

The Human Rights Approach to Planning Our Families

I. Introduction: The Future We Want

Over the last half-century, environmentalists, ecological economists, and child psychologists, have each raised the profile of some of the key issues that the Fair Start model, discussed in detail below, seeks to address. These include (1) the threat of climate change and environmental degradation,¹ (2) the critical importance of childhood development,² and (3) growing economic inequality.³ As the urgency of these challenges has become more widely recognized, nonprofit organizations and governmental entities have responded by investing in green energy greater access to preschools, and increased access to birth control. However, with the planet on pace for a world population of 11 billion or significantly more in 2100,^{4 5} and the global dangers that such a number represents,⁶ it is clear that these efforts have not gone far enough.⁷ In the last twelve years alone, the global population has grown by approximately one

¹ Mann, Michael E., “Earth Will Cross the Climate Danger Threshold by 2036,” *Scientific American* (April 1, 2014).

² New Scientist, “Childhood poverty can be a life sentence – we must act” (Sept. 28, 2016).

³ Matthews, Chris, “4 things you didn't (but should) know about economic inequality,” *Fortune*, (June 11, 2015).

⁴ United Nations, World Population Prospects (2017)

http://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2017.pdf (UN, 2017).

⁵ Hickey, Hannah (2014). “World population to keep growing this century, hit 11 billion by 2100.” <http://www.washington.edu/news/2014/09/18/world-population-to-keep-growing-this-century-hit-11-billion-by-2100/>

⁶ Population Matters, World Population Prospects, the 2015 Revision. UNDESA Population Division, available at

https://www.populationmatters.org/documents/world_population_prospects.pdf (last accessed Oct. 5, 2016).

⁷ Engelman, Robert. “Our Overcrowded Planet: A Failure of Family Planning.” 2013) http://e360.yale.edu/features/our_overcrowded_planet_a_failure_of_family_planning

billion, from 6.6 to 7.6 billion, and is projected to increase another billion by 2030.⁸

The inadequacy of these previous endeavors, in the face of ever-worsening global peril (unprecedented flooding,⁹ rampant disease,¹⁰ worldwide oxygen depletion,¹¹ mass wildlife extinction,¹² and an overheated, uninhabitable planet,¹³ to name a few), can be attributed to an overly narrow focus on symptoms of problems rather than the root cause.¹⁴ The fact is, as discussed in detail below, family planning interventions appear to be the most effective way to simultaneously protect the world's environment and improve human wellbeing.¹⁵ ¹⁶ Such interventions were widely relied upon by world governments in the 20th century to dramatically

⁸ UN, 2017, *supra* note 4.

⁹ DeConto, Robert M., and David Pollard. "Contribution of Antarctica to past and future sea-level rise." *Nature* 531.7596 (2016): 591-597.

¹⁰ Jones, Kate E., et al. "Global trends in emerging infectious diseases." *Nature* 451.7181 (2008): 990-993.

¹¹ Sekerci, Yadigar, and Sergei Petrovskii. "Mathematical modelling of plankton–oxygen dynamics under the climate change." *Bulletin of mathematical biology* 77.12 (2015): 2325-2353.

¹² Ceballos, G., Ehrlich, P. R., Dirzo, R. (2017). Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. *PNAS Early Edition*, 1-8. doi/10.1073/pnas.1704949114

¹³ Foster, Gavin L., Dana L. Royer, and Daniel J. Lunt. "Future climate forcing potentially without precedent in the last 420 million years." *Nature Communications* 8 (2017).

¹⁴ Guillebaud, John. "Voluntary family planning to minimise and mitigate climate change." *BMJ: British Medical Journal* 353 (2016) (warning that “already close to an irreversible tipping point, urgent action is needed to reduce not only our mean (carbon) footprints but also the “number of feet”—that is, the growing population either already creating large footprints or aspiring to do so.”)

¹⁵ Seth Wynes and Kimberly A Nicholas (2017). “The climate mitigation gap: education and government recommendations miss the most effective individual actions.” *Environ. Res. Lett.* **12** 074024.

¹⁶ Almost every United Nations Sustainable Development Goal fundamentally relies upon some form of family planning, and would benefit from improvements thereto. For a succinct summary of the goals see Council on Foundations, Getting Started With the Sustainable Development Goals. (2015) <http://www.cof.org/content/sustainable-development-goals-what-funders-need-know>.

bring down family size and address catastrophic population growth,¹⁷ ¹⁸ in what collectively may have been the most successful environmental protection policy ever implemented. Indeed, had the global fertility rate remained at its 1995 level of 3.04 children per woman, the world population might have reached 256 billion by 2150.¹⁹ However, attempts at articulating a human rights approach to family planning at that time oriented exclusively around an unsustainable subjective parental choice model (the “Isolation Model” of family planning,²⁰ also discussed below), rather than adopting a holistic and objective focus that included the human rights of prospective children and their communities, who have just as much, if not more, at stake in family planning. As such, family planning interventions were arbitrarily limited, and prevented humans from addressing many of the threats we face today.

