes and trees in LED lights to celebrate Christmas or Diwali.

Alternatively one might suggest that the general public, once appraised of the facts, will voluntarily limit their personal consumption, such as to render unnecessary any “draconian” regulation of our behavior – whether procreative or consumptive. This seems to assume people choose to live their lives the way they do purely out of naïve ignorance of the aggregate consequences of billions of others making a similar choice. But I know of no precedent for a *significant, voluntary* reduction in per capita consumption, anywhere, at any time. People are routinely forced to consume less by dint of circumstances – unemployment, rising prices, supply shortages, etc. But these reductions are not voluntary, and typically do not persist once the individual has the opportunity to resume higher levels of consumption.

Research on this topic is replete with discouraging results. Numerous surveys have found that consumers' self-reported “green” attitudes are only weakly predictive of willingness to buy green products (Joshi and Rahman, 2015) which are typically more expensive (due to the internalization of costs which are otherwise externalized onto the natural environment) or, if made of recycled materials, often assumed to be of inferior quality (Essoussi and Linton, 2010). One study found no significant difference in the energy consumption and CO₂ emissions of environmentally minded consumers compared to those of “environmentally unaware” consumers (Tabi, 2013). Yet another found that people's environmental impact is best predicted by their income level (and therefore ability to consume more), and not by whether they self-identify as environmentally minded. While individuals with high pro-environmental self-identity *intended* to behave in an ecologically responsible way, they typically focused on actions with small ecological benefits (Moser and Kleinhüchelkotten, 2018). A recent study tested the hypothesis that parents might be greener than non-parents in their personal consumption because they think and worry more about the future and might try to offset the added CO₂ emissions arising from the creation of their children. It found that parents personally consume more, and thus emit more CO₂, than their childless peers (Nordström, Shogren and Thunström, 2020).

8.7 Consumption-lowering interventions

By and large, increased individual consumption means people's lives are more comfortable, convenient, and enjoyable. We can reliably expect reduced consumption to cause a significant setback to people's wellbeing, at least during some initial period of adjustment. And people are unlikely to do it voluntarily, on a collective basis, to any significant extent. So reducing consumption would likely require coercive interference with a range of freedoms concerning how people make and spend money, potentially affecting a myriad aspects of their lives. It might require one or more of, for example:

- i. caps on personal income, wealth, or expenditure;
- ii. bans on manufacture, sale, and consumption of certain particularly damaging products (for example, single-use plastics, bitcoin, fossil fuel-powered vehicles and machinery);
- iii. restrictions on how products may be designed and sold (for example, mandating standardized, reusable containers and deposit return schemes for a wide range of consumer products);
- iv. personal or household allowances limiting how much of certain items may be purchased in any one year (e.g. animal products, air travel, clothing) or owned at any one time (e.g. cars, homes, TVs);
- v. internalization of environmental externalities, and ideally animal welfare and fair labor costs, across all products, which would significantly raise the prices of virtually all consumer goods;
- vi. mandated composting and recycling, and volume- or weight-based fees for processing non-recyclable waste;
- vii. restrictions on house building and home refurbishments;
- viii. mandated role-modelling on advertising and entertainment (e.g. to deglamorize consumerism and normalize consumptive restraint).

These may appear shocking proposals, or alternatively they may appear like exactly the kinds of interventions we should be adopting. This may depend on one's degree of appreciation of our environmental predicament, or on the strength of one's libertarian leanings. But I suggest they are *not obviously better* than anti-natalist interventions, in the sense that the extent of interference is not obviously smaller, or likely to be less onerous. On the contrary, consumption-curtailling policies seem to have potential for far more pervasive curtailment of people's freedom to lead their lives as they wish than policies nudging, incentivizing, or even compelling people to (say) have no more than one biological child. And insofar as consumption-reduction policies were to be pursued *in lieu* of anti-natalist population policies (and not in addition to, as logically they ought to be), they would appear to be going against the moral priority indicated by the revealed preferences of ordinary people.

Human beings normally do not choose to consume less, and given the opportunity, for example by technological advances cheapening resource extraction, we can be counted on to consume even more than we already do. But people routinely elect to curtail their procreative aspirations so as to avoid having to cut their per capita consumption. Of course, not everyone makes a choice about family size. Fatalism, lack of access to contraception or abortion, kin and peer pressure, and intimate partner coercion, for example, are all factors in the estimated 23% of births worldwide which are not actively wanted (Bearak *et al.*, 2018). But one of the most commonly cited reasons for people choosing to have fewer children than they would otherwise prefer is the wish to preserve one's standard of living, including the wish to provide a good education for one's existing offspring.¹⁹³ That is to say, people routinely make the opposite trade-off to that which population deflection and moralized indifference enjoin us to make for the sake of avoiding interference with procreative behaviors and preferences.

A further factor to consider is that multiple lines of evidence demonstrate that family size preferences and the desire for children are substantially socially determined, much as our consumption habits. As Sir Partha DasGupta puts it, our reproductive preferences are socially embedded (Dasgupta and Dasgupta, 2017). We should not assume that procreative preferences are especially genuine or even instinctive. Much like consumption, our preferences about family size are shaped by the behavior and stated preferences of our peers, the views of our family and friends, and other sources of role-modelling and social norm signaling, such as mass media. The sheer ubiquity and strength of pronatalist cultural messaging and attitudes in virtually all societies should also cause us to question the innateness of anyone's desire to have children. What would their true preferences be, in a world where they are not constantly urged to see having children as a badge of normality, success, and respectability? What family size they would prefer, if they were urged by friends and family to carefully consider the responsibilities and wider consequences of having a child before making a decision, rather than being encouraged to err on the side of procreation?

It is possible for us to glean some indication of what such a world might be like, one where having a child is a decision approached with restraint and reflection, rather than a foregone conclusion. Where traditional pronatalist attitudes have been disrupted by anti-natalist policy interventions, such as in China, South Korea, Singapore, Taiwan and Japan, very low fertility rates have endured well after the emergence of societal ageing-type concerns that birth rates were too low. This is at least suggestive that, if couples feel they will not face social stigma if they choose to have just one child, or indeed none, they very often will do that. And anti-natalist interventions can greatly assist in bringing about this enabling cultural shift.

¹⁹³ This is frequently reported in the media, typically with a pronatalist slant. See for example the survey by Globescan and The Economist (2016).

8.8 Conclusion

Based on what is known of the world, we can have no reasonable grounds for believing that a human population of seven or eight billion can be supported longer term, let alone a considerably larger one. It should be clear to anyone paying attention to scientific research, or indeed to the news, that the cracks have been appearing on the walls for some time, from back when our numbers were much lower. And this is with a large proportion of humanity living with so little material comfort and security that many of their human rights cannot be said to exist in any meaningful way. We now face a serious risk of multiple catastrophes and the almost certainty that food production will fall significantly over coming decades. Still, our population continues to grow, the wholly unsurprising outcome of decades of obfuscation, denial, and policy neglect.

As outlined in this chapter, it is common for discourse on climate change and other overpopulation-related hazards to frame consumption as a matter of greed and selfishness, while simultaneously positioning procreation as virtuous and self-abnegating, or at least as higher priority. But albeit that some specific forms of consumption may be reprehensible, there is nothing *intrinsically* reprehensible about consumption. We cannot survive without consuming food, water, fuel, in addition to a wide range of materials with which we make our clothing, homes, medicines, and all sorts of useful things. But no one needs to procreate in order to survive. And we should be careful not to idealize procreation. Having a child is intensely other-affecting, and therefore inherently capable of causing moral conflicts and harm. And as discussed in Chapter 6, the most plausible motivational interests for justifying procreation still involve parents treating children as instrumentally useful to their aims, a classically objectionable, or at the very least suspect, way of treating others.

If the empirical evidence summarised here is accurate (and if my reading of it is accurate, which I believe it is), then human overpopulation is currently occurring and already serious, not withstanding the conservative and undemanding nature of the criteria I set out in section 7.4, namely:

- (1) one or more collective goods necessary to satisfy minimum wellbeing requirements of a given population are becoming strained, sustaining damage, or undergoing depletion;
- (2) the downward resource trend is primarily or wholly caused by the ordinary consumption of the collective goods by the general public; and
- (3) a reasonable extrapolation of the downward resource trend reveals a risk to the satisfaction of minimum wellbeing requirements that becomes serious within a period of time corresponding to the life expectancy of the youngest people within that society.

The catastrophic risks to human welfare and to the very possibility of human rights

entailed by our present and worsening overpopulation cannot plausibly be justified by resort to parents' interest in raising children who are siblings, or indeed any plausible interest grounding a right to procreate. No interest of ours in relation to procreation can come close to justifying the tolerance of hazards to the very possibility of human rights, hazards which inevitably weigh more heavily on those with the least say in their creation: children and future generations.

The empirical evidence summarised in this chapter shows that **the morally justified scope of the right to procreate is currently, and for the foreseeable future, limited to a right to having one child**. We are not in a situation where the comparatively weak interest underlying a right to a second child can justify protecting that choice against anti-natalist interference, which is necessary to prevent and mitigate harm to many more, and far more important, human interests and our commitments to justice.

Should we continue to demur and fail to act to avert the full catastrophic potential of overpopulation, today's children or their children may end up with no right to procreate at all. The existential harm conditions will remove even a right to one child if that child will face a much more hazardous existence than that which is compatible with a child's open future. This could become true of virtually all children, meaning the right to procreate disappears and leaves in its place bare procreative liberties, which do not offer normative resistance to what could by then be extremely severe limitations under much-too-late policy interventions.

Hopefully, however, the roadmap provided in the final chapter will help avoid such a future, by clearing the way for appropriate anti-natalist interventions to be implemented now. These may or may not be coercive; this really is not a particularly important question, once we understand that anti-natalist interventions almost always operate outside the scope of the right to procreate, given its preconditions and limitations. Non-optional constraints on aspects of our freedom which are not protected by specific rights are an ordinary fact of life in society, not some extraordinary situation in need of soul-searching and special justification.

Chapter 9: The legitimate scope of anti-natalist policies

9.1 A morally justified right to procreate is both pre-conditioned and limited

In Chapter 6 I argued that a right to procreate – an individual entitlement to create other persons for what are wholly or principally instrumental purposes – can be plausibly justified with reference to a combination of autonomy-based interests in normative agency and pro-child motivations that show appropriate respect for the prospective child that is to be created. I have also argued that all of these interests need to be at play in order for the right to be engaged. In addition, our commitment to justice and to the equal standing of future persons requires the would-be parent to refrain from creating a child in conditions that are seriously unfavourable for their wellbeing and flourishing.

Together these considerations yield a right the exercise of which is subject to three preconditions, all of which must obtain in order for the right to procreate to be engaged at all:

- (1) The **normative agency condition**. The would-be parent must be able and willing to make a considered decision to procreate for which they can be, are prepared to be, held responsible. Persons unwilling to exercise normative agency in respect of procreation – for example, due to religious beliefs – are not entitled to the protection of a right to procreate for their non-decision about whether to create a child. Persons who lack the capacity to exercise normative agency similarly do not exercise a right to procreate if they create a child. They lack the capability to exercise it, as they might do in relation to a number of other autonomy-related rights and freedoms, for example to marry, pursue the profession of their choosing, vote, or drive a vehicle. As with motivational condition, if the normative agency condition is not satisfied, the would-be parent does not necessarily do wrong by procreating; but they are not exercising a right to procreate if they do so.
- (2) The **motivational condition**. The would-be parent must be specifically motivated by the desire to experience the special relationship between parent and child, and to raise a happy, flourishing child as a special personal project. This entails, among other things, that the right to procreate is not a right to create children per se, but a right to bring into being biological children whom the parent will (or at least intends to) parent, care for, and provide for. This motivational condition is related to would-be parents' connected *duty* to provide and care for

any children they create. But for the purposes of the right to procreate, the implication of the motivational condition is that one might exercise normative agency and intend to procreate, but still not be entitled to create a child if their motives are not appropriate in light of what it is that they are asserting a right to do. One does not, for example, have a right to create children if their sole or principal motivation is to pass on their genes. Similarly, there is no *right* to create a child who one does not intend to parent.

- (3) The **existential hazard** condition. This is the one condition which, if not met, means the right to procreate is not engaged *and* in addition procreation is wrongful, rather than merely a matter of a bare liberty, that is, that which we are permitted to do until we are not. The parent must truly and reasonably believe that their child will be born into conditions conducive to their wellbeing and flourishing. Existence is always hazardous, and the prospective child is intensely vulnerable to their188ouldd-be parent's overwhelming and morally hazardous power to, for example, place them in harm's way by creating them in unpropitious circumstances so as to serve some narrow interest of the parent. What this condition is screening for is situations where being brought into being would be unusually hazardous to the new person, beyond the usual vicissitudes of existing in a world where bad things might happen to any of us, and where we will, all of us, experience some pain and suffering, and one day die. If circumstances are such that a child will face serious limitation of their life chances, or a serious risk of violence or abuse, or of their basic needs going unmet, then creating the child is not something the parent is entitled to do. This is not all; unlike the previous conditions, if the existential hazard condition is not met, procreation is wrongful.

In Chapter 7 I argued that the right to procreate also has a limit to its justifiable content. It is not the case that if all preconditions are met, the parent is entitled to procreate as many times as they wish. The interests underlying the right simply do not support an open-ended entitlement to child-creation. Our interests in experiencing biological parenthood and in raising a happy, flourishing child are substantially satisfied by the creation of one child. From there on, one must call upon some additional plausible grounding interest, which I think must be the common human preference of rearing biological children who are siblings. This, however, seems like a comparably less compelling interest than the interest in experiencing biological parenthood and in raising a happy child. It veers much more into the idiosyncratic, while the costs to others of procreating multiple times increase at a higher than linear rate (as children will themselves become potential procreators).

The result of this is, I argued, is that the plausible justification of a right to create and rear children who are siblings only goes as far as a second child, and even then only *if* circumstances are so propitious, if resources are so abundant and free from downward pressures, that overpopulation is simply not a concern. I argued in Chapter 8 that the evidence available suggests this is unfortunately clearly not the case and has not been the case for some time.

In conclusion, **the right to procreate**, under prevailing circumstances and into the foreseeable future, **is a conditional entitlement to create one child**. Procreation beyond this, as with procreation where the conditions are not satisfied, is not a matter of right, but of bare liberty, the kind of practical option open to any of us without any special moral justification behind it beyond the absence of a specific prohibition.

The exception, again, is where the existential hazard condition is not met. There is no *right* to create an intensely vulnerable child into undue, foreseeable danger. Not only the right does not apply, but the conduct in question involves wrongful harm. This argues for the state to act to prevent the behaviour, including (for example) by requiring the use of contraception or otherwise imposing a duty on individuals to refrain from hazardous procreation.

Thus a *morally justified* right to procreate comprises a much more modest and caveated entitlement than currently assumed. But how could it be otherwise, considering the inherent other-affecting nature of procreation, its potentially catastrophic consequences at the aggregate level, and the intense vulnerability of children to harm arising from the circumstances of their birth, to which they can never possibly consent?

Is talk of a *right to procreate even appropriate?*

Indeed, while some authors such as Carter Dillard, Sarah Conly and Rivka Weinberg have reached conclusions broadly similar to my own (see section 3.6), a number of authors have argued that procreative options and behaviours should not be approached through the framework of rights at all.

Yvette Pearson (2007), for example, argues that while attempts should be made to provide a proper foundation for a right to procreate, if one exists at all, the better approach is to move away from rights talk altogether, as it “prevents serious scrutiny of reproductive behaviour”. The focus of discussions about procreative behaviour, Pearson adds, should be on parents’ duties towards prospective children and the essentially relational nature of procreative actions, rather than on a supposed right of individuals to procreate. Laura Shanner (1995) similarly suggests that framing procreative decisions in terms of rights is ethically problematic, and likely to harm children. She argues against formal protection for procreative rights, and that “even the informal defence of procreative rights by reference to other reproductive rights should be avoided”. Thomas Murray (2002) finds that the framework of procreative

liberty “has difficulty summoning the ethical will to curb the indulgence of almost any parental whim”, so “it prohibits or condemns almost nothing.” Instead of focusing on parents’ right to be free to procreate, he suggests, we should instead focus on the moral significance of the parent-child relationship while bearing in mind the ways in which families can promote (or sometimes hinder) human flourishing. Carol Kates (2004), too, suggests the rhetoric of fundamental human rights has become harmful; anyone not motivated by religious dogma could not rationally accept the risk of ecological catastrophe to preserve an unrestricted right to procreate.

In advancing their objections, these authors refer to the lack of a robust philosophical basis for an obviously problematic right to procreate which is widely assumed to exist. The better view, I suggest, is that it is not the rights framework that is the problem, but instead the specific right that has been assumed to exist, namely an absolute right to do something that is other-affecting and other-risking. That is, the problem is the Cairo consensus and its normative cognates in constitutional and human rights law, which ought to be rejected. A philosophically grounded, morally justified right to procreate must be preconditioned in a manner that shows an appropriate degree of respect for the prospective child, and limited as necessary to satisfy everyone’s equal interests in the preservation of the material conditions for human flourishing and the achievement of just societies. Anything else would amount to giving priority to a narrow human interest that simply cannot logically or morally warrant such ample scope for harm to others and to the very viability of meaningful basic rights. The conditional right to one child as conceptualised in chapters 6 and 7 should, I believe, put at ease the minds of authors who have objected to the very idea of a right to procreate.

9.2 Bringing the full suite of anti-natalist interventions back to the table

My ultimate aim in this dissertation has been to rehabilitate anti-natalist interventions, specifically coercive ones, to their proper place as critical tools for fairly and rationally resolving the conflict between our interest in procreative freedom on the one side and our overall wellbeing interests and the basic requirements of justice on the other. Procreation is inherently other-affecting, can lead to severe, lasting harm to the most vulnerable of human beings (children), and through overpopulation can mean that basic rights are at risk of becoming nothing but nice ideas.

Respect for fundamental or human rights, therefore, requires effective anti-natalist interventions. In many if not all contexts anti-natalist interventions will not be effective without at least some degree of coercion, for example via financial incentives for contraceptive use, extensive public messaging to counter pronatalism, and possibly penalties for procreation that is wrongful (that is, involves undue hazards for the created child) or beyond a lawfully implemented limitation.

If a threatened harm to others is serious enough, then individuals should not be free and unencumbered to *choose* whether to act in a way that avoids that harm. A duty needs to be imposed requiring the individual to act in a way that avoids the harm. This is particularly true of harms to children, who are so intensely vulnerable. And as discussed in Chapter 7, overpopulation, as a collective action problem, generally can only be fairly and effectively solved via an enforceable limitation of the relevant freedom - even if the enforcement operates solely through the less overt channel of social pressure, as might be appropriate in some contexts. Voluntary alternatives are likely to end up in free-riding, injustice, and failure of the policy-response.

It may be tempting for policymakers to seek to propose indirect-acting interventions trying to act on other, less controversial problems but with hoped-for anti-natalist effects, as is commonly advocated by well-meaning individuals and by proponents of the Cairo consensus. But not only are such interventions likely to be cost-ineffective ways of tackling procreative harms, when it comes to overpopulation, due to the severity of the problem and to population momentum, we are now decades past the stage at which indirect interventions might have avoided our numbers from growing too large or from causing the accrual of catastrophic risks. It would be immoral for us to continue to experiment with indirect measures in the face of such urgent threats to human welfare and the very possibility of justice and progress.

The foregoing may make it appear that I am about to set out one or more specific policy prescription. As I discussed in Chapter 1, this is not the case. The ultimate aim of my thesis is to rehabilitate direct anti-natalist interventions, including coercive ones, to their proper place as legitimate policy-making tools for the prevention and mitigation of moral conflicts and harms arising from procreation.

Legitimacy is not the only consideration; the design of anti-natalist interventions must incorporate careful regard to local circumstances. The drivers of harm, or of procreative behaviour, may be very different depending on social or material context. The same is true of available levers for changing those drivers or behaviours. The policy response needs to be tailored to conditions on the ground in order to be effective. And political feasibility cannot be overlooked; it is all well and good to know that a potential policy does not offend any rights and is clearly required, only to have it never be implemented because the process of policy development overlooked pragmatic considerations for how to get political or public buy-in for the intervention.

So I cannot properly recommend a particular policy intervention, or even a number of different interventions, not in the abstract. I can, and do, urge the active consideration of the full suite of possible anti-natalist interventions by political leaders, lawmakers, and policymakers, including in particular, for the reasons above, interventions which are coercive.

With that in mind, it is useful to recapitulate the discussion on the types of policy within that full suite.

Types of anti-natalist policies and the consequences of a conditional, limited right to one child

In section 1.6 I offered a typology of anti-natalist policies, noting that the ultimate subject of my analysis are *anti-natalist interventions per se*, that is, those interventions which are directly anti-natalist and which involve a degree of interference with the would-be parent's procreative choices, including coercive interference.

To recapitulate, anti-natalist policies include:

- (I) "Rights-based" policies enabling individuals to control their fertility (...)
- (II) Social policies capable of (indirect) anti-natalist effects (...)
- (III) Anti-natalist interventions per se
 - g. **public messaging** campaigns endorsing, promoting or normalizing procreative restraint
 - h. financial or other **positive incentives** encouraging smaller families or contraceptive uptake
 - i. financial or other **negative incentives** discouraging procreation or larger families; and
 - j. **compelled family planning**

While policies enabling individuals to control their fertility as well as social policies capable of anti-natalist effects are warmly endorsed by the Cairo consensus, anti-natalist interventions are generally assumed to offend people's right to make procreative decisions free of any coercive interference, including psychological or economic pressure, and on that basis are regarded as impermissible.

But if my arguments in defence of a pre-conditioned, limited right to procreate are accepted, then it follows that **any of the above types of anti-natalist intervention are in principle compatible with a justified right to procreate**. The supposed existence of an absolute right was the only real argument for shielding such an inherently other-affecting behaviour as procreation from the reach of ordinary policy-making and legislation to protect the rights and interests of others and the common good. If a behaviour does not fall within the scope of a right, it is not necessarily wrong to engage in that behaviour, but there is no entitlement to do so and no entitlement to *not* be placed under a prohibition.

This means there is no moral or normative reason why a policy which (for example) imposes a financial penalty in respect of procreation in excess of one's procreative entitlement would be illegitimate. Likewise, there is nothing illegitimate about a policy imposing a legal duty on individuals to not create a child they have no entitlement to

create in the first place (but are merely able to). These are the ordinary normative entailments of not having a right to do something, and procreation is no different.

A requirement to use contraception to avoid children one is not entitled to create would also be perfectly compatible with the right to procreate. Unlike the previous examples, this type of intervention involves the imposition of a requirement to use medication, or at least medical devices, to avoid procreation. Being under a duty to not procreate, per se, does not necessarily entail the use of contraception. Compelled use of contraception might be objected to on the grounds that it violates people's strong interest in bodily autonomy. The consideration of this argument falls outside the scope of this thesis, but I would note that our interests in bodily autonomy, and to refuse treatment, are generally not regarded to be absolute or to resist requirements intended to safeguard the life and wellbeing of others. There does not seem to be a reason, in principle, why a requirement to use contraception would be particularly different from a requirement to be vaccinated, or to wear masks, or to undergo medical screening for contagious diseases. Politically controversial, maybe, but generally compatible with people's rights.