In fact the Isolation Model and legal regimes built around it are not human rights-based at all, because they ignore the impact on the future child, as well as future generations, and are not based on the sort of objective values that define human rights. How does a model that enshrines *only* the parents’ right to have as many children as they wish (regardless of the conditions in which those children are born), simultaneously protect a child’s right to a minimum threshold of wellbeing? How do we ensure that every child gets a fair start in life, relative to their peers, while subscribing to a model that ignores a future child’s interest in adequate food, clothing, shelter, love, and security? Or, are we to accept that children simply don’t deserve equal opportunities in life? How does a model focused entirely on subjective parental choice account for the interests of democratic communities in the children that will enter them? How does that model promote healthy child development so that each citizen has a voice and the tools with

¹⁷ Centers for Disease Control and Prevention. "Achievements in public health, 1900–1999: Family planning. *MMWR Weekly*. 1999 Dec 3; 48 (47): 1073-80."

¹⁸ Bailey, Martha J. *Fifty years of family planning: new evidence on the long-run effects of increasing access to contraception*. National Bureau of Economic Research, 2013.

¹⁹ Key Findings". [*Long-Range Population Projections*](#) (PDF). *Proceedings of the United Nations Technical Working Group on Long-Range Population Projections*. New York: United Nations: Department of Economic and Social Affairs. 2003.

²⁰ Having Kids, “Isolation parenting, its costs, and an alternative,” (Jan. 4, 2017) available at <http://havingkids.org/isolation-parenting-costs-alternative/>.

which to make informed decisions? How does such a model account for the natural environment and ecosystems in which we live, or are those systems not integral to our quality of life? Are those systems not our very life source? And how does a model that isolates parents then effectively combat teen pregnancy, where the parents themselves are harmed, and their options in life severely limited.

The one-sided and short-sighted Isolation Model does not account for these interests, and is not human-rights based.

What's the solution? It's time to move toward a truly human rights-based model that considers the interests of the potential child, the parents, and the community. Legitimate human rights-based models of family planning put the *needs* of children before the *desires* of parents.

The Fair Start model, in contrast to the Isolation Model, adopts a holistic approach that addresses the rights of parents, prospective children, and their communities, and as such fully integrates the objectives of human rights and environmental protection. Unlike the Isolation Model, it seeks to modify the underlying norms that continue to spur unsustainable population growth, so that having children is not merely the "default option," but accurately recognized as the most important decision of our lives.²¹ In this sense, the Fair Start model supports solutions to immediate and critical problems like climate change and biodiversity loss, as well as the long term and fundamental problems of inequities in child welfare and diminishing democracy.

How does it work? The Fair Start model orients the cluster of human rights involved in family planning around the core right every child has to a fair start in life, relative to their peers. That means all children have the fundamental human right to begin their lives in conditions that create equitable opportunities that are socially and environmentally sustainable relative to other children born in their generation. Correlative to that right, families and communities have a duty to plan together to secure the fair start of every child, creating and promoting smaller families while maximizing resources to improve conditions of entry. The model accounts for all human rights, including those held by future children. It is truly human rights-based; and for the reasons

²¹ Rachels, Stuart, 2014, "The Immorality of Having Children," *Ethical Theory and Moral Practice*, 17(3): 567–582

discussed below, moves us toward the future we all want.

II. The Isolation Model and the Freedom to Harm

The Isolation Model of parenting is one in which potential parents are seen as individual entities apart from their prospective children and the communities in which they live, whereby the human rights of prospective children are not recognized and the voices of communities are not heard.²² This Isolation Model is as universal today as it is problematic. Among those prominent entities who appear to have adopted this Isolation Model of parenting are the United Nations (through the 1994 UN International Conference on Population and Development;²³ the World Health Organization,²⁴ the 1968 UN International Conference on Human Rights;²⁵ the 1981 Convention on the Elimination of All Forms of Discrimination Against Women;²⁶ and the 2012 State of World Population report²⁷), as well as major environmental and human rights

²² Carter Dillard, *Future Children As Property*, 17 *Duke J. Gender L. & Policy* 47 (2010); *Rethinking the Procreative Right*, 10 *Yale Hum. Rts. & Dev. L.J.* 1 (2007).