It should go without saying that if non-optional (that is, coercive) requirements on procreative conduct may be legitimately imposed, as I claim is the case, then other types of anti-natalist intervention, such as public messaging urging procreative restraint, and positive incentives for contraceptive use or family limitation, are also perfectly legitimate. In reality any successful anti-natalist policy will involve a combination of these types of intervention, with public messaging being useful not only to promote the desired behaviour (procreative restraint), but also to raise public awareness of the harms other interventions are intended to address, so as to earn democratic support for them. China's one-child policy, for example, though based principally on financial disincentives, relied substantially on public messaging efforts that earned the policy much greater support at the domestic level than is usually assumed by external observers. Public messaging and nudges encouraging procreative restraint, or highlighting the role of procreative decisions in fomenting or mitigating serious problems such as climate change, desertification, or mass extinctions, might be all that is required in some contexts. But the right to procreate offers no reason or argument in favour of trying 'less coercive' policies first. Indeed, the severity of procreative harms to children, and the catastrophic and compounding nature of unsustainable population growth, argue for policies that more proactively and assertively realise the moral limits of the right to procreate.

This is not to say that *any* anti-natalist intervention can be appropriately deployed in respect of *any* sort of procreative behaviour in *any* situation. That, too, would be arbitrary and irrational. Public policies must always be adequately justified and have a at least a reasonable fit to circumstances. But there is nothing in the nature of the types of anti-natalist intervention characterised above that would make them per se illegitimate or per se incompatible with a right to procreate or any other right. As with

any public policy, in particular policies involving the use of the state's monopoly on lawful coercion, whether the intervention is compatible with the right to procreate will turn on whether it is actually interfering with a right and if so, whether the interference is justified.

Therefore we must distinguish between two situations: where the intervention would act upon procreative behaviour that falls outside the scope of the right to procreate, and where it would interfere with behaviour that falls within it. In the former case, no *special* justification is required beyond the usual considerations of good administrative law. In the latter, there would have to be a robustly compelling reason of public policy justifying the specific interference, as necessary to rebut the strong presumption that the interference is not permissible. But as discussed below, there might still be situations where such situations exist.

To be clear, nothing in the theoretical approach or philosophical arguments put forward in this analysis would support the view that the right to procreate is an absolute right even within the confines of a conditional right to one child. As with any right, however fundamental, a possibility always exists that there will be a good enough reason why it would be unjust to *not* interfere with it under certain circumstances.

9.3 Interventions acting on bare procreative liberties

Interventions in relation to bare procreative liberties (see section 4.2), where procreation is not a matter of right, fall within the realm of ordinary public policy-making, of the kind concerning the prudent and just regulation of conduct and allocation of costs and benefits in a well-ordered society such as traffic laws and ordinances, laws and policies concerning the exercise of regulated professions, taxation, health and safety regulations, eligibility rules for social benefits, environmental laws, etc.

I take interventions that interfere with or curb a bare procreative liberty to be subject to the usual principles of fairness, legality, procedural propriety and rationality, which I expand upon in section 9.6 below. To restate, a bare procreative liberty is what remains if the right to procreate is not engaged but procreation is not (yet) prohibited. This could be because any one of the pre-conditions to the right to procreate is not satisfied, or because the would-be parent already has one child, or (if overpopulation were not occurring or looming), if the parent already has two children.

Bare procreative liberties are no different from any other bare liberty we have to do whatever we are (as of yet) under no duty *not* to do. They are not themselves rights and do not imply any right to *not* be placed under a prohibition or constraint.

Imposing a duty on people to not do something, if that duty has any real bite, must always involve coercion. To suggest that we have a right to not be subject to coercive rules would be tantamount to saying we have a right to not be subject to laws governing our permissible conduct as members of society, which is absurd. Anti-natalist interventions can apply to bare procreative liberties in the same way as any type of public messaging, a positive or negative incentive scheme, or a legal requirement or prohibition aiming to change to people's behaviour so as to, for example, address public health concerns, protect children or animals, reduce pollution or environmental damage, ensure fair taxation, etc.

So for example a person who does not specifically want to have a child, or specifically does want to have them, or is not capable of exercising normative agency in respect of decisions concerning procreation and child-rearing, could legitimately be placed under an obligation to use contraception until such time as they are able to satisfy the normative agency condition.¹⁹⁴ If they will never be able to satisfy that condition (for example, if they suffer from a permanent and serious cognitive impairment or mental disability), then they will never have a right to procreate. In such cases, the person would need to be on contraception for as long as conceiving or bearing a child remains a realistic risk. It would be for the courts to consider, as they do now, whether sterilisation may be the best approach, for example on health grounds, or to prevent an undue burden on carers who would otherwise need to ensure that a person lacking in capacity reliably uses contraception or remains celibate.

By way of another example, if we assume, as I do, that a person in the grip of serious substance abuse, or living in destitution, would not be able to satisfy the existential harm pre-condition and therefore has no right to procreate (for as long as they cannot satisfy that condition), then there can be no rights-based argument for why it would be wrong or illegitimate to offer that person an incentive to use long-acting contraception. Indeed, there can be no rights-based argument against *requiring* such person to use long-acting contraception until such time as their circumstances are no longer overly hazardous to any child they create. Given that creating a child into such an unfortunate situation would involve a wrongful (that is, serious, foreseeable, and avoidable) harm to that child, the incentive or requirement would help give effect to the justified limits of the right to procreate.

The substance abuser or person living in destitution may well be entitled to a great deal of social support to overcome these severe challenges to their own wellbeing. But

¹⁹⁴ Greg Bogner (2019), for example, argues in favour of mandatory long-acting contraception for those who do not actively intend to have a child as an intervention to mitigate catastrophic overpopulation risks. Bogner argues that such a requirement cannot be said to be incompatible with personal autonomy or liberal principals, for it mean avoiding procreation that was not intended to begin with. By making non-procreation the default, such a policy would align people's intentions would their behaviour, and make procreation "a conscious choice", which it ought to be given its "profound impact on wellbeing, opportunities, and equality between the sexes".

arguing about what is owed to the would-be parent so as to enable them to be in a position to have a child without doing wrong is very different to arguing that they must have a right to procreate anyway because they have not been offered enough support and are thus not to blame for their situation. Avoidance of harm to prospective children cannot be contingent on the full satisfaction of duties that might be owed to their would-be parents.

Moreover, the limits of the justified scope of the right to procreate are not a punishment. They simply reflect which other-affecting purported personal entitlements are capable of moral justification and which are not.

This sort of objection, it must be noted, is only ever asserted in relation to biological children, presumably because those making the complaint regard limitations on the right to procreate as implicitly depriving a person already facing severe disadvantage from *property* they would otherwise be able to acquire, i.e. the child they would create. No one could reasonably argue that an alcoholic or heroin user or slum dweller is *entitled* to bring a child into comparably hazardous circumstances *through adoption* on the grounds that their substance abuse problem or severe poverty or is not their fault, because they have been unfairly let down by society or authorities, or because they nonetheless have a right to be a parent.

Taking the preconditions and limit to the right to procreate into account, it may be that policies such as parental licensing could be fairly implemented. Insofar as would-be parents who do meet the preconditions and are within the limit of the right to procreate would be subject to no greater a burden than to demonstrate that this is the case, this seems easily justifiable notwithstanding that the licensing requirements would brush against their right to procreate. Such requirements arguably would be no different than obtaining a marriage licence, which is a requirement in some jurisdictions before the right to marry may be exercised. For would-be parents who are not able to demonstrate that their right to procreate is engaged, or where the limit of their procreative entitlement has already been exhausted, the licensing scheme would simply give effect to the limits of moral justification of the right to procreate. It would not change what rights they have or do not have. Further consideration of licensing schemes is beyond the scope of this analysis, and at any rate there is already plenty of useful philosophical work on this topic.¹⁹⁵

9.4 Interventions interfering with the right to procreate

Where the anti-natalist intervention would interfere with procreative behaviour that falls **within** the justified scope of the right to procreate, then the above types of intervention might still be legitimate, if the harm they seek to address is sufficiently

¹⁹⁵ See in particular the many interesting contributions in Peg Tittle's edited volume, *Should parents be licensed?* (1998).

serious. For the right to procreate, even within its boundaries, cannot be said to be absolute. But here the justificatory task for the legislator or policy-maker is considerably more onerous. Whereas policies acting upon bare liberties do not interfere with or violate rights, for the bare liberties by definition lie outside the scope of the right, here the policy would interfere with or potentially violate a right to procreate.

Unlike the over-ambitious and poorly defined right to procreate of the popular imagination, the reconstructed right to procreate I have accounted for has a well-defined content and reasonably clear boundaries intended to explicitly and fairly take into account the interests of others. But it would be naïve to think that a right with robust philosophical foundations and carefully delineated boundaries will for that reason be completely impervious to justified interference under any and all circumstances. There may be sufficiently compelling reasons of public policy to interfere with the right to procreate which were not considered in the development of that philosophical foundation or the delineation of the boundaries of the right. But the situations I have in mind here are of unusual and serious circumstances not otherwise in contemplation in the account of the morally justified content of the right.

For example, consider a natural catastrophe or devastating famine that requires the urgent resettlement of a massive number of people, counting in the millions, not thousands. This is not a fanciful scenario; global warming, alone, may make vast tracts of land subject to regular bouts of deadly heat waves in decades to come, land where vast numbers of people currently live. Let us assume, for the sake of the argument if not for pragmatism, that countries receiving these refugees cannot take an unlimited number of people, or at least cannot absorb them all at once, such that people end up languishing in refugee camps awaiting an opportunity to be resettled. And of course, families are to be settled together. Given an unprecedented amount of international aid, conditions in the camps are not so bad. People are sufficiently secure in their basic needs, and there is enough by way of schools, hospitals, opportunities for recreation etc that the existential hazard pre-condition does not operate to rule out a right to procreate. But it is a refugee camp; people in it want to go back to a normal life, and are anxious to be resettled as soon as possible. If people were free to procreate while in the camp, this would substantially increase the number of refugees requiring settlement, inevitably causing some people to have to wait longer, potentially years. It seems to me at least arguable that such situation might justify the implementation of anti-natalist policies to discourage or deter procreation while people are in the camp, so that those awaiting resettlement do not get pushed back in line by other people expanding their families.

Or consider a situation where there is a public health crisis from a novel pandemic causing massively increased demands on hospitals and on social insurance, as many people become unable to work while they are ill. Say this disease is spreading fast and it becomes clear that it poses a high risk of illness and long-term disability to women

who catch the disease while pregnant, while posing no particular risks to the children they give birth to (so the harm to children condition is not at play). Say the context is a low fertility country, where most women are having a first child anyway, and assume for the sake of the argument that these pregnancies are intended and that the children would be well-cared for by their parents. The procreation that would be interfered with, then, is plainly within the justified scope of the right to procreate. Could the government nonetheless *justifiably* impose a moratorium on procreation and require everyone to use contraception for a year or two so as to protect women's health and mitigate the number of people who become sick and disabled? Whether badged as an emergency derogation of rights or as a justified interference, I think such intervention is at least capable of justification.

Whether there is compelling enough justification for an actual interference with the right to procreate (as opposed to bare procreative liberties) would fall to be carefully considered in light of the specifics of any particular case, and cannot be pre-judged in advance. My only point here is that *it cannot be properly assumed* that where the right to procreate is engaged (that is, where its preconditions are met) and where its limit is not yet exhausted there is *absolutely nothing* the state may justifiably do by way of anti-natalist interference, under *any* circumstance. My account could not possibly take account of *all* possible moral conflicts that might emerge; the right to procreate I have conceptualised only takes account of standard moral conflicts involving procreation.

9.5 Why not stick with non-coercive anti-natalist policies anyway?

In this section I address an objection that is built into the Cairo consensus. I do not mean the notion that demographic goals (or at least, anti-natalist ones) cannot be the motivation for public interventions in relation to procreation or population; this purported proscription is arbitrary and absurd in view of the long-standing reality of our overpopulation trajectory. The population taboo does not afford a rational basis for circumscribing the legitimate goals of public policy.

What I have in mind is the standard “coercion is unnecessary” objection. A proponent of the Cairo consensus might accept my conceptualisation of a justified right to procreate as a conditional right to one child, and might also accept that this means that anti-natalist policies imposing non-optional constraints on procreative liberties are legitimate options and compatible with the right to procreate. But the Cairo consensus advocate might nonetheless insist that we should not pursue such policies because other options might work just as well without involving coercion.

By way of a brief recapitulation, the types of policy that are endorsed by the Cairo consensus and other absolute conceptions of a right to procreate include:

- (i) *Policies enabling individuals to control their fertility*
 - a. provision of family planning services;

b. proactive *education and outreach about modern contraceptive methods*;

(II) *Social policies capable of anti-natalist effects*

c. improved access to *primary healthcare services and advice*;

d. the introduction and provision of state-run *old age pension schemes* and related social safety nets for illness and disability;

e. *human capital formation measures* focused on women and children;

f. *anti-patriarchy measures*.

The above policies are all good things to implement in any context where basic rights have meaning, in particular the equal rights of women and children. So why should we even bother considering the legitimacy of anti-natalist interventions involving varying degrees of impingement upon people's freedom to procreate?

The short answer

It would be irrational, and ultimately immoral, to take off the table any legitimate policy option that may turn out to be the best way to resolve moral conflicts and preventing or mitigating procreative harms in a given situation. Under no version of public law principles, or of internationally recognized criteria for limiting human rights, is the *maximisation* of liberty a central consideration. It would be contrary to respect for people's basic rights to opt to prioritise a narrow individual liberty at the expense of how effectively we address serious threats to their overall rights or vital interests, or to justice in general. Liberty is best conceived as an *instrumental* good, valuable in so far it enables or advances our personal autonomy or broader wellbeing.¹⁹⁶

Existential harms to children cannot be more than very partially mitigated after their birth. The only real opportunity to prevent the infliction of wrongful harm is to refrain from creating a baby into conditions unsuitable to their wellbeing, healthy development, and future autonomy, and this is very feasible. And due to population momentum and the compounding nature of population growth, the longer we wait to act on population the more severe the problem, the greater the likely limitation of people's liberties that will be required (in relation to procreation as well as consumption), and the more catastrophic the damage it is likely to inflict to the material and social conditions for human wellbeing, justice, and the satisfaction of basic rights.

¹⁹⁶ This is also Tasioulas's position (2012). See also Dworkin's view that "if we have a right to basic liberties not because they are cases in which the commodity of liberty is somehow specially at stake, but because an assault on basic liberties injures us or demeans us in some way that goes beyond its impact on liberty, then what we have a right to is not liberty at all, but to the values or interests or standing that this particular constraint defeats." (Dworkin, 1997).

Ultimately, there is no rational basis for supposing that passively providing family planning services and implementing (important but potentially very costly) social policies that are merely capable of anti-natalist effects would, *in every context*, work well enough, fast enough, and comprehensively enough. On the contrary, we have good reason to think that anti-natalist interventions of some kind are likely to be required in almost every context if we are to take procreative harms seriously.

A more detailed answer

The provision of basic family planning is a fundamental component of any credible anti-natalist policy, and indeed an important element of primary healthcare. Access to modern, reliable and safe contraceptives is a necessity for any sexually active individual of reproductive age wishing to avoid, limit, or postpone procreation. In many contexts, in particular where average levels of educational attainment are low, or where women face practical or cultural restrictions on their mobility, many more people are likely to benefit from family planning services if the policy also includes family planning education and outreach efforts. These can, for example, help dispel common fears about modern contraceptives, which in high-fertility societies may currently pose a greater obstacle to addressing unmet need than lack of access¹⁹⁷.

However, while essential to enabling individuals to control their own fertility, family planning provision and outreach-type policies are not geared towards promoting procreative restraint or otherwise generating demand for family planning. Demographers have long understood that mere access to and knowledge about modern contraceptive methods are likely to have only modest effects on fertility rates where individuals and couples simply prefer having a large number of children¹⁹⁸, or hold fatalistic attitudes towards procreation¹⁹⁹. These preferences and attitudes are common in countries with traditional (patriarchal) cultures and persistent high fertility. In more liberal or lower-fertility societies, family planning provision and outreach on its own is unlikely to make a difference to the procreative behaviour of people who already take it for granted that contraception is available if they want it, whether or not their reproductive behaviour falls within the justified bounds of the right to procreate.

¹⁹⁷ See Sedgh *et al.* (2016).

¹⁹⁸ See for example Westoff's 2010 report on the desired number of children reviewed reproductive preferences in 60 countries based on data from Demographic and Health Surveys conducted between 1998 and 2008. Westoff concluded that there had been a decline in the total fertility rate in most of the 60 countries, and this was due largely to a decline in the number of children parents wanted to have rather than to a reduction in unintended births. Preference for a very large family remained widespread in Sub-Saharan Africa. (Westoff, 2010)

¹⁹⁹ Fatalism about procreation describes the attitude towards procreation, common in traditional, high-fertility settings, whereby people do not see family size as falling within the calculus of conscious choice. For example, Thomas LeGrand *et al.* (2003) found that rural people living in high-fertility contexts in Zimbabwe and Senegal did not seem to engage in any deliberate fertility strategy, and in particular did not have extra children by way of "insurance" against the risk of child death. Within religious societies, procreative fatalism is often rationalised into a stated belief that using contraception, or otherwise attempting to make decisions about how many children to have, is against the will of God. A 2014 survey by the Pew Research Center (Poushter, 2014) found that 65% of people in Pakistan, 54% in Nigeria, and 52% in Ghana regard contraception as "morally unacceptable".

The social policies of the kinds characterized at (c), (d), (e) and (f) are commonly raised in the context of contemporary development discussions as representing a supposedly optimally efficient, or perhaps the only morally permissible, way to promote demand for contraceptives and bring about declines in fertility rates. They are not alleged, nor likely to have, effects in relation to the prevention of hazardous procreation, or otherwise help realise the preconditions of the right to procreate. Such policies, though not anti-natalist in themselves, are generally believed to have, or be capable of having, anti-natalist effects.

Greater access to primary health care tends to reduce neonatal and infant mortality, which is theorized to reduce fertility rates by suppressing precautionary demand for children. The introduction of public pension systems is thought to discourage the old-age security motive for procreation. Human capital formation measures, if successful and given a reasonably propitious economic context, can lower fertility rates by making women's time more economically valuable, or by requiring greater parental investment into and reducing the instrumental utility of offspring. The upshot is the same: children become more expensive, and the option of limiting family size becomes more attractive to parents. Additionally, the blunt mechanism of keeping girls unmarried and in school is also likely to reduce their vulnerability to early, frequent, and physically dangerous childbearing, which is so often the lot of disempowered and abused child brides.

Finally, anti-patriarchy measures can be reasonably expected to have some anti-natalist effects, potentially by attenuating son preference, or helping women have more of a say on family size decisions that might otherwise be made by husbands or in-laws. But perhaps most importantly, anti-patriarchy measures can be essential to enable the success of human capital formation measures, with which they are closely related and partially overlap. Bans on child marriage, for example, fall into both categories.

The evidence for anti-natalist effectiveness of social policies is rather more complicated and mixed than standardly assumed in development discourse. Their indirect effects on procreative attitudes and behaviors are heterogeneous and highly dependent on the specific societal context. Different levels of cultural pronatalism and religiosity, for example, can mean seemingly identical social measures have very different fertility outcomes. In some contexts the effect on fertility rates may be undetectable, or positive²⁰⁰ instead of negative. And a negative effect may simply be too modest or uncertain²⁰¹ to be relied upon to address pressing concerns relating to

²⁰⁰ Multiple studies suggest that higher levels of education and affluence may have a “U”-shaped correlation with fertility, initially reducing it then increasing it. For example, Margherita Fort *et al* (2011) found that compulsory schooling reforms in Europe which increased levels of education caused “*a substantial decrease in childlessness and an increase in the number of children per woman*”. Similarly, Takashi Oshio (2019) found a robust positive correlation between female employment and fertility in developed countries.

²⁰¹ For example, Ushma Upadhyay and Deborah Karasek (2012) analysed demographic and health survey data for Guinea, Mali, Namibia and Zambia relating to women's empowerment and ideal family size. They found no consistent association between indicators of women's empowerment with a desire for smaller families or women's ability to avoid having more children than they wanted.

high fertility rates.²⁰²

Even where a substantial decline in fertility rates is observed, it is difficult to establish the direction of causation. This is at least in part due to fertility itself being a factor in the success or failure of social policies.

It is much more feasible to expand primary and secondary education, and to do so without sacrificing quality, for smaller rather than larger cohorts of school-age children.²⁰³ It is harder to bring about changes in social practices to build children's human capital and protect them from exploitation and harm where children are cheap, plentiful, and perceived as replaceable.²⁰⁴ Women and young people struggle to get any benefit from skills training and added years of education where they are trying to compete in labor markets already saturated with job-seekers.²⁰⁵ The sustainability and trustworthiness of public pension systems, and of public welfare systems more generally, will similarly suffer where there is labor over-supply and high levels of unemployment and informal employment.²⁰⁶

It is harder to change traditional misogynistic attitudes where women are prevented by the constant bearing and rearing of children from more active participation in public and economic life. And smaller family sizes seem to lead not only to better infant survival²⁰⁷ but more educated,²⁰⁸ better fed,²⁰⁹ and more intelligent²¹⁰ children

²⁰² For example, a longitudinal review of the relationship between education and fertility in Sub-Saharan Africa found it to be “weak and complex”, and able to explain only a small part of the fertility decline observed from 1975 to 2005. See Garenne (2012).

²⁰³ See for example the study by Monica Grant (2015) summarised at *supra* note 181.

²⁰⁴ See for example Omer Moav (2005).

²⁰⁵ The International Labour Organization (ILO) (1996, 2007, 2012, 2014, 2017, 2020, 2022a, 2022b) has been chronicling a rising trend in un- and under-employment at the global level since at least 1991, as the growth in the number of people seeking to enter the labour market persistently exceeds job creation. The lack of decent work affects women and young people most keenly. See the ILO's World Employment and Social Outlook Trends reports and linked publications, which are available at www.ilo.org.

²⁰⁶ The funding of “pay-as-you-go” public pension schemes is often cited as a purported reason to for pro-natalist policies promoting further population growth. PAYG schemes rely on an ever-larger working population, so doomed to eventual collapse if they are not transitioned into alternative systems, such as capital funded schemes. Larger cohorts of young workers go on to become larger cohorts of older people requiring even larger cohorts of young workers to support them in their retirement, and so on so forth.

²⁰⁷ It is well established that, in addition to short birth intervals, higher parity (meaning number of births, whether live or still) increases the risk of infant and child mortality. For example, Naoko Kozuki *et al* (2013) considered data from demographic and health surveys from 47 low- and middle-income countries to examine the impact of large families on under-five and neonatal mortality and found that children of mothers with large families faced a higher mortality risk compared to those of mothers with small families.

²⁰⁸ The literature on the relationship between family size and educational attainment is extensive, and usually framed as studies of the quality-quantity tradeoff effect. Recent studies include work by Jing Li *et al* (2017), who considered census data from 17 countries in Asia and Latin America to investigate the relationship between family size and children's educational attainment. They found that on average, one additional sibling in the family reduces the probability of secondary education by 6 percentage points for girls and 4 percentage points for boys. Bingjing Li and Hongliang Zhang (2017) found that prefectures in China with stricter enforcement of the one-child policy experienced larger declines in family size and also greater improvements in children's education. Christelle Dumas and Arnaud Lefranc (2019) considered the impact of a municipal ban on contraceptives imposed by the mayor of Manila in the late

who go on to enjoy greater incomes²¹¹ in adulthood, inverting the traditionally assumed direction of causation between fertility and child mortality, education, and affluence.

Of course, these kinds of social policies are justified quite independently of whether they can be shown to cause any reduction in fertility rates. But insofar as they are to be regarded as central components of anti-natalist population policies, effectiveness is a very relevant consideration.²¹²

I mean here merely whether they work, not whether they are cost-effective. Social policies involving substantial greater public expenditure in primary healthcare, social insurance, and raising levels of education, skills, and economic participation are expensive ways of achieving reductions in fertility rates, if that were the rationale for their implementation. Anti-patriarchy measures are not comparably expensive, but are unlikely to deliver substantial anti-natalist effects in and of themselves.