²³ United Nations: Report of the International Conference on Population and Development, UN Doc No A/CONF.171/13, Cairo, Egypt, 5–13 September 1994 (18 Oct 1994) (recognizing “the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children...”)

²⁴ World Health Organization, Regional Office for Africa, “A Guide to Identifying and Documenting Best Practices in Family Planning Programmes,” (2017), available at <http://apps.who.int/iris/bitstream/10665/254748/1/9789290233534-eng.pdf>.

²⁵ Proclamation of Teheran, Final Act of the International Conference on Human Rights, Teheran, 22 April to 13 May 1968, U.N. Doc. A/CONF. 32/41 at 3 (1968) (“Parents have a basic human right to determine freely and responsibly the number and spacing of their children...”); *but see* Carol A. Kates, *Environmental Values*, vol. 13, February 2004 (noting that “[t]he word ‘responsibly’ was inserted [in the Proclamation of Teheran] because of concerns about rapid population growth [citation omitted] suggesting a latent conflict about the precise boundaries of reproductive ‘freedom.’”)

²⁶ Article 16.1.e requires state parties to “ensure, on a basis of equality of men and women:...the same rights to decide freely and responsibly on the number and spacing of their children....”

²⁷ In the foreword to the 2012 State of World Population report, “By Choice, Not by Chance,” Babatunde Osotimehin, Executive Director of the United Nations Population Fund (UNFPA) wrote that, “the right of the individual to freely and responsibly decide how many children to have and when to have them has been the guiding principle in sexual and reproductive health, including family planning for decades

nonprofits and nongovernment organizations such as Amnesty International,²⁸ the Center for Reproductive Rights,²⁹ the Center for Biological Diversity,³⁰ and Right for Education.³¹ Prominent philosophers and academics, too, continue to subscribe to the Isolation Model, often under the mistaken assumption that the alternative necessarily involves some level of governmental coercion,³² or that children can never be harmed by being born, thereby negating the broader public interests at stake.³³

Historically, the Isolation Model is not as deeply rooted in American tradition as is often assumed, but is a product, as discussed above, of the late 20th century. In the nineteenth century, as awareness of the relationship between healthy childhood development and a thriving community grew, the public sphere began to participate more actively in family life, for example, by intervening in cases of child abandonment and neglect, by providing public education for children whose parents could not afford to send them to private schools, and by

²⁸ Amnesty international, <https://www.amnesty.org/en/what-we-do/sexual-and-reproductive-rights/> (“Sexual and reproductive rights mean you should be able to make your own decisions about your body and:....decide if you want to have children and how many.”)

²⁹ Center for Reproductive Rights, http://www.reproductiverights.org/sites/crr.civicaactions.net/files/documents/RRareHR_final.pdf (listing among the twelve human rights key to reproductive rights “The Right to Decide the Number and Spacing of Children”)

³⁰ Center for Biological Diversity, We Stand with Black Lives Matter, available at http://action.biologicaldiversity.org/o/2167/t/0/blastContent.jsp?email_blast_KEY=1318619 (“Our Population and Sustainability Program is committed to ensuring families have the tools needed to choose when, if, and how many children they will have.”)

³¹ Right for Education, Women Have the Right to Choose How Many Children They Want, (April 4, 2016) <http://www.rightforeducation.org/all-topics/law-rights/women-have-the-right-to-choose-2/> (“A woman’s body is hers and hers alone. She has the right to make decisions concerning her body, and this includes how many children she wants- if any- and when she wants them. The woman herself is the one who knows when she is physically and emotionally ready and able to bear, give birth to and care for her child. Nobody else bears or gives birth to the baby, and therefore nobody else should have the final decision on when and whether a woman should become pregnant.”)

³² See Bayles, Michael D. "Limits to a right to procreate." *Ethics and Population* (1976): 41-55.