Seeking to induce people to have fewer children via the implementation of social policies is arguably akin to seeking to reduce the rate of drunk-driving by expanding mental health services, or offering more generous unemployment benefits, but without explicitly disapproving of or seeking to directly deter the behaviour. This kind of social policy may well indirectly reduce drunk-driving. But the reduction would almost certainly be smaller, and achieved at a much greater cost to the public purse, than that achievable via the direct interventions normally pursued to tackle drunk-driving, such as public messaging on the dangers of impaired driving and the existence, awareness and enforcement of laws proscribing and penalizing the behavior.

Cost-effectiveness is particularly important where public resources are scarcest. The countries where fertility rates remain high, and where catastrophic overpopulation poses more immediate threats, include the poorest countries in the world.

1990s, and found that it led to a significant increase in family size and a sizable decrease in children's educational attainment. Takahiro Ito and Shinsuke Tanaka (2018) considered the effect of abolishing user fees from health services in South Africa, and found that the policy resulted in lower fertility in households and greater educational attainment for children a decade later. The effect also applies to wealthy countries such as the US. Judith Blake (1989) found that, in the US, "*education among those with many siblings is disproportionately cut short before high school graduation*". Similarly, Monique de Haan (2010) considered data from a longitudinal study of people in Wisconsin, US between 1957 and 2005. She found a significant negative correlation between family size and children's educational attainment, but specifically affecting later born children while mostly sparing first-borns.

²⁰⁹ For example, Qihui Chen (2021) considered the impact of Vietnam's two-child policy and found that having an additional sibling lowers a 5-year-old Vietnamese child's height-for-age and weight-for-age scores by 0.3 and 0.26 standard deviations. Similarly, Haoming Liu (2014) considered data following the relaxation of China's one-child policy and found a significant negative correlation between family size and child height.

²¹⁰ See Blake (1989), Silles (2010), and Wänström and Wegmann (2017).

²¹¹ See for example Van Bavel (2006), Wänström and Wegmann (2017), and Wang, Tian and Zhou (2021).

²¹² Daniel Goodkind (2017) study estimated that China's so-called "draconian" one-child policy, which was principally based on financial incentives, disincentives, and public messaging, probably averted between 360 million and 520 million births, and that those averted births are projected to double by 2060 due to (avoided) population momentum.

9.6 An outline of principles guiding anti-natalist interventions

Interventions concerning procreative freedom outside the scope of the right

Generally speaking the principles that should guide anti-natalist interventions interacting with **bare procreative liberties** are no different from the principles that guide, or should guide, other types of law- and policy-making that interact with people's interests and general (bare) liberties.

As with any law or public policy, an anti-natalist intervention should be **rational** in design and implementation, so as to be as effective as possible in achieving a reasonable anti-natalist aim. This means well-reasoned and not arbitrary, considering all relevant facts, disregarding irrelevant facts, and tailoring the policy to the circumstances on the ground. Using the same approach across the board, without regard to what will work best in different contexts, is perhaps the clearest example of irrationality in the context of anti-natalist policy-making. The design and implementation of the policy should also ensure its costs - to the public purse, to individual liberties, or the justice in the apportionment of benefits and harms - remain **proportionate**. Proportionate does not necessarily mean that the benefits must outweigh the costs under some mechanistic accounting or economic analysis. But clearly the policy should (as a minimum) not create a greater harm or injustice than it seeks to address

A policy that is rational and proportionate will not by that reason alone be legitimate. It needs to involve a **lawful** exercise of powers for the legislator or policy-maker. That is to say, the policy or intervention must be legal, though its *moral* legitimacy does not depend on whether the prevailing legal framework adequately caters for it. The intervention must also be procedurally, and perhaps more importantly, substantively **fair**. People should have an opportunity to be consulted, which also tends to safeguard the rationality of the policy by helping ensure that no major obstacle, or low-hanging fruit, has been overlooked in the policy design. And there should not be any unjustified discrimination. People ought to be treated the same, for they have the same right to procreate, and the same wellbeing interests and other rights in need of just safeguards.

Interventions concerning procreative freedom within the scope of the right

The above-sketched principles broadly correspond to standards against which public policies and delegated legislation fall to be judicially reviewed in the UK. They are also rather similar to the general principles governing the limitability of international (legal) human rights. In brief these are that limitations on a human right (other than an absolute right, of which the right to not be tortured is the sole uncontroversial example) must be prescribed by law, justified by the pursuance of a legitimate aim, and limited to what is necessary to effectively achieve that aim - or as a minimum that all the interests involved should be carefully balanced against one another (de

Schutter, 2010, pp. 288–289). Slightly more nuanced criteria that have become reasonably established, at least in the context of civil and political human rights, include that the scope of limitation of a right must not be so severe as to “jeopardise the essence” of the right concerned, that there should be a possibility of (legal) challenge, and that (where the limitability of the right is expressly conditional on it being ‘necessary’) there should be a pressing public or social need.²¹³

I would caution, however, that the above principles for limiting human rights are intended in relation to broadly stated legal human rights mostly lacking in obvious limitations. It would not be appropriate to apply them without alteration when looking to impose further limitations on the **pre-conditioned, limited right to procreate** I have conceptualised and accounted for in this analysis. It seems to me that potential anti-natalist interference with procreative conduct within the justified scope of right to procreate would be subject to the above outlined principles *together* with a substantially more demanding justificatory criterion than that implied by the rational pursuit of a legitimate aim.

I suggest there should be a specially compelling and urgent reason pertaining to the securing or promotion of the general welfare, perhaps without quite calling for the public emergency-type standard of human rights derogations. This, however, is a matter requiring further work. I cannot provide a satisfactory answer here. The cases where such interventions might be called for are, at this time, considerably more speculative than the present and clear procreative harms and standard procreative moral conflicts which can be comprehensively prevented and mitigated without interfering with what is in substance a conditional right to one child.

Considerations about coerciveness and political feasibility

I would like to make clear what I think is not a principle that should guide anti-natalist policy-making: the avoidance or minimisation of coercion. Coercive interventions with people’s behaviours and choices cannot be regarded as illegitimate or undesirable simply because they are coercive.

Coercion is an ordinary feature of the law. Laws and other forms of mandatory conduct regulation are the usual way in which the conditions or limits of a right are realised, and are often the most expedient and fairest way to achieve harm prevention or to reify the limits of a right. For example, the qualification requirements for professions such as medicine, law, architecture, etc, usually set by a combination of law and regulations by specialised bodies, set standards which if not met mean one is forbidden to exercise that profession, notwithstanding their ardent wish to do so or however much investment of time and money they may have made towards pursuing

²¹³ See the Siracusa Principles on the Limitation and Derogation of Provisions in the International Covenant on Civil and Political Rights, Annex, E/CN.4/1984/4, also reproduced in *Human Rights Quarterly*, 1985, vol 7: 1-57.

that profession. The limit to the right to marry is also typically a matter of law, often with punitive consequences for those who engage in bigamy. So whether a policy is coercive, or the extent to which it is coercive, is not an independent factor guiding policy-making, except insofar as it might be rationally taken into account as a cost of an intervention to be considered against its expected benefits.

There is something else that is not a principle or criterion for the legitimacy of anti-natalist policies, and that is their assumed political feasibility or popularity. This is, however, a pragmatic consideration for getting any intervention implemented at all. But what is politically feasible, or likely to be accepted by the public, can change, and change rather rapidly, by appropriate public communication about the issues of concern and by equally appropriate and consistent rejection of claims of a purported general right to non-interference. The idea of people being required to wear seat belts in cars, or that children must be seated in a baby carrier or a child seat, was once seen as outrageous. So were new laws banning smoking in public enclosed spaces, to name two relatively recent examples.

Our sense of what liberties we are entitled to can change very quickly once we are properly aware of rationale for constraints, and once the novelty of new harm-preventing legislation has worn off. Policy-makers need not assume that what is fatally unpopular now will be so forever, as this risks creating a self-fulfilling prophecy. On the contrary, proactive, courageous and clearly reasoned policy interventions are key to discovering what is, in fact, politically feasible.

9.7 Conclusion: The role of anti-natalist policies in mitigating moral conflicts and harm relating to procreation

The Cairo consensus and the equivalent assumptions of a right to unlimited individual discretion to create children through sex cannot be plausibly justified, and must be rejected. An unlimited right to procreate does not seem capable of philosophical justification, at least not unless we place overriding value on the sheer (and temporary) multiplication of our numbers, without any regard to the impact of this multiplication on the life chances of countless human beings, or any care for the fate of children born into clearly hazardous circumstances. And to value our multiplication, in this way, would be absurd. We cannot be free, as a matter of right, to act in a way that can foreseeably result in severe harm to others, or contributes to catastrophic risks to our own wellbeing and the very possibility of rights.

All rights are costly, and require justification of the corresponding burdens on duty-bearers, including potential costs to competing rights, interest, and requirements of justice. What value is expressed by an interest in repeatedly experiencing biological parenthood that is so important as to override our moral duties to today's existing children or to future generations, or even the prudential interests of our future selves? I have argued that what right to procreate we have must be not only conditional but

limited.

Under present circumstances, due to overpopulation it is a right to make a considered choice to have one child, by someone capable of making such a morally ponderous choice, and for reasons that are appropriately respectful of the equal interests and intense vulnerability to harm of the prospective child. The would-be parent must be motivated by the goods of the parent-child relationship, and be committed to the special, purpose-giving project of raising a happy, flourishing child. There is no right to procreate where procreation is the result of procreative ambivalence, neglect of or objection towards birth control use, where the parent does not intend to raise and parent the resulting child, or where the prospective child, if created, would face an unusually hazardous existence without the open future to each of us is entitled at birth. We do not have a right to toy with the life of another, even if we cause that other to come into being through the use of our own bodies.

A right that has preconditions and limits is by definition compatible with coercive impingement upon the behaviour that is its subject matter. Voluntary limits are no limits at all, and to suggest so is tantamount to asserting an absolute right. Anti-natalist interventions are not just legitimate, they are crucial in reifying the moral limits of the right to procreate such as to fairly and stably resolve the underlying moral conflicts that generate those limits. Any society committed to respecting and advancing the fundamental rights of its people must have appropriate anti-natalist policies.

Anti-natalist interventions actually protect all rights, including the right to procreate. Where overpopulation risks are already crystallised and catastrophic, the third, harm-based pre-condition to the right to procreate may come back into play in a way that has nothing to do with the parent's circumstances specifically, but with the general hazards applicable to all prospective children. If things get bad enough, people will essentially have no right to procreate at all.

Population growth takes decades to arrest, and even longer to reverse, making it virtually impossible for policymakers to respond dynamically to miscalculations or unforeseen challenges relating to a society's ability to provide for the needs of all its people. But respect for human rights does not require that we accept catastrophic risks as the price of our freedoms. On the contrary, it requires that we accept that the right to procreate is indeed legitimately limitable to a far greater extent than commonly assumed, as necessary to safeguard our overall freedoms and wellbeing.

Scaling back our procreative and lifestyle aspirations would represent an undeniable cost. But cost-free mitigation is unrealistic, and waiting for a non-existing technological solution to materialize is deeply irresponsible. It is within our ken to induce a fall in fertility rates with appropriate, well-designed, and well-funded anti-natalist population policies. Doing so would mitigate a wide range of catastrophic hazards, by reducing the

causative human pressures as well as the number of people in harm's way.

There is much more that could be said, and perhaps has already been said and not mentioned here, about specific aspects of the morality of procreation. I have endeavored to tackle the moral motherlode, so to speak, in a way designed to be of most use in illuminating where current rights discourse, legal practice and public policies on procreation have gone wrong. I have also proposed a way forward in terms of concrete normative prescriptions and policy options. Even a small success in this endeavour could have a very material payoff in reducing the infliction of harm of the most serious kind onto the most vulnerable of us.

Appendix

Ideational background: the taboo on problematising procreation and population growth

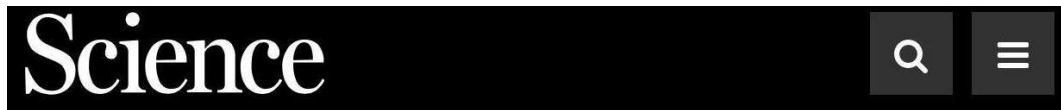
Procreative choices and climate change mitigation

The operation of the taboo can be subtle. Consider one of the greatest anxieties of our time, catastrophic climate change. Climate change is principally driven by population growth along with economic growth. This causative connection was only acknowledged by the Intergovernmental Panel on Climate Change (IPCC) in 2014, and downplayed ever since, relegated to side notes and dense technical sections in subsequent rounds of IPCC publications.

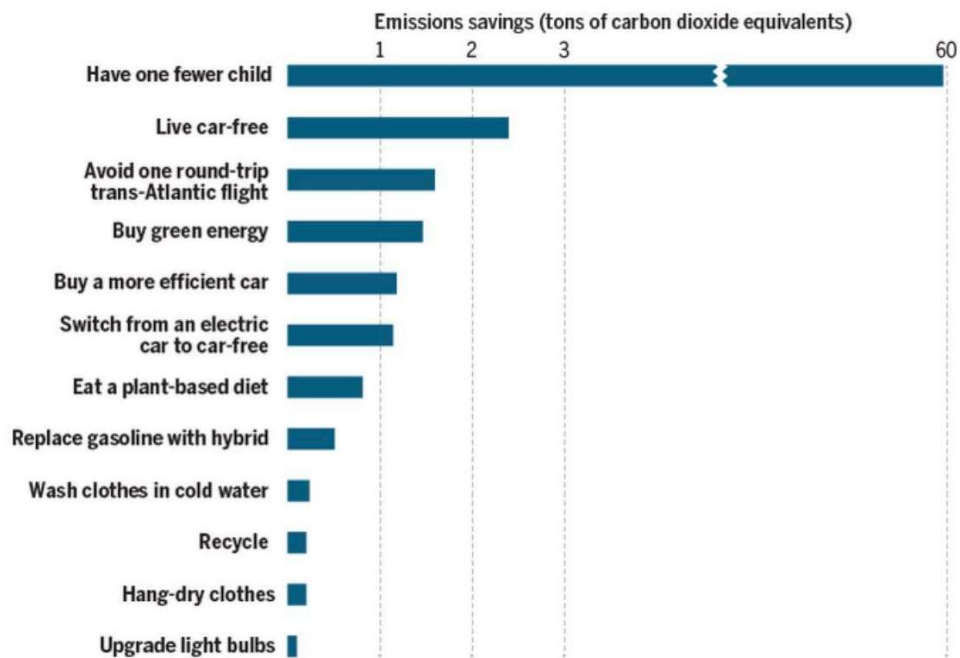
Writing in 2014, UN demographers Joseph Chamie and Barry Birkin criticised the IPCC report for (belatedly) acknowledging the link between population growth and climate change, only to omit the issue altogether in the report's mitigation recommendations. World population growth, they said, "*continues to be taboo, or at least sidestepped by international bodies addressing climate change and population matters*". This taboo, they indicate, is aided by Cairo consensus and its agreement to "*narrowly focus on sexual and reproductive health and rights, especially of women*" while "*downplaying a demographic rationale for population policy*" (Chamie and Mirkin, 2014). Chamie would know; he was the director of the UN's Population Division from 1993 to 2004, and served as deputy secretary-general during the ICPD. Elsewhere Chamie refers to population growth as the "elephant in the room", as world leaders convene in pointless UN summits to discuss lofty aims but without any goals or targets relating to population or procreation, though reducing population growth would assist with every single sustainable development goal (Chamie, 2015).

The UN has plenty of company in sidestepping the linkage between population growth and climate change. In 2017, Seth Wynes and Kimberly Nicholas published a groundbreaking study critical of standard education and government recommendations on individual choices to reduce greenhouse gas emissions. Wynes and Nicholas found that these recommendations commonly focused on actions with modest impacts, like comprehensive recycling or replacing household lightbulbs with more efficient ones, while avoiding those where individual choices could have the greatest impact. Among the actions with the most substantial impact, according with their calculations, were living car-free, avoiding airplane travel, and eating a plant-based diet. Though rarely suggested by governmental organisations (or indeed the United Nations), these more impactful strategies are commonly promoted by environmental and (in the case of a plant-based diet) animal welfare activists.

But by far and away the recommendation with the highest possible individual impact was the mentioned by none of the materials they surveyed: having fewer children. Wynes and Nicholas calculated that the impact of one fewer child led to average personal reduction emissions, for developed countries, of 58.6 tonnes of greenhouse gases *per year*. This vastly dwarfs the impact of the second most impactful choice, avoiding flying, at 1.6 tonnes saved per roundtrip transatlantic flight foregone. In other words, a person from a developed country who has a child increases their personal climate change impact by the equivalent of someone who flies back and forth across the Atlantic some *36 times per year*.



The top ways to reduce your carbon footprint



Credits: (Graphic) J. You/*Science*; (Data) Seth Wynes and Kimberly A Nicholas, *Environmental Research Letters* (2017)

Fig. 2: Individual savings in climate impact from greenhouse gas emissions-sparing choices (Wynes and Nicholas, 2017). Note the compression in the bar for “have one fewer child”, required to make it fit within the chart without rendering the others nearly invisible.

Wynes and Nicholas' paper received significant press coverage, for example by the UK's The Guardian²¹⁴. Among experts, the idea that family size choices are impactful in terms of greenhouse gas emissions was not new. Wynes and Nicholas were drawing from and building on existing scholarship which had already grounded the IPCC's acknowledgment of population growth as a primary driver of climate change. But as with pre-existing materials, the study by Wynes and Nicholas seems to have had very little if any impact on the advice given to individuals about how to reduce their climate impact, or on government policy in tackling climate change.

For example, the United Nations has an "Act Now" page setting out advice to individuals on how to "help limit climate change".²¹⁵ This advice was issued in 2020 – so three years after the publication of Wynes and Nicholas' findings, and six years after the ICPP identified population growth as a primary driver of greenhouse gas emissions. The UN's list includes the usual tips: walking or riding a bike instead of driving, switching to LED light bulbs and energy-efficient appliances, reducing consumption of meat and dairy, etc. But it does not invite individuals to consider limiting their procreative aspirations, or indeed may any observations about the impact of procreative choices. (It also does not mention avoiding flying.)

A web search of tips for how to reduce one's climate impact yields lists of similar recommendations, and identical omissions on the topic of procreative choices, by an assortment of NGOs and government bodies.²¹⁶ The UK government's net zero

²¹⁴ Damian Carrington, "Want to fight climate change? Have fewer children" The Guardian, 12 July 2017. <https://www.theguardian.com/environment/2017/jul/12/want-to-fight-climate-change-have-fewer-children> (accessed on 22 February 2023)

²¹⁵ United Nations Act Now, "Start with these ten actions!" <https://www.un.org/en/actnow/ten-actions> (accessed on 22 February 2023)

²¹⁶ See Laura Kastenbauer, "Ways to reduce your impact on climate change in 2021". Clean Water Action, 4 January 2021. <https://cleanwater.org/2021/01/04/ways-reduce-your-impact-climate-change-2021> (accessed 22 February 2023); The Grantham Institute, "9 things you can do about climate change", Imperial College London, <https://www.imperial.ac.uk/stories/climate-action/> (accessed 22 February 2023); "Top tips to reduce your carbon emissions". The Energy Saving Trust, 15 April 2021. <https://energysavingtrust.org.uk/top-tips-to-reduce-your-carbon-emissions/> (accessed 22 February 2023); "What is climate change: What can we all do?" Climate Change Committee. <https://www.theccc.org.uk/what-is-climate-change/what-can-we-all-do/> (accessed 22 February 2023); "What you can do to fight climate change". WWF, 2023. <https://www.worldwildlife.org/pages/what-you-can-do-to-fight-climate-change> (accessed 22 February 2023); "What you can do about climate change", United States Environmental Protection Agency (EPA). <https://www.epa.gov/climate-change/what-you-can-do-about-climate-change> (accessed 22 February 2023); and Mike Childs, "Reducing greenhouse gases: our position". Friends of the Earth, 14 July 2021. <https://policy.friendsoftheearth.uk/policy-positions/reducing-greenhouse-gases-our-position> (accessed 22 February 2023). The policy position and recommendations of Friends of the Earth (England, Wales and Northern Ireland) differs slightly from the preceding examples by cryptically referencing the importance of empowering women "so that women can fully contribute to tackling climate change and adapting to it, including in politics, policy and lifestyle choices".

strategy has nothing to say on population growth²¹⁷. The New York Times's current listicle, with the very same omission as all the others, actually mentions the Wynes and Nicholas study – but only in support of its contention that people should look to go carless if they can. It does not mention the climate consequences of different family size choices at all.²¹⁸ My web survey found a single listicle that mentions the central finding of Wynes and Nicholas, by the BBC. But the article immediately downplays that finding as philosophically complicated, questioning if a parent can really be held responsible for the climate emissions of a child they create. And moreover, the article asks, “*we could ask if having children is necessarily a bad thing for solving climate change: our challenges may mean we will need more problem solvers in future generations, not fewer*”.²¹⁹ Of course, nothing is said about our propensity to do nothing about catastrophic problems we know how to address but do not care to do so. We do not need potential ‘problem solvers’ that themselves add to a problem we lack the will to solve.

Yet another article, published in Quartz magazine, went as far as publishing a chart, purportedly drawn from the Nicholas and Wynes paper, but truncated so as to omit the information about not having a child²²⁰. This made it appear that avoiding flying was the most impactful individual choice.²²¹

It is not just public authorities, NGOs, and journalists who avoid acknowledging the environmental impact of procreative choices. Nicholas and Wynes were themselves cautious not to be seen as condoning anti-natalist interventions.

Shortly after the study's publication, Seth Wynes told CBC News that “*To put it simply, adding another person to the planet who uses more resources and produces more*

²¹⁷ HM Government, “Net zero strategy: Build back greener”, October 2021.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/103399/0/net-zero-strategy-beis.pdf (accessed 22 February 2023).

²¹⁸ Livia Albeck-Ripka, “How to reduce your carbon footprint.” The New York Times, undated.

<https://www.nytimes.com/guides/year-of-living-better/how-to-reduce-your-carbon-footprint> (accessed 22 February 2023)

²¹⁹ Diego Arguedas Ortiz, “Ten simple ways to act on climate change”. BBC, 5 November 2018.

<https://www.bbc.com/future/article/20181102-what-can-i-do-about-climate-change> (accessed 22 February 2023)

²²⁰ The Quartz article (Natasha Frost, “If you care about your impact on the planet, you should stop flying”, 3 July 2019) has been amended, without acknowledgment, presumably after attention was brought to its adulteration of Nicholas and Wynes' conclusions. See Yan (2019).

²²¹ For another example see Andy Newman, “If seeing the world helps ruin it, should we stay home?”, The New York Times, 3 June 2019. Newman asserts that “*Going some place far away, we now know, is the biggest single action a private individual can take to worsen climate change.*”

carbon dioxide is always going to make a large contribution to climate change".²²² Kimberly Nicholas' initial commentary, to The Guardian, was similarly robust: "We recognise these are deeply personal choices. But we can't ignore the climate effect our lifestyle actually has. It is our job as scientists to honestly report the data" (Carrington, 2017). In other news coverage, however, Nicholas stressed that the study did not suggest that people should be encouraged to have fewer children. In a 2021 interview to Vox²²³, Nicholas essentially dismissed her study's key finding, asserting that "it's really important to realise that population is actually irrelevant to solving the climate crisis". We needed a solution that would work within a decade, she claimed, and acting on population takes much longer. (There is no quick fix for the climate crisis; see the discussion in Chapter 7.) In the same interview Nicholas cryptically endorses the Cairo consensus prescription of social policies capable of (indirect) anti-natalist effects (see section 1.6), while making it clear that such policies should not be pursued as a climate strategy (Samuel, 2021).

In a separate interview in 2019,²²⁴ Wynes said that the papers' findings seemed controversial, but were not – at least not to scientists. But that does not mean that scientists were willing to talk about the subject:

"Climate researchers already understood that personal transportation—both flying and driving cars—as well as meat consumption contribute substantially to climate change. In terms of choices regarding family size, scientists also understand that population is a driver of climate change, but not all scientists think that it should be addressed either because it's too controversial or because it takes us away from focusing on changing levels of consumption."

Wynes himself seems affected by that fear of controversy. He goes on to stress that he and Nicholas were merely speaking of information that should be made available to the public, rather than suggesting or supporting anti-natalist interventions:

"I think a lot of the greater controversy comes from people assuming that our paper says things it doesn't say. We don't demand policy change, but we do suggest that education should line up with the science. We think government

²²² Matt Meuse, "The best way to reduce emissions? Have fewer kids, researchers say". CBC News, 13 July 2017. <https://www.cbc.ca/news/canada/british-columbia/emissions-reduction-choices-1.4204206> accessed 22 February 2023.

²²³ Sigal Samuel, "A climate scientist explains why it's still okay to have kids". Vox, 29 April 2021 (<https://www.vox.com/future-perfect/22399882/climate-change-kids-children-overpopulation> accessed 22 February 2023)

²²⁴ Rishika Pardikar, "Climate change: A scientist explains why it's not radical to say people should have fewer children". Huffington Post, 16 October 2018, updated 29 August 2019 (https://www.huffpost.com/archive/in/entry/climate-change-a-scientist-explains-why-it-s-not-radical-to-say-people-should-have-fewer-children_in_5c11ff9ce4b0508b21372770 accessed 22 February 2023).

documents titled, “Top 10 Things You Can Do to Help” should actually contain the top ten things an individual can do for the climate. Our results are not policy prescriptive.... I would emphasize even more clearly that in terms of choices regarding family size, I believe that the climate impact of choosing to have an additional child is just one of many things that parents might choose to think about when making this decision... What is more important than addressing population is to find ways to live healthy, fulfilling lives that result in low levels of carbon...” (Pardikar, 2018)

A taboo with a long history

This reluctance by scientists and other authoritative or influential voices to discuss the need for procreative restraint has been well documented, and it clearly predates the ICPD. But by the same token, an overview of public materials shows how the taboo was strengthened by the Cairo consensus, as Chamie and Mirkin suggest.

According to Charles Percy Snow, as early as the 1950s public figures were already biting their tongues and omitting the subject of overpopulation when discussing major threats to food security, keen not to make serious problems appear even more hopeless, and anxious not to offend religious sensitivities (1969, pp. 19–20).

These were not the only sensitivities. What is the point of even acknowledging a problem for which no morally acceptable response is perceived to exist? Even decades after the development of reliable contraception, we seem to implicitly regard procreation as falling outside the realm of normative agency, as something that just happens naturally, and over which individuals supposedly have no meaningful control.²²⁵ In addition, there seems to be a widespread sentiment that coercive limitation of one’s liberty to do as they wish – a standard requirement of life in society – is uniquely ‘draconian’ when it comes to procreative freedom, such as to be hardly worth considering. As some authors have observed, it is common-place for opposition to population governance by women’s and social justice groups to be expressed in the language of coercion – that is, by supposing that anti-natalist interventions are generally coercive and that this makes them illegitimate (Kopnina and Washington, 2016).

²²⁵ For example, in the midst of the Zika epidemic, which caused many pregnant women to give birth to microcephalic infants facing severe lifelong disabilities, El Salvador advised women to wait two years before having children. The New York Times covered this seemingly sensible recommendation as though a shocking or desperate step. Dr Ernesto Selva Sutter, a leading public health expert quoted in the article, dismissed the advice as futile; “are you going to stop people having sex?”, he asked, as though contraceptives were not an option. See Azam Ahmed, “El Salvador’s advice on Zika virus: Don’t have babies”, The New York Times, 25 January 2016.

(<https://www.nytimes.com/2016/01/26/world/americas/el-salvadors-advice-on-zika-dont-have-babies.html> accessed 22 February 2023)

Writing in 1971 about the Bhola cyclone, which killed between 300,000 to 500,000 people in present-day Bangladesh, Garrett Hardin makes the point that “nobody ever dies of overpopulation”²²⁶. Rather than consider the inherent danger in such a large number of people trying to eke a living in a low-lying region prone to disastrous flooding, it was easier to shrug and blame catastrophic weather:

“Were we to identify overpopulation as the cause of half a million deaths, we would threaten ourselves with a question to which we do not know the answer: ‘How can we control population without recourse to repugnant measures?’ Fearfully we close our minds to an inventory of possibilities. Instead, we say that a cyclone caused the deaths, thus relieving ourselves of responsibility for this and future catastrophes.”

As documented in detail by Roy Beck and Leon Kolankiewicz (2000), at about the same time as Hardin’s observation the environmental movement in the US was starting a decades-long retreat from advocating population stabilisation. Whereas in 1970 in the US “population and environmental issues were widely and publicly linked”, the subject of explicit concern by the US president and of a bi-partisan commission, by the late 1990s population concern had all but disappeared from public discourse. The problems stemming from US population growth were still huge news, Beck and Kolankiewicz emphasise, but the underlying population growth itself was barely mentioned. In a virtual reversal of 1970 conditions, they say,

“US population growth was treated by most environmental leaders and journalists as an implacable natural phenomenon, which like hurricanes and earthquakes, we could not prevent but only adjust to. [...] Most of the scores of American environmental groups either ignored US population growth altogether, treated it as a negative but inexorable force²²⁷ whose effects can only be mitigated, or even suggested that a growth in human numbers is environmentally benign.”

In his 1997 study, T. Michael Maher emphasises the role of media, not only in influencing what issues the public perceives to be important, but in telling the public how to think about an issue. Having surveyed a random sample of 150 stories on environmental issues logically affected by population growth, such as urban sprawl, water shortages, and defaunation, Maher found that only 10% even mentioned population growth as having some causative role. Only one of the 150 stories mentioned that population stabilisation might be part of the solution. Most of the journalists interviewed as part of the study said they understood the connection

²²⁶ Kenneth Smail’s similarly titled 1997 article, “Population growth seems to affect everything but is seldom held responsible for anything”, raises similar concerns in more detail (Smail, 1997).

²²⁷ Eileen Crist makes a similar observation: “...mainstream discourse and the political Left hold the population increase in the pipeline, under current policies, as our inexorable fate.” (2012, p. 147)

between population growth and environmental problems, but felt uncomfortable mentioning it given the controversial, “hot button” nature of population growth and “reproductive matters” (Maher, 1997).

Raymond Chipeniuk’s similar study found that expected references to population size or population growth as causative of environmental degradation were absent in all but 5% of a sample of public presentations in connection with planning decisions. Overall, Chipeniuk finds that the planners did not understand the causes of environmental degradation, though he accepts that on the topic of population at least they may have been engaging in self-censorship (Chipeniuk, 1999). More recently, Camilo Mora reviewed recent studies showing that the issue of overpopulation was being “critically underplayed” and “trivialized among scientific fields”, which could at least in part explain the declining interest by the public in the issue.

Martha Campbell, who was present at the ICPD,²²⁸ discussed the silence on overpopulation in a 2007 paper, noting that it was not merely a matter of the subject being ignored but of actual hostility, fostered at least in part by the Cairo consensus, “the turning point in removing the population subject from policy discourse”:

“In the run-up to the ICPD and following the two-week conference in Cairo, talking about population became politically incorrect in many circles. Drawing attention to any connection between population and the environment became taboo... because it was viewed, or promoted, as disadvantageous to women. It became inappropriate to say that slowing population growth will make it more possible to preserve the environment for future generations. “Malthusian” and even “demographic” became derogatory terms describing anyone still expressing interest in, or concerned about, population growth.” (Campbell, 2007)

Steven Sinding, the former Director-General of the International Planned Parenthood Federation, has said of the Cairo conference that “*the taboo about population... was the result of a mythology... that equated population policies with coercion*”²²⁹. But of course, connecting policy alternatives with mandatory constraints on individual conduct is not normally a source of taboos; after all, coercion is the bread and butter of law and regulation. Sinding’s comment is therefore rather telling of the underlying discomfort, even among population concern advocates, about questioning a presumptively absolute freedom of individuals to procreate at will.

²²⁸ See Campbell (1998) for a first-hand account of the ideational forces at play in the ICPD.

²²⁹ See Sinding’s oral testimony in the UK All-Party Parliamentary Group’s hearings on population and development, 8 May 2006. Cited in Campbell (2007, p. 242).

Writing in 2012, Diana Coole observes that, while population growth was regarded as an urgent environmental problem during the 1960s and 1970s, the subject had gone into something of a limbo. Coole notes that “*the problematisation of population numbers is widely disavowed or regarded with profound suspicion*”, with five “silencing discourses” commonly deployed for the purposes of foreclosing public debate: population shaming, skepticism, declinism, decomposing, and fatalism (2012).

The taboo was not, and is not, limited to the context of overpopulation concerns. John Robertson observed in 1994 that the idea of irresponsible procreation had become something of a taboo. Nonetheless, he says, it is always relevant to take into account that procreation leads to the birth of another person with extensive needs, so the morality of procreative decisions cannot be taken for granted (1994, pp. 72–73).

In a recent study about vulnerable women who repeatedly give birth to children who are removed from their care, Broadhurst *et al* steadfastly opposes anti-natalist interventions that go beyond nudging the use of contraception, and in particular oppose the use of financial incentives or the threat of withdrawal of support services (as a disincentive). Even then, their argument in support of the nudging is not that it might work in avoiding the creation of additional children into harm; the benefit is expressed entirely in terms of helping vulnerable women take control of their lives (Broadhurst, Shaw, *et al.*, 2015).

A population taboo case study: FAO reports

There was a time when the problems caused by population growth were a live topic, openly discussed and a matter of official concern by many countries. This was before pre-existing discursive anxieties hardened into a taboo.

UN reports on matters pertaining to food and livelihood insecurity in developing countries are particularly illustrative of the broader trend. These used to routinely identify population growth as causative of resource depletion, poverty and hunger, something which now seems almost unbelievable.

For example, starting in 1947, the Food and Agriculture Organization of the United Nations (FAO) has published reports on the state of food and agriculture every few years. The first report was a short one, focused on post-war shortages. From the second report (1954) onwards, explicit concern was expressed that rapid population growth could bring about “acute shortages” if world agricultural expansion did not keep pace. The 1963 issue had a whole section on population growth, noting (p. 12) that the unprecedented rate of growth in less than a decade had “tremendous implications for future food needs if we are to ensure a reasonably good level of nutrition to the peoples of the world.”

Let us fast forward to 1989, shortly before anti-population concern activism came to the fore in the Earth Summit (Rio, 1992) and triumphed at the ICPD (Cairo, 1994). That year’s FAO report mentions “population” 98 times, and “population growth” 18 times.

It notes (for example) that population growth in Africa and in the Near East in the 1980s had outstripped the increase in agricultural output of those regions, leading to a reduced amount of food produced per capita. Population growth is mentioned as a major cause of deforestation in the Third World, particularly through land clearance for agriculture, causing serious problems. And in a section headed “The nature of the problem” (page 65), the report states that “In the case of many developing countries a complementary objective must be the slowing down of population growth.” The 1990 report similarly expressed concern about the large stretches of the world, in particular Africa, the Caribbean, and the Near East, where food production expansion continued to fall behind population growth. In relation to Southern Africa in particular, the report mentions “a soaring population growth rate” as a challenge to food security, along with continuing wars, civil strife, and grave economic problems (p. 49). The 1992 report mentioned the famines in several African countries, noting that “in a region where prospects for economic growth remain poor, populations continue to expand rapidly, and external assistance is faltering, disasters of similar magnitude are likely to occur with ever-increasing frequency in the years ahead...” (page vi). In the same report, further concern is expressed about high population growth in Africa, which had “almost completely eroded” the substantial rise in total agricultural production in the region (page 16). Population growth is again identified as the causing problematic deforestation (page 45), and also of poverty among people earning a living through fishing, which in turn was said to induce small-scale fishermen to use highly damaging techniques (page 172).

By the 1995 FAO report, however, mentions to population growth had all but disappeared. Instead the report occasionally referenced changes in “consumption requirements”, or (more vaguely) “demographic variables”. Gone were the assessments of food production increases against population growth, or concerns that the former was outstripped by the latter in several world regions. The same was true of the 1997 report, which spoke of globalisation, economic development, and inequalities in food intake across regions. Population growth wasn’t mentioned at all in a section on food shortages and emergencies, though nearly all the countries mentioned had exceptionally high fertility and very high rates of population growth. In between the two reports there was a World Food Summit held in 1996. The summit’s final report explicitly references the 1994 International Conference on Population and Development (ICPD) in Cairo. It frames population stabilisation as desirable, but otherwise discusses population growth in terms of the challenge of meeting ever-growing food needs. Appended to this report – which is about food security – are the reservations and “interpretative statements” lodged by several countries in relation to *family planning programmes*.

All the above, I suggest, shows how the official discourse on food security was ideologically captured by the Cairo consensus and subjected to the same taboo as already applying in more direct discussions about problems relating to procreation and population growth.

Bibliographical references

Abdi, A. (2017) ‘Chad is the country most vulnerable to climate change – here’s why’, *The Conversation*, 8 June. doi: 10.1007/s10584-015-1522-z.

Abdou, A. and Goebel, A. (2010) ‘Niger: Fighting the battle against desertification’. Available at: <https://www.dw.com/en/niger-fighting-the-battle-against-desertification/a-4475725>.

Abrams, P. (1996) ‘Reservations about women: population policy and reproductive rights’, *Cornell international law journal*, 29(1), pp. 1–41. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/11660507>.

Ahaibwe, G. and Mbowa, S. (2014) *Youth Unemployment Challenge in Uganda and the Role of Employment Policies in Jobs Creation*, *Brookings.edu*. Available at: <https://www.brookings.edu/blog/africa-in-focus/2014/08/26/youth-unemployment-challenge-in-uganda-and-the-role-of-employment-policies-in-jobs-creation/> (Accessed: 4 September 2022).

Akenji, L. *et al.* (2016) ‘Ossified materialism: introduction to the special volume on absolute reductions in materials throughput and emissions’, *Journal of cleaner production*, 132, pp. 1–12. doi: 10.1016/j.jclepro.2016.03.071.

All Party Parliamentary Group (ed.) (2007) ‘Return of the population growth factor’, in *Report of Hearings by the All Party Parliamentary Group on Population, Development and Reproductive Health*. London: UK Parliament. doi: 10.1126/science.1140057.

Archard, D. (2004) ‘Wrongful life’, *Philosophy*, 79, pp. 403–420. doi: 10.1017/s0031819104000348.

Armor, D. A. and Taylor, S. E. (2002) ‘When Predictions Fail: The Dilemma of Unrealistic Optimism’, in Gilovich, T., Griffin, D., and Kahneman, D. (eds) *Heuristics and Biases*. Cambridge, UK: Cambridge University Press, pp. 337–347. doi: 10.1017/CBO9780511808098.021.

Arppe, L. *et al.* (2019) ‘Thriving or surviving? The isotopic record of the Wrangel Island woolly mammoth population’, *Quaternary science reviews*, 222, p. 105884. doi: 10.1016/j.quascirev.2019.105884.

Arsenault, C. (2014) ‘“Population growth far outpaces food supply” in conflict-ravaged Sahel’, *The Guardian*, 22 October. Available at: <https://amp.theguardian.com/global-development/2014/oct/22/population-growth-outpaces-food-sahel-study> (Accessed: 1 September 2022).

Bar-On, Y. M., Phillips, R. and Milo, R. (2018) ‘The biomass distribution on Earth’, *Proceedings of the National Academy of Sciences of the United States of America*, 115(25), pp. 6506–6511. doi: 10.1073/pnas.1711842115.

- Barry, B. (1971) 'Reflections on Justice as Fairness', in Bedau, H. (ed.) *Justice and Equality*. Englewood Cliffs, NJ: Prentice Hall.
- BBC News (2013) 'UN urges people to eat insects to fight world hunger', *BBC News*, 13 May. Available at: <https://www.bbc.co.uk/news/world-22508439>.
- BBC News (2021) 'Contraceptive pill to be available without prescription', *BBC*, 17 November. Available at: <https://www.bbc.co.uk/news/uk-scotland-59318841> (Accessed: 6 September 2022).
- Bearak, J. *et al.* (2018) 'Global, regional, and subregional trends in unintended pregnancy and its outcomes from 1990 to 2014: estimates from a Bayesian hierarchical model', *The Lancet. Global health*, 6(4), pp. e380–e389. doi: 10.1016/S2214-109X(18)30029-9.
- Bearak, J. M. *et al.* (2022) 'Country-specific estimates of unintended pregnancy and abortion incidence: a global comparative analysis of levels in 2015–2019', *BMJ Global Health*, 7(e007151). doi: 10.1136/bmjgh-2021-007151.
- Beaujot, R. (1995) 'The Cairo conference: Implications for population activities', *Canadian Studies in Population*, 22(2), pp. 169–180.
- Beck, R. and Kolankiewicz, L. (2000) 'The Environmental Movement's Retreat From Advocating U.S. Population Stabilization (1970-1998): A First Draft of History', *Journal of Policy History*, 12(1), pp. 123–156.
- Becker, A. (2019) 'On the economic origins of restrictions on women's sexuality', *SSRN Electronic Journal*. Elsevier BV, 7770. doi: 10.2139/ssrn.3432818.
- Beiser, V. (2019) 'Why the world is running out of sand', *BBC*, 18 November. Available at: <https://www.bbc.com/future/article/20191108-why-the-world-is-running-out-of-sand> (Accessed: 31 August 2022).
- Benatar, D. (2006) *Better never to have been: The harm of coming into existence*. Oxford and New York, NY: Oxford University Press.
- Benatar, D. (2010) 'The Limits of Reproductive Freedom', in Archard, D. and Benatar, D. (eds) *Procreation and Parenthood*, pp. 78–102. doi: 10.1093/acprof:oso/9780199590704.001.0001/acprof-9780199590704.
- Berens, A. E., Jensen, S. K. G. and Nelson, C. A. (2018) 'The Neurobiology of Childhood Psychosocial Adversity', in Dwyer, J. G. (ed.) *The Oxford Handbook of Children and the Law*. New York, NY: Oxford University Press. doi: 10.1093/oxfordhb/9780190694395.001.0001/oxfordhb-9780190694395.
- Bickman, J. (2012) *Should addicts be sterilized?*, *Salon*. Available at: https://www.salon.com/2012/05/02/should_addicts_be_sterilized_salpart/ (Accessed: 6 September 2022).
- Biello, D. (2012) 'Fishing Vessels Level Seafloor', *Scientific American*. Available at: <https://www.scientificamerican.com/article/bottom-trawling-fishing-levels-ocean-bottom/> (Accessed: 15 September 2022).

- Blake, J. (1972) 'Coercive pronatalism and American population policy', in Parke Jr, R and Westoff, C. F. (eds) *Aspects of Population Growth Policy: US Commission on Population Growth and the American Future*. Washington, DC: Government Printing Office, pp. 85–108.
- Blake, J. (1989) 'Number of Siblings and Educational Attainment', *Science*, 245(4913), pp. 32–36.
- Blanc, A. K. and Tsui, A. O. (2005) 'The dilemma of past success: insiders' views on the future of the international family planning movement', *Studies in family planning*, 36(4), pp. 263–276. doi: 10.1111/j.1728-4465.2005.00069.x.
- Blum, W. E. H. (2013) 'Soil and Land Resources for Agricultural Production: General Trends and Future Scenarios-A Worldwide Perspective', *International Soil and Water Conservation Research*, 1(3), pp. 1–14. doi: 10.1016/S2095-6339(15)30026-5.
- Blunden J and Boyer, T. (eds) (2021) *State of the climate in 2020*. Edited by J. Blunden and T. Boyer. American Meteorological Society. doi: 10.1175/2021BAMSStateoftheClimate.1.
- Bognar, G. (2019) 'Overpopulation and procreative liberty', *Ethics, policy & environment*. Informa UK Limited, 22(3), pp. 319–330. doi: 10.1080/21550085.2019.1652232.
- Boland, R., Rao, S. and Zeidenstein, G. (1994) 'Honoring human rights in population policies: from declaration to action', in Sen, G., Germain, A., and Chen, L. (eds) *Population Policies Reconsidered*. Cambridge, MA: Harvard University Press, pp. 89–106.
- Bongaarts, J. and Sinding, S. W. (2009) 'A response to critics of family planning programs', *International perspectives on sexual and reproductive health*, 35(1), pp. 39–44.
- Bostrom, N. (2013) 'Existential risk prevention as global priority', *Global policy*. Wiley, 4(1), pp. 15–31. doi: 10.1111/1758-5899.12002.
- Bradshaw, C. J. A. and Brook, B. W. (2014) 'Human population reduction is not a quick fix for environmental problems', *Proceedings of the National Academy of Sciences of the United States of America*, 111(46), pp. 16610–16615. doi: 10.1073/pnas.1410465111.
- Brewer, K. (2021) "'Huntington's disease won't stop me having a baby'", *BBC*, 11 June. Available at: <https://www.bbc.co.uk/news/stories-57430859> (Accessed: 27 August 2022).
- Bridbury, A. R. (1973) 'The Black Death', *The Economic History Review*, 26(4), pp. 577–592. doi: 10.1111/j.1468-0289.1954.tb01530.x.
- Brighouse, H. and Swift, A. (2014) *Family Values: The Ethics of Parent-Child Relationships*. Princeton, NJ: Princeton University Press.

Broadhurst, K., Alrouh, B., *et al.* (2015) ‘Connecting Events in Time to Identify a Hidden Population: Birth Mothers and Their Children in Recurrent Care Proceedings in England’, *British journal of social work*. Oxford Academic, 45(8), pp. 2241–2260. doi: 10.1093/bjsw/bcv130.

Broadhurst, K., Shaw, M., *et al.* (2015) ‘Vulnerable birth mothers and repeat losses of infants to public care: is targeted reproductive health care ethically defensible?’, *The Journal of social welfare & family law*. Routledge, 37(1), pp. 84–98. doi: 10.1080/09649069.2015.998007.

Brock, D. W. (2005) ‘Shaping future children: Parental rights and societal interests’, *The journal of political philosophy*. Wiley, 13(4), pp. 377–398. doi: 10.1111/j.1467-9760.2005.00229.x.

Broomfield, M. G. (1996) ‘Controlling the reproductive rights of impoverished women: Is this the way to “reform” welfare?’, *Boston College Third World law journal*, 16(2), pp. 217–244.

Brosnan, S. F. (2013) ‘Justice- and fairness-related behaviors in nonhuman primates’, *Proceedings of the National Academy of Sciences of the United States of America*, 110 Suppl 2, pp. 10416–10423. doi: 10.1073/pnas.1301194110.

Bureau of International Labor Affairs (2020a) ‘Findings on the worst forms of child labor: Chad’. US Department of Labor. Available at: <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/findings>.

Bureau of International Labor Affairs (2020b) ‘Findings on the worst forms of child labor: Niger’. US Department of Labor. Available at: <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/findings>.

Cafaro, P. (2022) *Population in the IPCC’s new mitigation report, The Overpopulation Project*. Available at: <https://overpopulation-project.com/population-in-the-ipccs-new-mitigation-report/> (Accessed: 18 February 2023).

Cai, Y. (2010) ‘China’s below-replacement fertility: government policy or socioeconomic development?’, *Population and development review*, 36(3), pp. 419–440. doi: 10.1111/j.1728-4457.2010.00341.x.