³³ John A. Robertson, Procreative Liberty and Harm to Offspring in Assisted Reproduction, 30 *AM J.L. & MED.* 7, 24–39 (2004)

including the “best interests” of both the public and the child as factors for consideration in custody disputes (whereas previously the parents’ wishes had been dispositive).³⁴

Contrary to the conventional wisdom of today’s Isolation Model, philosopher John Stuart Mill argued in 1859 that, in order to maximize the liberty of all, the state has a clear obligation to control the liberty of those more powerful, particularly in the case of familial relations, lest children continue to suffer in the name of parental liberty.³⁵ According to Mill, the state’s responsibility necessarily extended to prospective children as well because, “to bring a child into existence without a fair prospect of being able, not only to provide food for its body, but instruction and training for its mind is a moral crime, both against the unfortunate offspring and against society.”³⁶

With the mounting environmental and social threats exacerbated by Isolation Model family planning, Mill’s arguments resonate even more strongly today. And yet, the Isolation Model remains ubiquitous, both as a vestige of the anachronistic view of children as parental property,³⁷ and as a conflation of the rights to have and not have children (when the former necessarily implicates the interests of future children and the communities they will join).^{38 39} This model has many other and obvious flaws that will be discussed below, including using subjective values to ground the right to have children despite conflicting objective values,

³⁴ Lee E. Teitelbaum, *Family History and Family Law* (2006) 2006 Utah L. Rev. 197, 212-218. (Teitelbaum, 2006)

³⁵ John Stuart Mill, *On Liberty* 103 (Elizabeth Rapaport ed., Hackett Publ'g Co. 1978) (1859) (lamenting that “misplaced notions of liberty prevent moral obligations on the part of parents from being recognized, and legal obligations from being imposed, where there are the strongest grounds for the former always, and in many cases for the latter also.”)

³⁶ *Ibid.*

³⁷ Dillard, *supra* note 22.

³⁸ *See* Robert M. Hardaway, *Environmental Malthusianism: Integrating Population and Environmental Policy*, 27 *Env'tl. L.* 1209, 1216-17 (1997) (noting that the absolute procreative right necessarily leads to environmental degradation.).

³⁹ Pearson, Yvette E. "Storks, cabbage patches, and the right to procreate." *Journal of Bioethical Inquiry* 4.2 (2007): 105-115

ignoring the satiating nature of our interest in having children, prejudicing the exercise of the same right/model by future generations, ignoring obvious paternalistic limits, etc.

As will be discussed, the Fair Start model is meant to liberate future generations, as well as the nonhuman world, from the Isolation Model's barbaric proprietary relationship between parents and future children,⁴⁰ and speak the truth (in the most fundamental sense) of human rights to our power as procreators.⁴¹ Human rights and democracy will remain elusive and aspirational until we begin the physical reconstitution and replacement of massive bureaucratic nation states, where citizens play little actual role in making the rules they live by, with smaller, sustainable, and truly democratic communities.

It is within this Isolation Model that efforts to address population growth, as well as the related problems of failure to ensure children's wellbeing and the development of functional systems of human rights and democracies, have taken place thus far. Those efforts have been limited by the Isolation Model's inability to reshape the social norms that form the root of the problem.⁴² Providing access to contraceptives and reproductive health services, for example, while essential, is insufficient on its own without changing reproductive norms and thereby increasing demand and effective use.⁴³ It is no wonder, then, that declines in fertility can be easily reversed in the most environmentally destructive populations, notwithstanding advances in development, including increased availability of contraception.⁴⁴

⁴⁰ Dillard, Future Children as Property; also <http://www.businessinsider.com/the-ultimate-status-symbol-is-a-big-family-2015-5>.

⁴¹ See e.g. <http://www.animal-rights-library.com/texts-m/feinberg01.htm>

⁴² Rachels, Stuart, 2014, "The Immorality of Having Children," *Ethical Theory and Moral Practice*, 17(3): 567–582 (describing

⁴³ Ryerson, William N. "Population: The multiplier of everything else." *The Post Carbon Reader: Managing the 21st Century's Sustainability Crises* (2010): 153-75 "It is true that, over the last forty years, increasing access to contraceptive services has helped reduce fertility rates, but large-family norms and the cultural and informational barriers to use of contraception are now the major impediments to achieving replacement-level fertility.

⁴⁴ Myrskylä, Mikko, Hans-Peter Kohler, and Francesco C. Billari. "Advances in development reverse fertility declines." *Nature* 460.7256 (2009): 741-743.

In addition to buttressing efforts to reduce unintended pregnancies,⁴⁵ ⁴⁶ the Fair Start model can actually reduce the number of *overall* pregnancies⁴⁷ by leveraging the impact of role models who demonstrate the ways in which smaller families help to provide children with a fair start in life, in addition to benefiting the parents themselves, the greater community, and the environment.

Population Growth and Environmental Change

While there is a litany of significant problems with the Isolation Model, perhaps its most fundamental flaw is unsustainability, which could prove to be our most egregious violation of human rights.