Campbell, M. (2007) ‘Why the silence on population?’, *Population and environment*, 28(4), pp. 237–246. doi: 10.1007/s11111-007-0054-5.

Campbell, M. M. (1998) ‘Schools of Thought: An Analysis of Interest Groups Influential in International Population Policy’, *Population and environment*, 19(6), pp. 487–512. doi: 10.1023/A:1024660407333.

Carrasco, M. Á., González-Calderón, M. J. and Suárez, J. C. (2018) ‘Does emotional dependence and perceived parental acceptance predict children’s psychological maladjustment?’, *Family relations*. Wiley, 67(5), pp. 660–674. doi: 10.1111/fare.12338.

Carrington, D. (2017) ‘Want to fight climate change? Have fewer children’, *The Guardian*, 12 July. Available at:

<https://www.theguardian.com/environment/2017/jul/12/want-to-fight-climate-change-have-fewer-children> (Accessed: 22 February 2023).

Ceballos, G., Ehrlich, P. R. and Dirzo, R. (2017) ‘Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines’, *Proceedings of the National Academy of Sciences of the United States of America*, 114(30), pp. E6089–E6096. doi: 10.1073/pnas.1704949114.

Ceballos, G., Ehrlich, P. R. and Raven, P. H. (2020) ‘Vertebrates on the brink as indicators of biological annihilation and the sixth mass extinction’, *Proceedings of the National Academy of Sciences of the United States of America*, 117(24), pp. 13596–13602. doi: 10.1073/pnas.1922686117.

Chamie, J. (2015) *UN Reviews Development Goals, but Again Ignores Population Growth*, *The Epoch Times*. Available at: https://www.theepochtimes.com/un-reviews-development-goals-but-again-ignores-population-growth_1766707.html (Accessed: 7 September 2022).

Chamie, J. and Mirkin, B. (2014) ‘Climate change and world population: still avoiding each other’, *PassBlue - Independent coverage of the UN*, 16 September. Available at: <https://www.passblue.com/2014/09/16/climate-change-and-world-population-still-avoiding-each-other/> (Accessed: 7 September 2022).

Chen, L., Germain, A. and Sen, G. (1994) *Population policies reconsidered: Health, empowerment and rights*. Cambridge, MA, USA: Harvard University Press.

Chen, Q. (2021) ‘Population policy, family size and child malnutrition in Vietnam: Testing the trade-off between child quantity and quality from a child nutrition perspective’, *Economics and Human Biology*. Elsevier B.V., 41(100983). doi: 10.1016/j.ehb.2021.100983.

Cheng, M. (2011) ‘U.K. mom requests sterilization of mentally disabled daughter’, *The Toronto Star*, 15 February. Available at: https://www.thestar.com/news/world/2011/02/15/uk_mom_requests_sterilization_of_mentally_disabled_daughter.html (Accessed: 28 August 2022).

Chipeniuk, R. (1999) ‘Public explanations for environmental degradation in a sustainable land use planning exercise’, *Landscape and urban planning*. Elsevier BV, 45(2–3), pp. 93–106. doi: 10.1016/s0169-2046(99)00029-8.

Chivers, D. (2021) ‘Carbon capture – still a pipe dream?’, *New Internationalist*, 8 February. Available at: <https://newint.org/features/2021/02/08/temperature-check> (Accessed: 1 September 2022).

Clark, G. (2016) ‘Microbes and markets: Was the Black Death an economic revolution?’, *Journal of Demographic Economics*, 82(2), pp. 139–165. doi: 10.1017/dem.2016.6.

Clark, T. (2016) “‘But the real problem is...’: The Chameleonic Insidiousness of ‘Overpopulation’ in the Environmental Humanities”, *Oxford Literary Review*. Edinburgh University Press 22 George Square, Edinburgh EH8 9LF UK, 38(1), pp. 7–26. doi: 10.3366/olr.2016.0177.

- Cleland, J. *et al.* (2006) 'Family planning: the unfinished agenda', *Lancet*, 368(18vember), pp. 1810–1827. doi: 10.1016/S0140-6736(06)69480-4.
- Coale, A. J. (1973) 'The demographic transition reconsidered', in *International Population Conference*. Liege, Belgium: International Union for the Scientific Study of Population.
- Cohen, J. (2004) 'Minimalism about human rights: The most we can hope for?', *The journal of political philosophy*. Wiley, 12(2), pp. 190–213. doi: 10.1111/j.1467-9760.2004.00197.x.
- Conly, S. (2016) *One Child: Do we have a right to more?* Oxford and New York, NY: Oxford University Press.
- Coole, D. (2012) 'Too many bodies? The return and disavowal of the population question', *Environmental politics*, 22(2), pp. 195–215.
- Coole, D. (2021) 'The Toxification of Population Discourse. A Genealogical Study', *The journal of development studies*. Routledge, 57(9), pp. 1454–1469. doi: 10.1080/00220388.2021.1915479.
- Correa, S. (1999) 'Implementing ICPD: Moving forward in the eye of the storm', in *Cairo +5*. Suva: Development Alternatives for Women for a New Era (DAWN).
- Correa, S. and Petchesky, R. (1994) 'Reproductive and Sexual Rights: A Feminist Perspective', in Germain, A. and Chen, L. (eds) *Population Policies Reconsidered*. Cambridge, MA: Harvard University Press, pp. 107–126. Available at: <https://www.researchgate.net/publication/262477546>.
- Correa, S. and Reichmann, R. (1994) *Population and Reproductive Rights*. London and New Jersey, NJ: Zed Books.
- Cottingham, J., Germain, A. and Hunt, P. (2012) 'Use of human rights to meet the unmet need for family planning', *The Lancet*. Elsevier, 380(9837), pp. 172–180. doi: 10.1016/S0140-6736(12)60732-6.
- Cowan, R. S. (2009) 'Moving up the slippery slope: mandated genetic screening on Cyprus', *American journal of medical genetics. Part C, Seminars in medical genetics*, 151C(1), pp. 95–103. doi: 10.1002/ajmg.c.30202.
- Crawford, J. (2010) *Confessions of an Antinatalist*. Charleston, WV: Nine-Banded Books.
- Cripps, E. (2015) 'Climate Change, Population, and Justice: Hard Choices to Avoid Tragic Choices', *Global Justice : Theory Practice Rhetoric*, 8(2). doi: 10.21248/gjn.8.2.96.
- Crist, E. (2012) 'Abundant Earth and the Population Question', in Cafaro, P. and Crist, E. (eds) *Life on the Brink: Environmentalists confront overpopulation*. Athens, GA: University of Georgia Press, pp. 141–153.

- Cruft, R. (2013) ‘Why is it disrespectful to violate rights?’, *Proceedings of the Aristotelian Society*, 113(New Series), pp. 201–224.
- Cutas, D. (2009) ‘Sex is over-rated: on the right to reproduce’, *Human fertility*, 12(1), pp. 45–52. doi: 10.1080/14647270802642123.
- Cylus, O. and Hodgson, T. F. (2021) “*The Poor Person is Meant to Die*”: Uganda’s Failing Health System in the Context of COVID-19, *Opinio Juris*. Available at: <https://opiniojuris.org/2021/08/17/the-poor-person-is-meant-to-die-ugandas-failing-health-system-in-the-context-of-covid-19/> (Accessed: 4 September 2022).
- Daniels, N. (1979) ‘Wide reflective equilibrium and theory acceptance in ethics’, *The journal of philosophy*, pp. 256–282.
- Daniels, N. (1980) ‘Reflective Equilibrium and Archimedean Points’, *Canadian Journal of Philosophy*, 10(1), pp. 83–103. doi: 10.1080/00455091.1980.10716284.
- Daniels, N. (2012) ‘Reasonable disagreement about identified vs. statistical victims’, *Hastings Center Report*, (January-February), pp. 35–45. doi: 10.1002/hast.13.
- Darimont, C. T. *et al.* (2015) ‘The unique ecology of human predators’, *Science*, 349(6250), pp. 858–859. doi: 10.1126/science.aac4249.
- Darkoh, M. B. K. (1996) ‘The human dimension of desertification in the drylands of Africa’, *Journal of social development in Africa*, 11(2), pp. 89–106.
- Dasgupta, A. and Dasgupta, P. (2017) ‘Socially embedded preferences, environmental externalities, and reproductive rights’, *Population and development review*. Wiley, 43(3), pp. 405–441. doi: 10.1111/padr.12090.
- Dasgupta, P. (2011) ‘Personal histories and poverty traps’, in Sepúlveda, C., Harrison, A., and Lin, J. Y. (eds) *Annual World Bank Conference on Development Economics - Global 2011*. Washington, DC: The International Bank for Reconstruction and Development and The World Bank, pp. 103–123.
- Davies, R. (2013) *Promoting fertility in the EU: Social policy options for Member States*. 130519REV2. European Parliament. Available at: [https://www.europarl.europa.eu/thinktank/en/document/LDM_BRI\(2013\)130519](https://www.europarl.europa.eu/thinktank/en/document/LDM_BRI(2013)130519) (Accessed: 6 September 2022).
- Davis, B. B. (1978) ‘The moralistic fallacy’, *Nature*, 272(30), p. 390.
- Dawes, R. M. (2001) ‘Probabilistic Thinking’, in Smelser, N. J. and Baltes, P. B. (eds) *International Encyclopedia of the Social & Behavioral Sciences*. 1st edn. Pergamon, Elsevier Ltd., pp. 12082–12089. doi: 10.1016/B978-0-08-097086-8.42162-8.
- De Schutter, O., Van Goethem, V. and EU Network of Independent Experts on Fundamental Rights (2006) *Commentary of the Charter of Fundamental Rights of the European Union*.
- Deaton, A. (2016) ‘The Threat of Inequality’, *Scientific American*, 315(3), pp. 48–53. doi: 10.1038/scientificamerican0916-48.

- Dennis, M. J. and Stewart, D. P. (2004) 'Justiciability of Economic, Social, and Cultural Rights: Should There Be an International Complaints Mechanism to Adjudicate the Rights to Food, Water, Housing, and Health', *American Journal of International Law*, 98(3), pp. 462–515. Available at: <https://heinonline.org/HOL/P?h=hein.journals/ajil98&i=472>.
- Derkas, E. (2012) 'The Organization Formerly Known as Crack: Project Prevention and the Privatized Assault on Reproductive Wellbeing', *Race, Gender & Class*. Jean Ait Belkhir, *Race, Gender & Class Journal*, 19(3/4), pp. 179–195. Available at: <http://www.jstor.org/stable/43497495>.
- Dewson, H. *et al.* (2018) 'Sexual rights, mental disorder and intellectual disability: practical implications for policy makers and practitioners', *BJPsych Advances*. Cambridge University Press, 24(6), pp. 386–397. doi: 10.1192/bja.2018.40.
- Diamond, J. (2005) *Collapse: How societies choose to fail or succeed*. New York, NY: Penguin.
- Diggelmann, O. and Cleis, M. N. (2014) 'How the Right to Privacy Became a Human Right', *Human Rights Law Review*. Oxford Academic, 14(3), pp. 441–458. doi: 10.1093/hrlr/ngu014.
- Dildar, Y. (2022) 'The effect of pronatalist rhetoric on women's fertility preferences in Turkey', *Population and development review*. Wiley, 48(2), pp. 579–612. doi: 10.1111/padr.12466.
- Dillard, C. (2010a) 'Future children as property', *Duke journal of gender law & policy*, 17(47), pp. 47–79.
- Dillard, C. (2010b) 'Procreation, harm, and the constitution', *Northwestern University Law Review*, 105(5), pp. 5–17.
- Dillard, C. (2010c) 'Valuing having children', *Journal of Law and Family Studies*, 12(151).
- Dillard, C. J. (2007) 'Rethinking the procreative right', *Yale Human Rights and Development Law Journal*, 10(1).
- Dirzo, R. *et al.* (2014) 'Defaunation in the Anthropocene', *Science*, 345(6195), pp. 401–406. doi: 10.1126/science.1251817.
- Dixon-Mueller, R. (1993) *Population Policy and Women's Rights: Transforming reproductive choice*. Westport, CT: Praeger.
- Doepke, M. and de la Croix, D. (2003) 'Inequality and Growth: Why Differential Fertility Matters', *The American economic review*, 93(4), pp. 1091–1113. doi: 10.2139/ssrn.279521.
- Donaldson, P. J. (1990) *Nature against us: The United States and the World Population Crisis: 1965-1980*. Chappel Hill, NC: The University of North Carolina Press.

- Downey, D. B. (1995) 'When Bigger Is Not Better: Family Size, Parental Resources, and Children's Educational Performance', *American sociological review*. [American Sociological Association, Sage Publications, Inc.], 60(5), pp. 746–761. doi: 10.2307/2096320.
- Drèze, J. and Murthi, M. (2001) 'Fertility, education, and development: Evidence from India', *Population and development review*. Wiley, 27(1), pp. 33–63. doi: 10.1111/j.1728-4457.2001.00033.x.
- Duffy, R. and St John, F. A. V. (2013) *Poverty, poaching and trafficking: what are the links? Evidence on Demand*. UK Department for International Development (DFID). doi: 10.12774/eod_hd059.jun2013.duffy.
- Dumas, C. and Lefranc, A. (2019) "'Sex in Marriage Is a Divine Gift"? Evidence on the Quantity-Quality Trade-off from the Manila Contraceptive Ban', *The World Bank economic review*. Oxford Academic, 33(1), pp. 259–285. doi: 10.1093/wber/lhw055.
- Dutton, A. *et al.* (2015) 'Sea-level rise due to polar ice-sheet mass loss during past warm periods', *Science*, 349(6244), p. aaa4019. doi: 10.1126/science.aaa4019.
- Dworkin, R. (1993) *Life's Dominion*. London: HarperCollins.
- Dworkin, R. (1997) *Taking rights seriously*. 2nd edn. London and New York, NY: Bloomsbury Publishing Plc.
- Dwyer, J. G. (1998) 'Why Parents' Rights Are Wrong', in *Religious Schools v. Children's Rights*. Cornell University Press, pp. 62–101. doi: 10.7591/j.ctv3s8rjw.8.
- Eager, P. W. (2004) *Global Population Policy*. Aldershot and Burlington, VT: Ashgate Publishing.
- Edmonds, E. V. (2006) 'Understanding Sibling Differences in Child Labor', *Journal of population economics*. Springer, 19(4), pp. 795–821. Available at: <http://www.jstor.org/stable/20008045>.
- Edmundson, W. A. (2012) *An Introduction to Rights*. New York: Cambridge University Press.
- Eekelaar, J. (1986) 'The Emergence of Children's Rights', *Oxford journal of legal studies*. Oxford University Press, 6(2), pp. 161–182. Available at: <http://www.jstor.org/stable/764202>.
- Eijkholt, M. (2008) 'The right to procreate is not aborted', *Medical law review*, 16(2), pp. 284–293.
- Eijkholt, M. (2010) 'The right to found a family as a stillborn right to procreate?', *Medical law review*, 18(2), pp. 127–151. doi: 10.1093/medlaw/fwq013.
- Einarsdóttir, K. *et al.* (2012) 'The Australian baby bonus maternity payment and birth characteristics in Western Australia', *PloS one*, 7(11), p. e48885. doi: 10.1371/journal.pone.0048885.

- Eloundou-Enyegue, P. M. and Williams, L. B. (2006) 'Family size and schooling in sub-Saharan African settings: a reexamination', *Demography*, 43(1), pp. 25–52. doi: 10.1353/dem.2006.0002.
- Erisman, J. W. *et al.* (2008) 'How a century of ammonia synthesis changed the world', *Nature geoscience*. Nature Publishing Group, 1(10), pp. 636–639. doi: 10.1038/ngeo325.
- Essoussi, L. H. and Linton, J. D. (2010) 'New or recycled products: how much are consumers willing to pay?', *Journal of Consumer Marketing*, 27(5), pp. 458–468. doi: 10.1108/07363761011063358.
- Fanni, S. (2018) 'The protection of the right to life at the intersection between reproductive rights and scientific progress in the jurisprudence of the inter- American court of human rights and the European court of human rights', *Araucaria - Revista Iberoamericana de Filosofía, Política, Humanidades y Relaciones Internacionales*. Editorial Universidad de Sevilla, 20(40), pp. 655–732. doi: 10.12795/araucaria.2018.i40.27.
- FAO (2011) *The state of the world's land and water resources for food and agriculture: Managing systems at risk*. Rome, London. doi: 978-1-84971-326-9.
- FAO (2012) *Coping with water scarcity*. Rome: Food and Agriculture Organization of the United Nations (FAO Water Reports).
- Fathalla, M. F. (1995) 'The impact of reproductive subordination on women's health', *The American University Law Review*, 44, pp. 1179–1189.
- Feinberg, J. (1969) *Moral Concepts*. Oxford: Oxford University Press.
- Feinberg, J. (1973) *Social Philosophy*. Englewood Cliffs, NJ: Prentice Hall.
- Feinberg, J. (1980) 'Is there a right to be born', in *Rights, Justice, and the Bounds of Liberty: Essays in Social Philosophy*. Princeton, NJ: Princeton University Press, pp. 207–220.
- Feinberg, J. (1984) *Harm to Others*. Oxford and New York, NY: Oxford University Press (The Moral Limits of the Criminal Law). doi: 10.1093/0195046641.001.0001/acprof-9780195046649.
- Feinberg, J. (1985) *Offense to Others*. Oxford and New York, NY: Oxford University Press (The Moral Limits of the Criminal Law). doi: 10.1093/0195052153.001.0001/acprof-9780195052152.
- Feinberg, J. (1989) *Harm to Self*. Oxford and New York, NY: Oxford University Press (The Moral Limits of the Criminal Law). doi: 10.1093/0195059239.001.0001/acprof-9780195059236.
- Feinberg, J. (1990) *Harmless Wrongdoing*. Oxford and New York, NY: Oxford University Press (The Moral Limits of the Criminal Law). doi: 10.1093/0195064704.001.0001/acprof-9780195064704.

FFP (2022) *Fragile States Index Annual Report 2022*. Washington, DC: The Fund for Peace. Available at: <https://fragilestatesindex.org/wp-content/uploads/2022/07/22-FSI-Report-Final.pdf>.

Filipponi, T., Jarvis, P. and Harris, A. (2018) 'Food Security and Climate Change in Rural Eastern Uganda', *The Proceedings of the Nutrition Society*. Cambridge University Press, 77(OCE4), p. E188. doi: 10.1017/S0029665118001945.

Filmer, D. and Fox, L. (2014) *Overview: Youth Employment in Sub-Saharan Africa*. Washington, DC: World Bank. doi: 10.1596/978-1-4648-0107-5.

Finkle, J. L. and McIntosh, C. A. (2002) 'United Nations population conferences: shaping the policy agenda for the twenty-first century', *Studies in family planning*, 33(1), pp. 11–23. doi: 10.1111/j.1728-4465.2002.00011.x.

Fleming, J. E. and McClain, L. C. (2013) *Ordered Liberty*. Cambridge, MA and London: Harvard University Press.

Foley, J. A. *et al.* (2011) 'Solutions for a cultivated planet', *Nature*, 478(7369), pp. 337–342. doi: 10.1038/nature10452.

Food and Agriculture Organization (2016) *The state of world fisheries and aquaculture 2016: contributing to food security and nutrition for all*. Rome, Italy: The Food and Agriculture Organization of the United Nations (FAO).

Fort, M., Schneeweis, N. E. and Winter-Ebmer, R. (2011) 'More schooling, more children: Compulsory schooling reforms and fertility in Europe', *SSRN Electronic Journal*. Elsevier BV. doi: 10.2139/ssrn.1944718.

Fox, D. (2019) *Birth Rights and Wrongs*. New York, NY: Oxford University Press.

Fox, K. C. R., Muthukrishna, M. and Shultz, S. (2017) 'The social and cultural roots of whale and dolphin brains', *Nature ecology & evolution*, 1(11), pp. 1699–1705. doi: 10.1038/s41559-017-0336-y.

FRA (2018) *Marriage with consent of a public authority and/or public figure, FRA - European Agency for Fundamental Rights*. European Union Agency for Fundamental Rights. Available at: <https://fra.europa.eu/en/publication/2017/mapping-minimum-age-requirements/marriage-consent-public-authority-andor-public-figure> (Accessed: 25 July 2022).

Freeman, M. (2011) *Human Rights*. 2nd edn. Cambridge and Malden, MA: Polity Press.

Frejka, T. (1981) *World population projections: A concise history*. New York, NY: Center for Policy Studies, The Population Council (Working Papers No. 66).

Fuller, R. *et al.* (2022) 'Pollution and health: a progress update', *The Lancet. Planetary health*, 6(6), pp. e535–e547. doi: 10.1016/S2542-5196(22)00090-0.

Garenne, M. (2012) *Education and fertility in Sub-Saharan Africa: A longitudinal perspective*. Calverton, MD: United States Agency for International Development and ICF International (DHS Analytical Studies No. 33).

- Garrett, N. and Sharot, T. (2017) ‘Optimistic update bias holds firm: Three tests of robustness following Shah et al’, *Consciousness and Cognition*. The Authors, 50, pp. 12–22. doi: 10.1016/j.concog.2016.10.013.
- Gerland, P. *et al.* (2014) ‘World population stabilization unlikely this century’, *Science*. American Association for the Advancement of Science (AAAS), 346(6206), pp. 234–237. doi: 10.1126/science.1257469.
- Germain, A. and Kyte, R. (1995) *The Cairo consensus: The right agenda for the right time*. New York, NY: International Women’s Health Coalition.
- Germain, A., Nowrojee, S. and Pyne, H. H. (1994) ‘Setting a new agenda: sexual and reproductive health and rights’, *Environment and urbanization*. Edited by G. Sen, A. Germain, and L. C. Chen. Cambridge, MA: Harvard University Press, 6(2), pp. 133–154.
- Geuss, R. (2001) *History and illusion in politics*. Cambridge: Cambridge University Press.
- Gewirth, A. (1982) *Human Rights: Essays on justification and applications*. Chicago, IL: University of Chicago Press.
- Gilabert, P. (2018) *Human Dignity and Human Rights*. Oxford: Oxford University Press. doi: 10.1093/oso/9780198827221.001.0001.
- Gillespie, D. G. (2004) ‘Whatever happened to family planning, and, for that matter, reproductive health?’, *International family planning perspectives*, 30(1), pp. 34–38. doi: 10.1363/3003404.
- Glendon, M. A. (1991) *Rights Talk: The impoverishment of political discourse*. New York, NY: The Free Press.
- Global Footprint Network, York University, and Footprint Data Foundation (2023) *Ecological deficit/reserve, Global Footprint Network*. Available at: <https://data.footprintnetwork.org/#/>? (Accessed: 23 February 2023).
- Global Initiative Against Transnational Organized Crime (2021) *Global Organized Crime Index: Uganda*. Global Initiative Against Transnational Organized Crime. Available at: <https://ocindex.net/country/uganda> (Accessed: 4 September 2022).
- Globescan and The Economist (2016) *The empty crib: Demography and desire*. The Economist. Available at: <https://www.proquest.com/docview/1814252873?OpenUrlRefId=info:xri/sid:primo&acountid=1451>.
- Godfray, H. C. J. *et al.* (2010) ‘Food security: the challenge of feeding 9 billion people’, *Science*, 327(5967), pp. 812–818. doi: 10.1126/science.1185383.
- Godwin, S. (2015) ‘Against parental rights’, *Columbia Human Rights Review*, 47(1), pp. 1–83.

- Goldin, C. and Katz, L. F. (2002) 'The Power of the Pill: Oral Contraceptives and Women's Career and Marriage Decisions', *The journal of political economy*. The University of Chicago Press, 110(4), pp. 730–770. doi: 10.1086/340778.
- Gomiero, T. (2016) 'Soil Degradation, Land Scarcity and Food Security: Reviewing a Complex Challenge', *Sustainability: Science Practice and Policy*. Multidisciplinary Digital Publishing Institute, 8(3), p. 281. doi: 10.3390/su8030281.
- Goodkind, D. (2017) 'The Astonishing Population Averted by China's Birth Restrictions: Estimates, Nightmares, and Reprogrammed Ambitions', *Demography*, 54(4), pp. 1375–1400. doi: 10.1007/s13524-017-0595-x.
- GO-Science (2011) *Foresight. The future of food and farming*. London: The Government Office for Science.
- Gosseries, A. (2008) 'On future generations' future rights', *The journal of political philosophy*. Wiley, 16(4), pp. 446–474. doi: 10.1111/j.1467-9760.2008.00323.x.
- Grant, M. J. (2015) 'The Demographic Promise of Expanded Female Education: Trends in the Age at First Birth in Malawi', *Population and development review*, 41(3), pp. 409–438. doi: 10.1111/j.1728-4457.2015.00066.x.
- Grantham-McGregor, S. *et al.* (2007) 'Developmental potential in the first 5 years for children in developing countries', *The Lancet*, 369(9555), pp. 60–70. doi: 10.1016/S0140-6736(07)60032-4.
- Griffin, J. (2001) 'Discrepancies between the best philosophical account of human rights and the international law of human rights', *Proceedings of the Aristotelian Society*, 101, pp. 1–28.
- Griffin, J. (2007) 'The Human Right to Privacy', *San Diego Law Review*, 44(4), pp. 697–721.
- Griffin, J. (2008) *On Human Rights*. Oxford: Oxford University Press.
- Guilbert, K. (2017) 'Family honor, more than money, fuels child marriage in West Africa', *Reuters.com*, 30 May. Available at: <https://www.reuters.com/article/us-westafrica-children-marriage-idUSKBN18Q001> (Accessed: 24 July 2022).
- Gunther, G. (1972) 'Foreword: In search of evolving doctrine on a changing court: A model for a newer equal protection', *Harvard law review*, 86(1).
- Guttmacher Institute (2019) *Unintended pregnancy in the United States*. Available at: <https://www.guttmacher.org/sites/default/files/factsheet/fb-unintended-pregnancy-us.pdf> (Accessed: 25 July 2022).
- de Haan, M. (2010) 'Birth order, family size and educational attainment', *Economics of education review*, 29(4), pp. 576–588. doi: 10.1016/j.econedurev.2009.10.012.
- Habitat for Humanity (2022) *Uganda*, www.habitat.org. Available at: <https://www.habitat.org/where-we-build/uganda> (Accessed: 4 September 2022).

- Haddock, D. d. and Kiesling, L. (2002) ‘The Black Death and Property Rights’, *The Journal of legal studies*. [The University of Chicago Press, The University of Chicago Law School], 31(S2), pp. S545–S587. doi: 10.1086/345566.
- Hallmann, C. A. *et al.* (2017) ‘More than 75 percent decline over 27 years in total flying insect biomass in protected areas’, *PloS one*, 12(10), p. e0185809. doi: 10.1371/journal.pone.0185809.
- Hannan, S. (2018) ‘Why Childhood is Bad for Children’, *Journal of Applied Philosophy*. Wiley, 35(S1), pp. 11–28. doi: 10.1111/japp.12256.
- Harari, Y. N. (2015) ‘Industrial farming is one of the worst crimes in history’, *The Guardian*, 25 September. Available at: <https://amp.theguardian.com/books/2015/sep/25/industrial-farming-one-worst-crimes-history-ethical-question> (Accessed: 9 August 2022).
- Hardin, R. (1971) ‘Collective action as an agreeable n-prisoners’ dilemma’, *Systems Research: the official journal of the International Federation for Systems Research*. Wiley, 16(5), pp. 472–481. doi: 10.1002/bs.3830160507.
- Hardin, R. (1982) *Collective Action*. Baltimore, MA: Resources for the Future, Inc and The Johns Hopkins University Press.
- Harris, J. (2003) ‘Rights and reproductive choice’, in Harris, J. and Holm, S. (eds) *The future of human reproduction*. Oxford: Clarendon Press, pp. 5–37.
- Harris, J. (2007) *Enhancing evolution: The ethical case for making better people*. Oxford: Princeton University Press.
- Harris, J. (2020) ‘Buck v. Bell, 274 U.S. 200 (1927)’, in Mutcherson, K. (ed.) *Feminist Judgments: Reproductive Justice Rewritten*. Cambridge and New York: Cambridge University Press, pp. 15–35. doi: 10.1017/9781108348409.005.
- Harrison, R. D. (2011) ‘Emptying the Forest: Hunting and the Extirpation of Wildlife from Tropical Nature Reserves’, *Bioscience*. Oxford Academic, 61(11), pp. 919–924. doi: 10.1525/bio.2011.61.11.11.
- Hart, H. L. A. (1982) *Essays on Bentham: Jurisprudence and Political Theory*. Oxford: Oxford University Press.
- Hartmann, B. (1987) *Reproductive Rights and Wrongs: The global politics of population control and contraceptive choice*. Boston, MA: South End Press.
- Hartmann, B. (1994) ‘What success story?’, *The New York Times*, 29 September. Available at: <https://www.nytimes.com/1994/09/29/opinion/what-success-story.html> (Accessed: 7 September 2022).
- Hartmann, B. (2009a) ‘Rebuttal to Chris Hedges: Stop the Tired Overpopulation Hysteria’, *Alternet*, 13 March.
- Hartmann, B. (2009b) ‘The “New” Population Control Craze: Retro, Racist, Wrong Way to Go’, *On the Issues Magazine*.

- Harvey, C. and House, K. (2022) 'Every dollar spent on this climate technology is a waste', *The New York Times*, 16 August. Available at: <https://www.nytimes.com/2022/08/16/opinion/climate-inflation-reduction-act.html> (Accessed: 1 September 2022).
- Hashemi, A. and Cruickshank, H. (2015) 'Delivering Sustainable Low-Income Housing in Uganda: Challenges and opportunities', *OIDA International Journal of Sustainable Development*, 8(10), pp. 47–60. Available at: <https://papers.ssrn.com/abstract=2705280> (Accessed: 4 September 2022).
- Hayhoe, K. (2021) 'Q&A following talk on "What climate change and coronavirus have in common"'. Edited by K. Kuhlemann.
- Heinberg, R. (2017) *There's No App For That: Technology and morality in the age of climate change, overpopulation, and biodiversity loss*. Corvallis, OR: Post Carbon Institute.
- Hendrixson, A. and Hartmann, B. (2019) 'Threats and burdens: Challenging scarcity-driven narratives of "overpopulation"', *Geoforum; journal of physical, human, and regional geosciences*, 101, pp. 250–259. doi: 10.1016/j.geoforum.2018.08.009.
- Hirschman, C. (1994) 'Why fertility changes', *Annual review of sociology*, 20, pp. 203–233. doi: 10.1146/annurev.so.20.080194.001223.
- Hodgson, D. and Watkins, S. C. (1997) 'Feminists and Neo-Malthusians: Past and Present Alliances', *Population and development review*. [Population Council, Wiley], 23(3), pp. 469–523. doi: 10.2307/2137570.
- Hoem, J. M. (2008) 'Overview Chapter 8: The impact of public policies on European fertility', *Demographic research*. Demographic Research, 19, pp. 249–260. doi: 10.4054/DemRes.2008.19.10.
- Hohfeld, W. (1913) 'Some fundamental legal conceptions as applied in judicial reasoning', *The Yale law journal*, 23(1), pp. 16–59.
- Hohfeld, W. N. (1917) 'Fundamental legal conceptions as applied in judicial reasoning', *The Yale law journal*, 26(8), pp. 710–770.
- Hosonuma, N. *et al.* (2012) 'An assessment of deforestation and forest degradation drivers in developing countries', *Environmental research letters: ERL [Web site]*. IOP Publishing, 7(4), p. 044009. doi: 10.1088/1748-9326/7/4/044009.
- Hughes, J. D. and Thirgood, J. V. (1982) 'Deforestation, Erosion, and Forest Management in Ancient Greece and Rome', *Journal of Forest History*, 26(2), pp. 60–75.
- Human Rights Committee (1990) *CCPR General comment No. 19: Article 23 (The Family) Protection of the Family, the Right to Marriage and Equality of the Spouses*. Office of the High Commissioner for Human Rights. Available at: <https://www.refworld.org/docid/45139bd74.html> (Accessed: 26 July 2022).

Ignatieff, M. (2003) *Human rights as politics and idolatry*. Princeton, NJ: Princeton University Press.

Institut National de la Statistique (INS) and ICF International (2013) *Enquête Démographique et de Santé et à Indicateurs Multiples du Niger 2012*. Calverton, Maryland, USA.

Intergovernmental Panel on Climate Change (2014a) *AR5 Climate Change 2014: Mitigation of Climate Change*. Edited by O. Edenhofer et al. Cambridge and New York, NY: Cambridge University Press. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_full.pdf (Accessed: 1 September 2022).

Intergovernmental Panel on Climate Change (2014b) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC.

Intergovernmental Panel on Climate Change (2014c) 'Drivers, trends and mitigation', in Gomes, M. and Verbruggen, A. (eds) *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York, NY: Cambridge University Press. Available at: https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter5.pdf (Accessed: 1 September 2022).

Intergovernmental Panel on Climate Change (2022) *Climate Change 2022: Mitigation of Climate Change*. Edited by P. R. Shukla, J. Skea, and A. Reisinger. WMO and UNEP (Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change).

Intergovernmental Technical Panel on Soils (2015a) *Status of the World's Soil Resources: Main Report*. Rome: Food and Agriculture Organization of the United Nations. Available at: <https://play.google.com/store/books/details?id=p0CzDAEACAAJ>.

Intergovernmental Technical Panel on Soils (2015b) *Status of the world's soil resources: Technical summary*. Rome: The Food and Agriculture Organization of the United Nations.

International Labour Organization (1996) *Unemployment Threatens World Cities; Jobs are Needed to Check Growth in Urban Poverty, Says ILO*. Available at: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_008055/lang--en/index.htm (Accessed: 12 September 2022).

International Labour Organization (2007) *Global Employment Trends*. Brief. ILO.

International Labour Organization (2012) *Global Employment Outlook: global employment spill-overs from advanced to emerging economies worsen the situation for young jobseekers*. ILO. Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_188810.pdf.

International Labour Organization (2014) *Global Employment Trends 2014: Risk of a Jobless Recovery?* Geneva: International Labour Organisation (ILO). Available at: https://play.google.com/store/books/details?id=_iK5oAEACAAJ.

International Labour Organization (2017) *World Employment and Social Outlook: Trends 2017*. Geneva: International Labour Organization. Available at: <https://play.google.com/store/books/details?id=SjxaswEACAAJ>.

International Labour Organization (2020) *Insufficient paid work affects almost half a billion people, new ILO report shows*. Available at: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_734454/lang--en/index.htm (Accessed: 12 September 2022).

International Labour Organization (2022a) *Global employment trends for youth 2022: investing in transforming futures for young people*. Geneva: International Labour Organization. doi: 10.54394/QSMU1809.

International Labour Organization (2022b) *World Employment and Social Outlook: Trends 2022*. Geneva: International Labour Organization (ILO). Available at: <https://play.google.com/store/books/details?id=ehjwzgeACAAJ>.

International Labour Organization and Walk Free Foundation (2017) *Global estimates of modern slavery: Forced labour and forced marriage*. Geneva: ILO and Walk Free Foundation.

IPBES (2019) *The Global Assessment Report on Biodiversity and Ecosystem Services*. Bonn : {Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services}.

IPCC (2021) ‘Summary for Policymakers’, in Masson-Delmotte, V. et al. (eds) *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge, UK: Cambridge University Press.

Ito, T. and Tanaka, S. (2018) ‘Abolishing user fees, fertility choice, and educational attainment’, *Journal of development economics*, 130, pp. 33–44. doi: 10.1016/j.jdeveco.2017.09.006.

Jackson, T. and Victor, P. A. (2019) ‘Unraveling the claims for (and against) green growth’, *Science*, 366(6468), pp. 950–951. doi: 10.1126/science.aay0749.

Jägermeyr, J. et al. (2021) ‘Climate impacts on global agriculture emerge earlier in new generation of climate and crop models’, *Nature Food*. Nature Publishing Group, 2(11), pp. 873–885. doi: 10.1038/s43016-021-00400-y.

Jain, A. K. (1998) *Do Population Policies Matter? Fertility and Politics in Egypt, India, Kenya, and Mexico*. New York, NY: Population Council (Reproductive Health). doi: 10.31899/rh10.1042.

James, S. (2003) ‘Rights as enforceable claims’, *Proceedings of the Aristotelian Society*, 103, pp. 133–147.

Janig, P. (2022) 'Extraterritorial Application of Human Rights', in Binder, C. et al. (eds) *Elgar Encyclopedia of Human Rights*. Cheltenham: Edward Elgar Publishing. doi: 10.4337/9781789903621.

Johnson, S. (1995) *The Politics of Population: Cairo 1994*. London: Earthscan.

Johnson, S. P. (1987) *World Population and the United Nations: Challenge and response*. Cambridge: Cambridge University Press.

Joshi, Y. and Rahman, Z. (2015) 'Factors Affecting Green Purchase Behaviour and Future Research Directions', *International Strategic Management Review*, 3(1), pp. 128–143. doi: 10.1016/j.ism.2015.04.001.

van de Kaa, D. J. (2004) 'Ready, Willing, and Able: Ansley J. Coale, 1917-2002', *The Journal of Interdisciplinary History*, 34(3), pp. 509–511.

Kamenev, M. (2013) 'Sterilizing a Child, for a Better Life', *The Atlantic*, 19 September. Available at: <https://www.theatlantic.com/health/archive/2013/09/sterilizing-a-child-for-a-better-life/279765/> (Accessed: 28 August 2022).

Kaplan, J. O., Krumhardt, K. M. and Zimmermann, N. (2009) 'The prehistoric and preindustrial deforestation of Europe', *Quaternary science reviews*, 28(27), pp. 3016–3034. doi: 10.1016/j.quascirev.2009.09.028.

Kappes, A. et al. (2018) 'Concern for others leads to vicarious optimism', *Psychological Science*, 29(3), pp. 379–389. doi: 10.1177/0956797617737129.

Kastner, T. et al. (2012) 'Global changes in diets and the consequences for land requirements for food', *Proceedings of the National Academy of Sciences of the United States of America*, 109(18), pp. 6868–6872. doi: 10.1073/pnas.1117054109.

Kates, C. A. (2004) 'Reproductive Liberty and Overpopulation', *Environmental values*. White Horse Press, 13(1), pp. 51–79. Available at: <http://www.jstor.org/stable/30301969>.

Keneally, M. (2017) *47 guns, loaded high-capacity magazines found in Vegas shooter's hotel suite and Nevada home*, *ABC News*. Available at: <https://abcnews.go.com/US/19-weapons-found-las-vegas-shooters-room-sources/story?id=50228093> (Accessed: 13 February 2023).

Kerr, S. et al. (2014) *Effects of poverty on deforestation: distinguishing behaviour from location*. ESA Working Paper no. 04-19. The Food and Agriculture Organization of the United Nations.

Keskar, A. et al. (2017) 'Assessing the sustainability of subsistence fisheries of small indigenous fish species', *Aquatic Living Resources*, 30(13). Available at: https://www.alr-journal.org/articles/alr/full_html/2017/01/alr160047/alr160047.html.

Kessler, R. C. et al. (2010) 'Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys', *The British Journal of Psychiatry: The Journal of Mental Science*, 197(5), pp. 378–385. doi: 10.1192/bjp.bp.110.080499.

Kissling, F. (1994) 'Theo-Politics: The Roman Catholic Church and Population Policy', in Mazur, L. A. (ed.) *Beyond the Numbers*. Washington, DC and Covelo, CA: Island Press, pp. 320–309. Available at: <https://islandpress.org/books/beyond-numbers>.

Kissling, F. (2009) 'Examining religion and reproductive health: Constructive engagement for the future', in Reichenbach, L. and Roseman, M. J. (eds) *Reproductive Health and Human Rights*. Philadelphia, PA: University of Pennsylvania Press, pp. 211–220.

Kissling, F. (2010) 'Reconciling differences: Population, reproductive rights and the environment', in Mazur, L. (ed.) *A Pivotal Moment*. Washington, DC and Covelo, CA: Island Press, pp. 383–392.

Kissling, F., Musinguzi, J. and Singer, P. (2018) 'Talking about overpopulation is still taboo. That has to change', *The Washington Post*.

Kiwanuka, S. N. *et al.* (2008) 'Access to and utilisation of health services for the poor in Uganda: a systematic review of available evidence', *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 102(11), pp. 1067–1074. doi: 10.1016/j.trstmh.2008.04.023.

Kleeman, J. (2010) 'Should drug addicts be paid to be sterilised?', *The Guardian*, 11 June. Available at: <https://amp.theguardian.com/society/2010/jun/12/barbara-harris-sterilise-drug-addicts-alcoholics> (Accessed: 6 September 2022).

Klein, E. S. and Thurstan, R. H. (2016) 'Acknowledging Long-Term Ecological Change: The Problem of Shifting Baselines', in Schwerdtner Máñez, K. and Poulsen, B. (eds) *Perspectives on Oceans Past*. Dordrecht: Springer Netherlands, pp. 11–29. doi: 10.1007/978-94-017-7496-3_2.

Kochhar, R. (2015) *China's middle class surges, while India's lags behind*, *Pew Research Center*. Available at: <https://www.pewresearch.org/fact-tank/2015/07/15/china-india-middle-class/> (Accessed: 31 August 2022).

Kolbert, E. (2013) 'Head Count', *The New Yorker*, 13 October. Available at: <https://www.newyorker.com/magazine/2013/10/21/head-count-3> (Accessed: 18 February 2023).

Kopnina, H. and Washington, H. (2016) 'Discussing why population growth is still ignored or denied', *Chinese Journal of Population Resources and Environment*. Taylor & Francis, 14(2), pp. 133–143. doi: 10.1080/10042857.2016.1149296.

Kozuki, N., Sonneveldt, E. and Walker, N. (2013) 'Residual confounding explains the association between high parity and child mortality', *BMC public health*, 13 Suppl 3, p. S5. doi: 10.1186/1471-2458-13-S3-S5.

Kramer, M. H., Simmonds, N. E. and Steiner, H. (1998) *A Debate Over Rights*. Oxford and New York, NY: Oxford University Press.

Kristof, N. (2017) 'Eleven years old, a mom, and pushed to marry her rapist in Florida', *The New York Times*, 26 May. Available at:

<https://www.nytimes.com/2017/05/26/opinion/sunday/it-was-forced-on-me-child-marriage-in-the-us.html> (Accessed: 24 July 2022).

Kuhlemann, K. (2019) 'The elephant in the room: The role of interest groups in creating and sustaining the population taboo', in Almiron, N. and Xifral, J. (eds) *Climate change denial and public relations*. Oxford and New York, NY: Routledge, pp. 74–99.

Lafollette, H. (1980) 'Licensing parents', *Philosophy & public affairs*, 9(2), pp. 182–197.

Lamb, W. F. *et al.* (2021) 'A review of trends and drivers of greenhouse gas emissions by sector from 1990 to 2018', *Environmental research letters: ERL [Web site]*. IOP Publishing, 16(7), p. 073005. doi: 10.1088/1748-9326/abee4e.

Lancy, D. F. (2015) *The Anthropology of Childhood: Cherubs, Chattels, Changelings*. Cambridge: Cambridge University Press.

LeGrand, T. *et al.* (2003) 'Reassessing the insurance effect: A qualitative analysis of fertility behavior in Senegal and Zimbabwe', *Population and development review*. Wiley, 29(3), pp. 375–403. doi: 10.1111/j.1728-4457.2003.00375.x.

Li, B. and Zhang, H. (2017) 'Does population control lead to better child quality? Evidence from China's one-child policy enforcement', *Journal of comparative economics*, 45(2), pp. 246–260. doi: 10.1016/j.jce.2016.09.004.

Li, J., Dow, W. H. and Rosero-Bixby, L. (2017) 'Education Gains Attributable to Fertility Decline: Patterns by Gender, Period, and Country in Latin America and Asia', *Demography*, 54(4), pp. 1353–1373. doi: 10.1007/s13524-017-0585-z.

Liu, H. (2014) 'The quality-quantity trade-off: evidence from the relaxation of China's one-child policy', *Journal of population economics*. Springer, 27(2), pp. 565–602. Available at: <http://www.jstor.org/stable/44289675>.

Loewenstein, G., Small, D. A. and Strand, J. (2006) 'Statistical, identifiable, and iconic victims', in McCaffery, E. J. and Slemrod, J. (eds) *Behavioural Public Finance*. New York, NY, USA: Russell Sage Foundation, pp. 32–46.

Long, B. *et al.* (2017) 'Reversing "Empty Forest Syndrome" in Southeast Asia', *National Geographic*, 8 February.

Lord, E. and Maguire, B. (eds) (2016) *Weighing Reasons*. New York, NY: Oxford University Press. doi: 10.1093/acprof:oso/9780199315192.001.0001/acprof-9780199315192.

Lotz, M. (2018) 'The vulnerable child', in Gheaus, A., Calder, G., and De Wispelaere, J. (eds) *The Routledge Handbook of the Philosophy of Childhood and Children*. 1st Edition. Routledge, pp. 304–314. doi: 10.4324/9781351055987-28.

Lucke, J. C. and Hall, W. D. (2012) 'Under what conditions is it ethical to offer incentives to encourage drug-using women to use long-acting forms of contraception?', *Addiction*, 107(6), pp. 1036–1041. doi: 10.1111/j.1360-0443.2011.03699.x.

- MacCormick, N. (1976) 'Children's rights: A test-case for theories of rights', *Archiv für Rechts- und Sozialphilosophie*, 62(3), pp. 305–317.
- MacCormick, N. (1977) 'Rights in Legislation', in Hacker, P. and Raz, J. (eds) *Law, Morality, and Society: Essays in Honour of HLA Hart*. Oxford: Oxford University Press, pp. 189–209.
- Mackie, J. L. (1978) 'Can there be A right-based moral theory?', *Midwest Studies in Philosophy*, 3(1), pp. 350–359. doi: 10.1111/j.1475-4975.1978.tb00366.x.
- Mackie, J. L. (1984) 'Rights, utility, and universalization', in Frey, R. G. (ed.) *Utility and Rights*. Minneapolis, MN: University of Minnesota Press, pp. 86–105.
- Magee, C. L. and Devezas, T. C. (2017) 'A simple extension of dematerialization theory: Incorporation of technical progress and the rebound effect', *Technological forecasting and social change*, 117, pp. 196–205. doi: 10.1016/j.techfore.2016.12.001.
- Maher, T. M. (1997) 'How and Why Journalists Avoid the Population-Environment Connection', *Population and environment*. Springer, 18(4), pp. 339–372. Available at: <http://www.jstor.org/stable/27503532>.
- Mair, M. L. (1992) 'The right to procreate: intellectual disability and the law', *Australian College of Midwives Incorporated journal*, 5(4), pp. 16–20. doi: 10.1016/s1031-170x(05)80179-5.
- Mani, A. *et al.* (2013) 'Poverty impedes cognitive function', *Science*, 341(6149), pp. 976–980. doi: 10.1126/science.1238041.
- Marchese, D. (2022) 'This Pioneering Economist Says Our Obsession With Growth Must End', *The New York Times*, 18 July. Available at: <https://www.nytimes.com/interactive/2022/07/18/magazine/herman-daly-interview.html> (Accessed: 1 September 2022).
- Masilkova, M. *et al.* (2021) 'Observation of rescue behaviour in wild boar (*Sus scrofa*)', *Scientific reports*, 11(1), p. 16217. doi: 10.1038/s41598-021-95682-4.
- Mason, K. O. (1997) 'Explaining fertility transitions', *Demography*, 34(4), pp. 443–454.
- Matthews, D. (2016) 'Sweden pays parents for having kids - and it reaps huge benefits. Why doesn't the US?', *Vox*, 23 May. Available at: <https://www.vox.com/2016/5/23/11440638/child-benefit-child-allowance> (Accessed: 6 September 2022).
- Maxwell, S. L. *et al.* (2016) 'Biodiversity: The ravages of guns, nets and bulldozers', *Nature*, 536, pp. 143–145. doi: 10.1038/536143a.
- Mazur, L. A. (ed.) (1994) *Beyond the Numbers*. Washington, DC and Covelo, CA: Island Press. Available at: <https://islandpress.org/books/beyond-numbers>.

- Mazur, L. A. (ed.) (2010) *A Pivotal Moment: Population, justice, and the environmental challenge*. Washington, DC and Covelo, CA: Island Press. Available at: <https://islandpress.org/books/pivotal-moment> (Accessed: 7 September 2022).
- McCrudden, C. (2008) ‘Human dignity and judicial interpretation of human rights’, *European journal of international law*. Oxford University Press (OUP), 19(4), pp. 655–724. doi: 10.1093/ejil/chn043.
- McDaniel, B. and Dillenburger, K. (2013) *Child neglect and behavioural parent education: Research and practice*. Lyme Regis: Russell House.
- Mchangama, J. and Verdirame, G. (2013) ‘The Danger of Human Rights Proliferation’, *Foreign Affairs*, 24 July. Available at: <https://www.foreignaffairs.com/print/node/1070681> (Accessed: 7 August 2022).
- McIntosh, C. A. and Finkle, J. L. (1995) ‘The Cairo Conference on Population and Development: A New Paradigm?’, *Population and development review*. [Population Council, Wiley], 21(2), pp. 223–260. doi: 10.2307/2137493.
- McKie, R. (2014) ‘Bottom trawling: how to empty the seas in just 150 years’, *The Guardian*, 10 February. doi: 10.1111/faf.12034/abstract.
- McNicoll, G. (1992) ‘The United Nations’ Long-Range Population Projections’, *Population and development review*. [Population Council, Wiley], 18(2), pp. 333–340. doi: 10.2307/1973683.
- McWilliams, J. E. (2012) ‘The Myth of Sustainable Meat’, *The New York Times*, 12 April. Available at: <https://www.nytimes.com/2012/04/13/opinion/the-myth-of-sustainable-meat.html> (Accessed: 19 February 2023).
- Meckled-Garcia, S. (2005) ‘Neo-positivism about rights the problem with “rights as enforceable claims”’, *Proceedings of the Aristotelian Society*. Oxford University Press (OUP), 105(1), pp. 143–148. doi: 10.1111/j.0066-7373.2004.00107.x.
- Meckled-Garcia, S. (2008) *Moral methodology and the third theory of rights*. Working Paper 28. University College London.
- Mekonnen, M. M. and Hoekstra, A. Y. (2016) ‘Four billion people facing severe water scarcity’, *Science advances*, 2(2), p. e1500323. doi: 10.1126/sciadv.1500323.
- Mill, J. S. (1859) *On Liberty*. London: John W Parker and Son.
- Miller, D. (2012) ‘Grounding human rights’, *Critical Review of International Social and Political Philosophy*. Routledge, 15(4), pp. 407–427. doi: 10.1080/13698230.2012.699396.
- Mills, C. (2011) *Futures of Reproduction*. Dordrecht, Heidelberg, London and New York, NY: Springer Netherlands. doi: 10.1007/978-94-007-1427-4.
- Minow, M. and Shanley, M. L. (1996) ‘Relational Rights and Responsibilities: Revisioning the Family in Liberal Political Theory and Law’, *Hypatia*. [Hypatia, Inc., Wiley], 11(1), pp. 4–29. Available at: <http://www.jstor.org/stable/3810353>.

- Moav, O. (2005) 'Cheap Children and the Persistence of Poverty', *The Economic Journal of Nepal*. [Royal Economic Society, Wiley], 115(500), pp. 88–110. Available at: <http://www.jstor.org/stable/3590505>.
- Molotoks, A., Smith, P. and Dawson, T. P. (2021) 'Impacts of land use, population, and climate change on global food security', *Food and energy security*. Wiley, 10(1). doi: 10.1002/fes3.261.
- Mora, C. *et al.* (2009) 'Management effectiveness of the world's marine fisheries', *PLoS biology*, 7(6), p. e1000131. doi: 10.1371/journal.pbio.1000131.
- Mora, C. (2014) 'Revisiting the Environmental and Socioeconomic Effects of Population Growth: a Fundamental but Fading Issue in Modern Scientific, Public, and Political Circles', *Ecology and Society*. The Resilience Alliance, 19(1). doi: 10.5751/ES-06320-190138.
- Mora, C. *et al.* (2017) 'Global risk of deadly heat', *Nature climate change*. Nature Publishing Group, 7(7), pp. 501–506. doi: 10.1038/nclimate3322.
- Moser, S. and Kleinhüchelkotten, S. (2018) 'Good Intentions, but Low Impacts: Diverging Importance of Motivational and Socioeconomic Determinants Explaining Pro-Environmental Behavior, Energy Use, and Carbon Footprint', *Environment and behavior*. SAGE Publications Inc, 50(6), pp. 626–656. doi: 10.1177/0013916517710685.
- Murray, E. T. *et al.* (2020) 'Non-parental care in childhood and health up to 30 years later: ONS Longitudinal Study 1971–2011', *The European Journal of Public Health*, 30(6), pp. 1121–1127.
- Murray, T. H. (2002) 'What Are Families for? Getting to an Ethics of Reproductive Technology', *The Hastings Center report*. [Hastings Center, Wiley], 32(3), pp. 41–45. doi: 10.2307/3528113.
- Murtaugh, P. A. and Schlax, M. G. (2009) 'Reproduction and the carbon legacies of individuals', *Global environmental change: human and policy dimensions*, 19(1), pp. 14–20. doi: 10.1016/j.gloenvcha.2008.10.007.
- Nakagawa, M., Oura, A. and Sugimoto, Y. (2021) 'Under- and over-investment in education: the role of locked-in fertility', *Journal of Population Economics*. Journal of Population Economics, 35, pp. 755–784. doi: 10.1007/s00148-021-00823-8.
- Narveson, J. (1967) 'Utilitarianism and New Generations', *Mind; a quarterly review of psychology and philosophy*. [Oxford University Press, Mind Association], 76(301), pp. 62–72. Available at: <http://www.jstor.org/stable/2252027>.
- Nasi, Taber and Van Vliet (2011) 'Empty forests, empty stomachs? Bushmeat and livelihoods in the Congo and Amazon Basins', *International Forestry Review*, 13(3), pp. 355–368.
- Nath, D. K. (1994) 'A Bangladesh Update: Letters to the editor', *The New York Times*, 8 December. Available at: <https://www.nytimes.com/1994/12/08/opinion/IHT-a-bangladesh-update-letters-to-the-editor.html> (Accessed: 7 September 2022).

- Ng, C. *et al.* (2020) ‘Perspectives of HIV-positive and -negative people who use drugs regarding the criminalization of HIV non-disclosure in Canada: a qualitative study’, *BMC public health*, 20(1), p. 1220. doi: 10.1186/s12889-020-09291-3.
- Nickel, J. W. (2007) *Making sense of human rights*. 2nd edn. Malden, MA and Oxford: Blackwell Publishing.
- Nie, Y. and Wyman, R. J. (2005) ‘The One-Child Policy in Shanghai: Acceptance and Internalization’, *Population and development review*. [Population Council, Wiley], 31(2), pp. 313–336. Available at: <http://www.jstor.org/stable/3401363>.
- Nordström, J., Shogren, J. F. and Thunström, L. (2020) ‘Do parents counter-balance the carbon emissions of their children?’, *PloS one*, 15(4), p. e0231105. doi: 10.1371/journal.pone.0231105.
- O’Donoghue, T. and Rabin, M. (1999) ‘Doing It Now or Later’, *The American Economic Review*, 89(1), pp. 103–124.
- Office of the High Commissioner for Human Rights (2014) *Anti-Homosexuality law in Uganda violates human rights and endangers LGBT people*, OHCHR. Available at: <https://www.ohchr.org/en/press-releases/2014/02/anti-homosexuality-law-uganda-violates-human-rights-and-endangers-lgbt> (Accessed: 4 September 2022).
- Olson, M. (1965) *The Logic of Collective Action*. Cambridge, MA and London: Harvard University Press.
- O’Neill, B. C. *et al.* (2010) ‘Global demographic trends and future carbon emissions’, *Proceedings of the National Academy of Sciences of the United States of America*, 107(41), pp. 17521–17526. doi: 10.1073/pnas.1004581107.
- O’Neill, B. C. *et al.* (2012) ‘Demographic change and carbon dioxide emissions’, *The Lancet*, 380(9837), pp. 157–164. doi: 10.1016/S0140-6736(12)60958-1.
- O’Neill, D. W. *et al.* (2018) ‘A good life for all within planetary boundaries’, *Nature Sustainability*. Nature Publishing Group, 1(2), pp. 88–95. doi: 10.1038/s41893-018-0021-4.
- O’Neill, O. (2002) *Autonomy and trust in bioethics*. Cambridge: Cambridge University Press.
- Ord, T. (2014) ‘Overpopulation or Underpopulation?’, in Goldin, I. (ed.) *Is the planet full?* Oxford, UK: Oxford University Press, pp. 46–60.
- Oshio, T. (2019) ‘Is a positive association between female employment and fertility still spurious in developed countries?’, *Demographic research*. Max Planck Institute for Demographic Research, 41, pp. 1277–1288. doi: 10.4054/demres.2019.41.45.
- Ostner, I. *et al.* (2003) ‘Family policies in Germany’, in *Welfare Policies and Employment in the Context of Family Change*, Institute of Social Policy and Soziologisches Forschungsinstitut Goettingen.

- O’Sullivan, J. N. (2012) ‘The burden of durable asset acquisition in growing populations’, *Economic Affairs*, pp. 31–37.
- Overall, C. (2012) *Why have children?* Cambridge, Massachusetts and London, England: The MIT Press.
- Overall, C. (2018) ‘Reasons to have children – or not’, in *The Routledge Handbook of the Philosophy of Childhood and Children*. London and New York, NY: Routledge, pp. 147–157. doi: 10.4324/9781351055987-14.
- Pardikar, R. (2018) *Climate Change: A Scientist Explains Why It’s Not Radical To Say People Should Have Fewer Children*, *HuffPost*. Available at: https://www.huffpost.com/archive/in/entry/climate-change-a-scientist-explains-why-it-s-not-radical-to-say-people-should-have-fewer-children_in_5c11ff9ce4b0508b21372770 (Accessed: 23 February 2023).
- Parfit, D. (1986) ‘The Repugnant Conclusion’, in *Reasons and Persons*. Oxford: Oxford University Press. doi: 10.1093/019824908X.001.0001/acprof-9780198249085.
- Parfit, D. (2016) ‘Can we avoid the repugnant conclusion?’, *Theoria*. Wiley, 82(2), pp. 110–127. doi: 10.1111/theo.12097.
- Parr, N. and Guest, R. (2011) ‘The contribution of increases in family benefits to Australia’s early 21st-century fertility increase: An empirical analysis’, *Demographic Research*. Max Planck Institute for Demographic Research, 25(6), pp. 215–244. doi: 10.4054/demres.2011.25.6.
- Pauly, D. and Zeller, D. (2016) ‘Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining’, *Nature communications*, 7, p. 10244. doi: 10.1038/ncomms10244.
- PDR (2014) ‘Ayatollah Ali Khamenei on Iran’s population policy’, *Population and Development Review*. Wiley, 40(3), pp. 573–575. doi: 10.1111/j.1728-4457.2014.00708.x.
- Pearson, Y. E. (2007) ‘Storks, Cabbage Patches, and the Right to Procreate’, *Journal of bioethical inquiry*, 4(2), pp. 105–115. doi: 10.1007/s11673-007-9047-4.
- Pebody, R. (2019) *HIV criminalisation cases recorded in 72 countries, including 49 in the last four years*, *aidsmap.com*. Available at: <https://www.aidsmap.com/news/jun-2019/hiv-criminalisation-cases-recorded-72-countries-including-49-last-four-years> (Accessed: 29 August 2022).
- Pepper, G. V. and Nettle, D. (2017) ‘The behavioural constellation of deprivation: Causes and consequences’, *The Behavioral and brain sciences*, 40, p. e314. doi: 10.1017/S0140525X1600234X.
- Petchesky, R. P. (1990) *Abortion and Woman’s Choice*. Boston, MA: Northeastern University Press (The Northeastern Series in Feminist Theory).

- Petchesky, R. P. (1995) 'From population control to reproductive rights: feminist fault lines', *Reproductive health matters*. Taylor & Francis, 3(6), pp. 152–161. doi: 10.1016/0968-8080(95)90172-8.
- Petchesky, R. P. (1997) 'Spiraling discourses of reproductive and sexual rights: A post-Beijing assessment of international feminist politics', in Cohen, C. J., Jones, K. B., and Tronto, J. C. (eds) *Women Transforming Politics*. New York, NY and London: New York University Press, pp. 569–587.
- Petchesky, R. P. and Judd, K. (eds) (1998) *Negotiating Reproductive Rights*. London and New York, NY: Zed Books.
- Poore, J. and Nemecek, T. (2018) 'Reducing food's environmental impacts through producers and consumers', *Science*, 360(6392), pp. 987–992. doi: 10.1126/science.aag0216.
- Potts, M. *et al.* (2005) 'Reverse Gear: Cairo's dependence on a disappearing paradigm', *Journal of Reproduction & Contraception*, 16(3), pp. 179–186.
- Potts, M. *et al.* (2011) 'Niger: Too Little, Too Late', *International Perspectives on Sexual and Reproductive Health*, 37(2), pp. 95–101.
- Poushter, J. (2014) 'What's morally acceptable? It depends on where in the world you live'. Pew Research Center. Available at: <http://www.pewresearch.org/fact-tank/2014/04/15/whats-morally-acceptable-it-depends-on-where-in-the-world-you-live/> (Accessed: 31 August 2022).
- Public Health England (2018) *Health matters: Reproductive health and pregnancy planning*. Guidance. UK Government. Available at: <https://www.gov.uk/government/publications/health-matters-reproductive-health-and-pregnancy-planning/health-matters-reproductive-health-and-pregnancy-planning> (Accessed: 25 July 2022).
- Qiao, E. (2020) 'What's Up With Education in Uganda?', *BORGEN Magazine*, 3 November. Available at: <https://www.borgenmagazine.com/whats-up-with-education-in-uganda/> (Accessed: 4 September 2022).
- Quine, W. W. (1987) 'Future', in *Quiddities: An Intermittently Philosophical Dictionary*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Raj, A. *et al.* (2009) 'Prevalence of Child Marriage and its impact of the Fertility and Fertility Control Behaviors of Young Women in India', *Lancet*, 373(9678), pp. 1883–1889. doi: 10.1016/S0140-6736(09)60246-4.Prevalence.
- Range, F. *et al.* (2009) 'The absence of reward induces inequity aversion in dogs', *Proceedings of the National Academy of Sciences of the United States of America*, 106(1), pp. 340–345. doi: 10.1073/pnas.0810957105.
- Rawls, J. (1999) *The Law of Peoples*. Cambridge, MA and London: Harvard University Press.

- Rawls, J. (2001) *Justice as Fairness: A Restatement*. Edited by E. Kelly. Cambridge, MA: The Belknap Press of Harvard University Press.
- Raworth, K. (2012) *A safe and just space for humanity*. Oxfam Discussion Papers. Oxfam.
- Raz, J. (1986) *The Morality of Freedom*. Oxford and New York, NY: Oxford University Press. doi: 10.1093/0198248075.001.0001.
- Raz, J. (1989) 'Liberating Duties', *Law and philosophy*, 8, pp. 3–21.
- Raz, J. (1995) *Ethics in the Public Domain: Essays in the Morality of Law and Politics*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780198260691.001.0001/acprof-9780198260691.
- Raz, J. (2007) 'Human Rights Without Foundations', *Oxford Legal Studies Research Paper no. 14/2007*, (Oxford Legal Studies Research Paper14/2007). doi: 10.2139/ssrn.999874.
- Reichenbach, L. and Roseman, M. J. (eds) (2009) *Reproductive Health and Human Rights*. Philadelphia, PA: University of Pennsylvania Press.
- Reiss, F. (2021) 'Child Marriage in the United States: Prevalence and Implications', *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, 69(6S), pp. S8–S10. doi: 10.1016/j.jadohealth.2021.07.001.
- Rizvi, S. *et al.* (2018) 'Global land use implications of dietary trends', *PloS one*, 13(8), p. e0200781. doi: 10.1371/journal.pone.0200781.
- Roberts, C. (2012) '*The Ocean of Life*'—*And the Sorrow Beneath the Sea*, *Newsweek*. Available at: <https://www.newsweek.com/ocean-life-and-sorrow-beneath-sea-65069> (Accessed: 15 September 2022).
- Robertson, J. A. (1994) *Children of choice*. Princeton, New Jersey and Chichester, West Sussex: Princeton University Press.
- Rööß, E. *et al.* (2016) 'Limiting livestock production to pasture and by-products in a search for sustainable diets', *Food policy*, 58, pp. 1–13. doi: 10.1016/j.foodpol.2015.10.008.
- Roudi, F. (2012) *Iran Is Reversing Its Population Policy*. Viewpoints no. 7. Wilson Center.
- Safi, M. (2020) 'Iran ends provision by state of contraceptives and vasectomies', *The Guardian*, 15 June.
- Salayo, N. *et al.* (2008) 'Managing excess capacity in small-scale fisheries: Perspectives from stakeholders in three Southeast Asian countries', *Marine Policy*, 32(4), pp. 692–700. doi: 10.1016/j.marpol.2007.12.001.

- Samuel, S. (2021) *A climate scientist explains why it's still okay to have kids*, *Vox*. Available at: <https://www.vox.com/future-perfect/22399882/climate-change-kids-children-overpopulation> (Accessed: 22 February 2023).
- Sánchez-Amaro, A. *et al.* (2019) 'Chimpanzees and children avoid mutual defection in a social dilemma', *Evolution and human behavior: official journal of the Human Behavior and Evolution Society*, 40(1), pp. 46–54. doi: 10.1016/j.evolhumbehav.2018.07.004.
- Sánchez-Bayo, F. and Wyckhuys, K. A. G. (2019) 'Worldwide decline of the entomofauna: A review of its drivers', *Biological conservation*, 232, pp. 8–27. doi: 10.1016/j.biocon.2019.01.020.
- Saunders, B. (2017) 'First, do no harm: Generalized procreative non-maleficence', *Bioethics*, 31(7), pp. 552–558. doi: 10.1111/bioe.12366.
- Savulescu, J. (2001) 'Procreative beneficence: why we should select the best children', *Bioethics*, 15(5–6), pp. 413–426. doi: 10.1111/1467-8519.00251.
- Savulescu, J. and Kahane, G. (2009) 'The moral obligation to create children with the best chance of the best life', *Bioethics*, 23(5), pp. 274–290. doi: 10.1111/j.1467-8519.2008.00687.x.
- Schapiro, T. (1999) 'What Is a Child?', *Ethics*. The University of Chicago Press, 109(4), pp. 715–738. doi: 10.1086/233943.
- Scheinin, M. (2013) 'Core rights and obligations', in Shelton, D. (ed.) *The Oxford Handbook of International Human Rights Law*. Oxford: Oxford University Press. doi: 10.1093/law/9780199640133.001.0001/law-9780199640133.
- de Schutter, O. (2010) *International Human Rights Law: Cases, materials, commentary*. Cambridge and New York, NY: Cambridge University Press.
- Sedano, F. *et al.* (2016) 'The impact of charcoal production on forest degradation: a case study in Tete, Mozambique', *Environmental research letters: ERL [Web site]*, 11(9). doi: 10.1088/1748-9326/11/9/094020.
- Sedgh, G., Ashford, L. S. and Hussain, R. (2016) *Unmet Need for Contraception in Developing Countries: Examining Women's Reasons for Not Using a Method*. Guttmacher Institute. Available at: <http://www.guttmacher.org/report/unmet-need-for-contraception-in-developing-countries>.
- Sen, A. (1996) 'Fertility and coercion', *The University of Chicago law review. University of Chicago. Law School*, 63, pp. 1035–1061.
- Shanner, L. (1995) 'The right to procreate: when rights claims have gone wrong', *McGill law journal. Revue de droit de McGill*, 40(4), pp. 823–874. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/11654471>.
- Sharot, T. (2011) 'The optimism bias', *Current Biology*. Elsevier, 21(23), pp. R941–R945. doi: 10.1016/j.cub.2011.10.030.

Shiffrin, S. V. (1999) ‘Wrongful life, procreative responsibility, and the significance of harm’, *Legal Theory*. Cambridge University Press, 5(2), pp. 117–148. doi: 10.1017/S1352325299052015.

Shonkoff, J. P. *et al.* (2012) ‘The lifelong effects of early childhood adversity and toxic stress’, *Pediatrics*, 129(1), pp. e232-46. doi: 10.1542/peds.2011-2663.

Silles, M. A. (2010) ‘The implications of family size and birth order for test scores and behavioral development’, *Economics of education review*, 29(5), pp. 795–803. doi: 10.1016/j.econedurev.2010.02.004.

Sims, A. (2016) ‘Denmark’s bizarre series of sex campaigns lead to baby boom’, *The Independent*, 3 June. Available at: <https://www.independent.co.uk/news/world/europe/denmark-s-bizarre-series-of-sex-campaigns-lead-to-baby-boom-a7062466.html> (Accessed: 6 September 2022).

Singer, P. (2010) ‘Fish: the forgotten victims on our plate’, *The Guardian*, 14 September. Available at: <https://amp.theguardian.com/commentisfree/cif-green/2010/sep/14/fish-forgotten-victims> (Accessed: 9 August 2022).

Singh, J. S. (2009) *Creating a new consensus on population: The politics of reproductive health, reproductive rights and women’s empowerment*. 2nd edn. London: Earthscan.

Sison, P. B. (1994) ‘Bangladesh succeeds with family planning: Letters to the editor’, *The New York Times*, 6 October. Available at: <https://www.nytimes.com/1994/10/06/opinion/l-bangladesh-succeeds-with-family-planning-453013.html> (Accessed: 7 September 2022).

Smail, J. K. (1997) ‘Population growth seems to affect everything but is seldom held responsible for anything’, *Politics and the life sciences: the journal of the Association for Politics and the Life Sciences*. Cambridge University Press (CUP), 16(2), pp. 231–236. doi: 10.1017/s0730938400024709.

Smil, V. (1999) ‘Detonator of the population explosion’, *Nature*, 400(29 July). Available at: <http://www.vaclavsmil.com/wp-content/uploads/docs/smil-article-1999-nature7.pdf>.

Smith, H. (2020) ‘“It’s national preservation”: Greece offers baby bonus to boost birthrate’, *The Guardian*, 4 February. Available at: <https://amp.theguardian.com/world/2020/feb/04/its-national-preservation-greece-offers-baby-bonus-to-boost-birthrate> (Accessed: 6 September 2022).

Snow, C. P. (1969) *The state of siege*. New York, NY: Scribners.

Spiegel International (2012) *Study: German Efforts to Increase Birthrate a Failure*, *Spiegel.de*. Available at: <https://www.spiegel.de/international/germany/study-german-efforts-to-increase-birthrate-a-failure-a-873635.html> (Accessed: 6 September 2022).

Springer, K. W. *et al.* (2003) ‘The long-term health outcomes of childhood abuse’, *Journal of General Internal Medicine*, pp. 864–870. doi: 10.1046/j.1525-1497.2003.20918.x.

Springmann, M. *et al.* (2018) 'Options for keeping the food system within environmental limits', *Nature*, 562(7728), pp. 519–525. doi: 10.1038/s41586-018-0594-0.

Ssenkaaba, S. (2017) *Uganda: Violence against women unabated despite laws and policies*, *United Nations Africa Renewal*. Available at: <https://www.un.org/africarenewal/news/uganda-violence-against-women-unabated-despite-laws-and-policies> (Accessed: 4 September 2022).

Steffen, W. *et al.* (2015) 'Sustainability. Planetary boundaries: guiding human development on a changing planet', *Science*, 347(6223), p. 1259855. doi: 10.1126/science.1259855.

Stobutzki, I. C., Silvestre, G. T. and Garces, L. R. (2006) 'Key issues in coastal fisheries in South and Southeast Asia, outcomes of a regional initiative', *Fisheries research*, 78(2), pp. 109–118. doi: 10.1016/j.fishres.2006.02.002.

Struening, K. (1999) 'Familial purposes: An argument against the promotion of familial uniformity', *Policy studies journal: the journal of the Policy Studies Organization*, 27(3).

Sullivan, R. (2010) 'Fear in Love: Attachment, abuse, and the developing brain', *Dana Foundation*, 1 September. Available at: <https://dana.org/article/fear-in-love/> (Accessed: 24 August 2022).

Sumner, L. W. (1987) *The Moral Foundations of Rights*. Oxford : Clarendon Press.

Sunstein, C. R. (2002) 'Probability Neglect: Emotions, Worst Cases, and Law', *The Yale Law Journal*, 112(1), pp. 61–107.

Sunstein, C. R. and Zeckhauser, R. (2010) 'Dreadful possibilities, neglected probabilities', in Michel-Kerjan, E. and Slovic, P. (eds) *The irrational economist: Making decisions in a dangerous world*. New York, NY, USA: Public Affairs Press, pp. 116–123.

Swanson, A. (2015) 'Why many families in China won't want more than one kid even if they can have them', *The Washington Post*, 30 October. Available at: <https://www.washingtonpost.com/news/wonk/wp/2015/10/30/why-many-families-in-china-wont-want-more-than-one-kid-even-if-they-can-have-them/> (Accessed: 1 September 2022).

Sylla, M. B. *et al.* (2018) 'Projected heat stress under 1.5 °C and 2 °C global warming scenarios creates unprecedented discomfort for humans in west Africa', *Earth's future*. American Geophysical Union (AGU), 6(7), pp. 1029–1044. doi: 10.1029/2018ef000873.

Tabi, A. (2013) 'Does pro-environmental behaviour affect carbon emissions?', *Energy policy*, 63, pp. 972–981. doi: 10.1016/j.enpol.2013.08.049.

Tai, A. P. K., Martin, M. V. and Heald, C. L. (2014) 'Threat to future global food security from climate change and ozone air pollution', *Nature climate change*. Nature Publishing Group, 4(9), pp. 817–821. doi: 10.1038/nclimate2317.

Talbott, W. (2010) *Human Rights and Human Well-Being*. Oxford and New York, NY: Oxford University Press. doi: 10.1093/acprof:oso/9780195173482.001.0001.

Tasioulas, J. (2007) 'The moral reality of human rights', in Pogge, T. (ed.) *Freedom from Poverty as a Human Right: Who owes what to the very poor?* Paris and Oxford: Unesco and Oxford University Press, pp. 75–101.

Tasioulas, J. (2009) 'Are human rights essentially triggers for intervention?', *Philosophy compass*. Wiley, 4(6), pp. 938–950. doi: 10.1111/j.1747-9991.2009.00246.x.

Tasioulas, J. (2010) 'Taking Rights out of Human Rights', *Ethics*. The University of Chicago Press, 120(4), pp. 647–678. doi: 10.1086/653432.

Tasioulas, J. (2011) 'On the nature of human rights', in Ernst, G. and Heilinger, J.-C. (eds) *The Philosophy of Human Rights*. Berlin and Boston, MA: De Gruyter, pp. 17–60. doi: 10.1515/9783110263886.17.

Tasioulas, J. (2012) 'Towards a Philosophy of Human Rights', *Current legal problems*. Oxford Academic, 65(1), pp. 1–30. doi: 10.1093/clp/cus013.

Tasioulas, J. (2013a) 'Human dignity and the foundations of human rights', in McCrudden, C. (ed.) *Understanding Human Dignity*. Oxford: Oxford University Press, pp. 293–314.

Tasioulas, J. (2013b) 'Justice, Equality, and Rights', in Crisp, R. (ed.) *The Oxford Handbook of the History of Ethics*. Oxford: Oxford University Press, pp. 768–792.

Tasioulas, J. (2015) 'On the foundations of human rights', in Cruft, R., Matthew Liao, S., and Renzo, M. (eds) *Philosophical Foundations of Human Rights*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780199688623.001.0001.

Tasioulas, J. (2019) 'Saving Human Rights from Human Rights Law', *Vanderbilt Journal of Transnational Law*, 52, pp. 1167–1207. doi: 10.21564/2227-7153.2020.1.219080.

Terfa, Z. G. *et al.* (2022) 'Household food insecurity, maternal nutrition, environmental risks and infants' health outcomes: protocol of the IMPALA birth cohort study in Uganda', *BMJ open*, 12(3), p. e050729. doi: 10.1136/bmjopen-2021-050729.

Thayer, B. A. (2009) 'Considering population and war: a critical and neglected aspect of conflict studies', *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, 364(1532), pp. 3081–3092. doi: 10.1098/rstb.2009.0151.

The Challenge Fund for Youth Employment (2021) *Uganda: Scoping Report*. Palladium, VSO Nederland, and Randstad. Available at: <https://fundforyouthemployment.nl/wp-content/uploads/2022/01/Scoping-Report-Uganda-2021-Challenge-Fund-for-Youth-Employment.pdf>.

Tian, H. *et al.* (2020) 'A comprehensive quantification of global nitrous oxide sources and sinks', *Nature*. Nature Research, 586(7828), pp. 248–256. doi: 10.1038/s41586-020-2780-0.

Tickler, D. *et al.* (2018) ‘Modern slavery and the race to fish’, *Nature communications*, 9(1), p. 4643. doi: 10.1038/s41467-018-07118-9.

Tittle, P. (ed.) (1998) *Should parents be licensed? Debating the issues*. Amherst, NY: Prometheus Books.

Toulemon, L., Pailhé, A. and Rossier, C. (2008) ‘France: High and stable fertility’, *Demographic research*. Demographic Research, 19, pp. 503–556. doi: 10.4054/DemRes.2008.19.16.

Turkewitz, J. and Goldman, A. (2017) ‘Another Shift in Las Vegas Timeline Caps Days of Confusion’, *The New York Times*, 13 October. Available at: <https://www.nytimes.com/2017/10/13/us/las-vegas-timeline.html> (Accessed: 13 February 2023).

Türmen, T. (2000) ‘Reproductive rights: how to move forward?’, *Health and human rights*, 4(2), pp. 31–36. doi: 10.2307/4065195.

Turner, A. (2009) ‘Population priorities: the challenge of continued rapid population growth’, *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, 364(1532), pp. 2977–2984. doi: 10.1098/rstb.2009.0183.

Turney, K. and Wildeman, C. (2016) ‘Mental and Physical Health of Children in Foster Care’, *Pediatrics*, 138(5). doi: 10.1542/peds.2016-1118.

Tversky, A. and Kahneman, D. (1974) ‘Judgment under Uncertainty: Heuristics and Biases’, *Science*, 185(157), pp. 1124–1131.

Tversky, A. and Kahneman, D. (1982) ‘Evidential impact of base rates’, in Kahneman, D., Slovic, P., and Tversky, A. (eds) *Judgment under uncertainty: Heuristics and biases*. New York, NY, USA: Cambridge University Press, pp. 153–160. doi: 10.1017/CBO9780511809477.011.

UN Water (2009) *The United Nations World Water Development Report 3: Water in a changing world*. 3rd edn. Paris and London: UNESCO Publishing and Earthscan.

UN Water (2016) *Water and Jobs*. Paris: UNESCO.

UN Women (2021) *Ending violence against women in Uganda takes a step forward with critical law reforms passed in Parliament, UN Women – Headquarters*. Available at: <https://www.unwomen.org/en/news/stories/2021/8/feature-uganda-critical-law-reforms-passed-in-parliament-to-end-violence-against-women> (Accessed: 4 September 2022).

UNCCD (2014) *Desertification: The invisible frontline*. Bonn: United Nations Convention to Combat Desertification.

UNCCD Secretariat (2022) *Global Land Outlook, Second Edition: Land restoration for recovery and resilience*. Bonn: United Nations Convention to Combat Desertification.

UNDP (2006) *Human Development Report*. New York: United Nations Development Programme.

UNESCO (2012) *Managing water under uncertainty and risk*. Paris, France: United Nations Educational Scientific and Cultural.

UNFPA (2012) *Marrying Too Young: End child marriage*. New York, NY: United Nations Population Fund. doi: 10.1163/2210-7975_hrd-9823-0072.

UNICEF (2019) *Uganda: Water, sanitation and hygiene, UNICEF*. Available at: <https://www.unicef.org/uganda/what-we-do/wash> (Accessed: 4 September 2022).

UNICEF (2020) *Uganda: Education, Unicef.org*. Available at: <https://www.unicef.org/uganda/what-we-do/education> (Accessed: 4 September 2022).

United Nations (1968a) ‘Final Act of the International Conference on Human Rights’, in *International Conference on Human Rights*. Tehran: United Nations.

United Nations (1968b) ‘The Proclamation of Tehran’, in *International Conference on Human Rights*. Tehran, Iran: United Nations.

United Nations (2013) *World Population Prospects - The 2012 Revision, Volume I: Comprehensive Tables*. ST/ESA/SER.A/336. United Nations.

United Nations (2015) *World Population Prospects 2015: Key findings and advance tables*. ESA/P/WP.241. United Nations.

United Nations (2017) *World Population Prospects 2017: Key findings and advance tables*. ESA/P/WP/248. United Nations.

United Nations (2019a) *World Population Prospects 2019: Highlights*. ST/ESA/SER.A/423. New York, NY: United Nations.

United Nations (2019b) *World Population Prospects 2019, Volume I: Comprehensive tables*. New York, NY: United Nations (ST/ESA/SER.A/426).

United Nations (2019c) *World Population Prospects 2019, Volume II: Demographic Profiles*. New York, NY: United Nations.

United Nations (2020) *World Social Report 2020: Inequality in a Rapidly Changing World*. UN. Available at: <https://play.google.com/store/books/details?id=FiV9zQEACAAJ>.

United Nations (2022) *World Population Prospects 2022: Summary of Results*. UN DESA/POP/2021/TR/NO. 3. United Nations.

United Nations Office on Drugs and Crime (2008) *Victimization survey in Uganda: Executive summary*. UNODC. Available at: https://www.unodc.org/documents/data-and-analysis/dfa/Victimization_survey_Uganda.pdf.

United Nations Population Fund (1994) ‘Programme of Action’, in *International Conference on Population and Development*. United Nations. Available at: <https://www.unfpa.org/publications/international-conference-population-and-development-programme-action> (Accessed: 6 September 2022).

United Nations Population Fund (2022) *State of world population 2022: Seeing the unseen - the case for action in the neglected crisis of unintended pregnancy*. New York, NY: United Nations (State of World Population).

United Nations World Water Assessment Programme (2016) *The United Nations World Water Development Report 2016: Water and jobs*. Paris, FR.

Upadhyay, U. D. and Karasek, D. (2012) 'Women's empowerment and ideal family size: An examination of DHS empowerment measures in Sub-Saharan Africa', *International perspectives on sexual and reproductive health*, 38(2), pp. 78–89.

Van Bavel, J. (2006) 'The effect of fertility limitation on intergenerational social mobility: the quality-quantity trade-off during the demographic transition', *Journal of biosocial science*, 38(4), pp. 553–569. doi: 10.1017/S0021932005026994.

Vargas Zeppetello, L. R., Raftery, A. E. and Battisti, D. S. (2022) 'Probabilistic projections of increased heat stress driven by climate change', *Communications Earth & Environment*. Nature Publishing Group, 3(1), pp. 1–7. doi: 10.1038/s43247-022-00524-4.

Vargha, L. and Donehower, G. (2019) 'The quantity-quality tradeoff: A cross-country comparison of market and nonmarket investments per child in relation to fertility', *Population and development review*. Wiley, 45(2), pp. 321–350. doi: 10.1111/padr.12245.

Vidal, J. (2013) 'Breed insects to improve human food security: UN report', *The Guardian*, 13 May. Available at: <https://www.theguardian.com/environment/2013/may/13/breed-insects-improve-human-food-security-un>.

Von Huis, A. and Food and Agriculture Organization (2013) *Edible insects: future prospects for food and feed security*. Rome, Italy: Food & Agriculture Organization of the United Nations (FAO) (FAO forestry paper, 171).

Waldron, J. (1984) *Theories of rights*. Oxford, New York: Oxford University Press.

Waldron, J. (1993) *Liberal Rights*. Cambridge, Victoria, and New York: Cambridge University Press.

Waldron, J. (2009) 'Dignity, Rank, and Rights', in *The Tanner Lectures on Human Values*. Berkeley: University of California. doi: 10.1093/acprof:oso/9780199915439.001.0001.

Waldron, J. (2013) 'Human rights: A critique of the Raz/Rawls approach', *New York University Public Law and Legal Theory Working Papers*, 405(405). doi: 10.2139/ssrn.2272745.

Waldron, J. (2015) 'Is Dignity the Foundation of Human Rights?', in Cruft, R., Matthew Liao, S., and Renzo, M. (eds) *Philosophical Foundations of Human Rights*. Oxford: Oxford University Press. doi: 10.1093/acprof:oso/9780199688623.001.0001/acprof-9780199688623.

- Walker, S. (2019) ‘Viktor Orbán: no tax for Hungarian women with four or more children’, *The Guardian*, 10 February. Available at: <https://amp.theguardian.com/world/2019/feb/10/viktor-orban-no-tax-for-hungarian-women-with-four-or-more-children> (Accessed: 6 September 2022).
- Walker, S. (2020) ‘“Baby machines”: eastern Europe’s answer to depopulation’, *The Guardian*, 4 March. Available at: <https://amp.theguardian.com/world/2020/mar/04/baby-bonuses-fit-the-nationalist-agenda-but-do-they-work> (Accessed: 6 September 2022).
- Wamara, C. K. (2017) ‘Corruption in Uganda: Does this Have Anything to Do with Social Work?’, *Journal of Human Rights and Social Work*, 2(1), pp. 52–61. doi: 10.1007/s41134-017-0031-6.
- Wang, S., Tian, X. and Zhou, Y. (2021) ‘The trade-off between quantity and quality in family fertility decision: Evidence from China’s family planning policy’, *Front. Econ. China*, 16(1), pp. 67–104. doi: 10.3868/s060-013-021-0004-1.
- Wänström, L. and Wegmann, B. (2017) ‘Effects of sibship size on intelligence, school performance and adult income: Some evidence from Swedish data’, *Intelligence*, 62, pp. 1–11. doi: 10.1016/j.intell.2017.01.004.
- Water.org (2022) *Uganda’s Water Crisis*, *Water.org*. Available at: <https://water.org/our-impact/where-we-work/uganda/> (Accessed: 4 September 2022).
- Weinberg, R. (2008) ‘Identifying and dissolving the non-identity problem’, *Philosophical studies*, 137(1), pp. 3–18. doi: 10.1007/s11098-007-9168-y.
- Weinberg, R. (2013) ‘Existence: who needs it? The non-identity problem and merely possible people’, *Bioethics*. Wiley, 27(9), pp. 471–484. doi: 10.1111/j.1467-8519.2012.01976.x.
- Weinberg, R. (2016) *The risk of a lifetime*. Oxford and New York, NY: Oxford University Press. doi: 10.1093/acprof:oso/9780190243708.001.0001/acprof-9780190243708.
- Weinstein, N. D. (1980) ‘Unrealistic optimism about future life events’, *Journal of personality and social psychology*. American Psychological Association (APA), 39(5), pp. 806–820. doi: 10.1037//0022-3514.39.5.806.
- Weinstein, N. D. (1989) ‘Optimistic biases about personal risks’, *Science*, 246(4935), pp. 1233–1234. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/2555922>.
- Weinstein, N. D. and Klein, W. M. (1995) ‘Resistance of personal risk perceptions to debiasing interventions’, *Health Psychology*, 14(March), pp. 132–140.
- Weisberg, D. K. (1978) ‘Evolution of the Concept of the Rights of the Child in the Western World’, *Rev. of the Int’l Commission of Jurists*, 21, pp. 43–51.
- Weiss, K. M. (1984) ‘On the number of members of the genus Homo who have ever lived, and some evolutionary implications’, *Human biology*, 56(4), pp. 637–649. Available at: <http://www.jstor.org/stable/41463610>.

- Welch, C. (2018) 'Why Cape Town Is Running Out of Water, and the Cities That Are Next', *National Geographic*, 5 March. Available at: <https://www.nationalgeographic.com/science/article/cape-town-running-out-of-water-drought-taps-shutoff-other-cities> (Accessed: 19 February 2023).
- Wellman, C. (1985) *A Theory of Rights: Persons under laws, institutions, and morals*. Totowa, NJ : Rowman & Allanheld.
- Welsh, J. (2013) 'United Nations: Eating insects to solve world hunger', *Business Insider*, 14 May. Available at: <https://www.businessinsider.com/un-eating-insects-to-solve-world-hunger-2013-5?IR=T>.
- Welsh, M. B. and Navarro, D. J. (2012) 'Seeing is believing: Priors, trust, and base rate neglect', *Organizational Behavior and Human Decision Processes*, 119(1), pp. 1–14. doi: 10.1016/j.obhdp.2012.04.001.
- Wenar, L. (2005) 'The Nature of Rights', *Philosophy & public affairs*. Wiley, 33(3), pp. 223–252. Available at: <http://www.jstor.org/stable/3557929>.
- Westing, A. H. (1994) 'Population, desertification, and migration', *Environmental conservation*, 21(2), pp. 110–114. doi: 10.1017/s0376892900024528.
- Westoff, C. F. (2010) *Desired Number of Children 2000-2008*. Calverton, MD: ICF Macro (DHS Comparative Reports No. 25).
- Westoff, C. F., Bietsch, K. and Koffman, D. (2013) *Indicators of trends in fertility in Sub-Saharan Africa*. Calverton, MD: ICF International (DHS Analytical Studies No. 34).
- Whelan, E. M. (1975) *A Baby? Maybe: A guide to making the most fateful decision of your life*. New York, NY: Bobbs-Merrill.
- Whitney, E. E. (1994) 'Bangladesh and Population: Letters to the editor', *The New York Times*, 11 October. Available at: <https://www.nytimes.com/1994/10/11/opinion/IHT-bangladesh-and-population-letters-to-the-editor.html> (Accessed: 7 September 2022).
- Whyman, T. (2021) 'Why, Despite Everything, You Should Have Kids', *New York Times*, 13 April. doi: 10.1088/1748-9326/aa7541.
- Wicks, E. (2007) 'Medically assisted conception and a right to reproduce?', in *Human Rights and Healthcare*. London: Hart Publishing, pp. 159–180. doi: 10.5040/9781472564009.ch-008.
- World Bank (2022) *DataBank - Glossary*. Available at: <https://databank.worldbank.org/metadataglossary/millennium-development-goals/series/SP.DYN.TFRT.IN> (Accessed: 1 September 2022).
- World Health Organization (2020a) *Child maltreatment*. WHO. Available at: <https://www.who.int/news-room/fact-sheets/detail/child-maltreatment> (Accessed: 26 August 2022).

World Health Organization (2020b) *Violence against children*. WHO. Available at: <https://www.who.int/news-room/fact-sheets/detail/violence-against-children> (Accessed: 26 August 2022).

Worm, B. *et al.* (2009) 'Rebuilding global fisheries', *Science*, 325(5940), pp. 578–585. doi: 10.1126/science.1173146.

Worm, B. (2015) 'A most unusual (super)predator', *Science*, pp. 784–785. doi: 10.1126/science.aac8697.

Wright, L. (2022) 'The Elephant in the Courtroom', *The New Yorker*, 25 February. Available at: <https://www.newyorker.com/magazine/2022/03/07/the-elephant-in-the-courtroom> (Accessed: 9 August 2022).

WWF and ZSL (2022) *Living Planet Report 2022*. Edited by R. E. A. Almond *et al.* Gland: World Wildlife Fund. Available at: https://wwflpr.awsassets.panda.org/downloads/lpr_2022_full_report_1.pdf.

WWF International (2020) *Living Planet Report 2020: Bending the curve of biodiversity loss*. Gland, Switzerland: WWF International.

Wyman, R. J. (2013) 'The effects of population on the depletion of fresh water', *Population and development review*. Wiley, 39(4), pp. 687–704. doi: 10.1111/j.1728-4457.2013.00634.x.

Wynes, S. and Nicholas, K. A. (2017) 'The climate mitigation gap: education and government recommendations miss the most effective individual actions', *Environmental Research Letters*, 12, p. 074024.

Xu, X. M. *et al.* (2004) 'The prevalence and spectrum of alpha and beta thalassaemia in Guangdong Province: implications for the future health burden and population screening', *Journal of clinical pathology*, 57(5), pp. 517–522. doi: 10.1136/jcp.2003.014456.

Yan, W. (2019) *For many reporters covering climate, population remains the elephant in the room*, *Columbia Journalism Review*. Available at: https://www.cjr.org/covering_climate_now/population-climate-crisis.php (Accessed: 22 February 2023).

Yang, J. *et al.* (2016) 'Only-child and non-only-child exhibit differences in creativity and agreeableness: evidence from behavioural and anatomical structural studies', *Brain Imaging and Behaviour*, 11, pp. 493–502. Available at: https://link.springer-com.libproxy.ucl.ac.uk/article/10.1007/s11682-016-9530-9?wt_mc=alerts.TOCjournals.

Young, K. G. (2019) 'Waiting for Rights: Progressive Realization and Lost Time', in Young, K. G. (ed.) *The future of economic and social rights*. Cambridge and New York, NY: Cambridge University Press. Available at: <https://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=2228&context=lsfp>.

Young, T. (2001) 'Overconsumption and Procreation: Are they Morally Equivalent?', *Journal of Applied Philosophy*. Wiley, 18(2), pp. 183–192. doi: 10.1111/1468-5930.00185.

Zauberman, G. and Lynch, J. G. (2005) 'Resource slack and propensity to discount delayed investments of time versus money', *Journal of Experimental Psychology: General*, 134(1), pp. 23–37. doi: 10.1037/0096-3445.134.1.23.

Zhao, C. *et al.* (2017) 'Temperature increase reduces global yields of major crops in four independent estimates', *Proceedings of the National Academy of Sciences of the United States of America*, 114(35), pp. 9326–9331. doi: 10.1073/pnas.1701762114.

Zika, M. and Erb, K.-H. (2009) 'The global loss of net primary production resulting from human-induced soil degradation in drylands', *Ecological economics: the journal of the International Society for Ecological Economics*. Elsevier, 69(2), pp. 310–318. doi: 10.1016/j.ecolecon.2009.06.014.