Consider, for example, that the most current population projections predict a global population of 9.8 billion by mid-century;⁴⁸ if the average woman alive today has between 2 and 3 children, the world population will continue to skyrocket to as many as 16 billion, by 2100, or twice our current size.⁴⁹ While these population projections may sound alarming, it is perhaps more alarming that these analyses do not include any consideration of Earth's planetary boundaries (Earth's biogeophysical forces that allow for human life) and the fact that we have already passed the safe threshold for two of the nine boundaries (biodiversity and

⁴⁵ In the United States, 45% of pregnancies are unintended. Finer, L.B., and M.R. Zolna. "Declines in Unintended Pregnancy in the United States, 2008–2011." *New England Journal of Medicine*, 374, no. 9 (2016): 843-852.

⁴⁶ Colorado Department of Public Health and Environment, Taking the Unintended Out of Pregnancy: Colorado's Success with Long-Acting Reversible Contraception, January 2017.

⁴⁷ Lant H. Pritchett, "Desired fertility and the impact of Population Policies," *Population and Development review* 20, no. 1 (March 1994), 1–55 (noting that "despite the obvious role of contraception as a proximate determinant of fertility, the additional effect of contraceptive availability or family planning on fertility is quantitatively small and explains very little cross country variation. These empirical results are consistent with theories in which fertility is determined by parent's choices about children within the social, educational, economic, and cultural environment that parents, and especially women, face.")

⁴⁸ United Nations, *World Population Prospects* (2017)

http://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf (UN, 2017).

⁴⁹ *Id.*

biogeochemical flows (nitrogen and phosphorus cycles)).⁵⁰ We have also pushed Earth's land system use and climate system into operations that place humanity at high risk.⁵¹ Therefore, even if humans were to reproduce to those levels projected by demographers, we could not with good conscience estimate they would enjoy any quality of life; we will run out of resources and people will suffer.⁵²

Under any of these scenarios, the environmental consequences are dire, particularly with regard to climate change: larger populations consume more, and as consumption increases, so do carbon emissions, which in turn results in intensified climate change.^{53 54} As the IPCC's 4th Assessment Report notes: "At the global scale, declining carbon and energy intensities have been unable to offset income effects and population growth and, consequently, carbon emissions have risen."

In fact, the carbon legacy and greenhouse gas impact of an extra child is nearly 20 times more important than the adoption of other environmentally sensitive practices, e.g. driving a high mileage car, recycling, or using energy-efficient appliances and light bulbs.⁵⁵ Conversely, "reducing fertility rates so as to match the UN's 'low fertility' projections rather than the 'medium fertility' projections, which corresponds to an average difference of 0.5 children per woman, would likely result in a yearly reduction in GHG emissions of 5.1 billion tons of carbon

⁵⁰ Steffen, Will, et al. "Planetary boundaries: Guiding human development on a changing planet." *Science* 347.6223 (2015): 1259855.

⁵¹ *Id.*

⁵² For an extended discussion of future population projections, environmental degradation and resultant human suffering, see Conly, Sarah. *One child: Do we have a right to more?*. Oxford University Press, USA, 2016, pp. 145-153.

⁵³ Rosnick, David. "The Consequences of Increased Population Growth for Climate Change." Center for Economic and Policy Research (2014). <http://cepr.net/documents/Climate-population-2014-12.pdf>

⁵⁴ Population Matters Report: Population key to controlling climate change (2017). <https://www.populationmatters.org/report-population-key-controlling-climate-change/>

⁵⁵ Murtaugh, P.A., & Schlax, M.G. (2009). Reproduction and the Carbon Legacies of Individuals. *Global Environmental Change*, 19.1 (2009): 14-20. (Murtaugh, 2009)

by 2100;”⁵⁶; that is, reductions “as large as, or larger than, the annual emissions that could be saved from doubling the fuel efficiency of cars, increasing wind energy 50 fold, or tripling nuclear energy.”⁵⁷ This is because population reduction’s effects are exponential, i.e. “smaller global populations in one generation lead to smaller populations in the next generation, and the next, and the emissions reductions continue to cumulate,” whereas “the energy efficiency improvements touted by many political leaders and environmentalists as climate change panaceas, often *decrease* over time.”⁵⁸ And yet, these environmentalist organizations that would laugh (justifiably) at a Hummer driver with a Save the Polar Bears bumper sticker, are the same ones advocating an unsustainable family planning model far more damaging to the environment. In light of this data, scholars have called for buttressing our conception of the ecological footprint with the impacts of “procreative consumption.”⁵⁹ ⁶⁰

The importance of smaller families as a key component in tackling climate change is even more apparent in developed countries, with the greenhouse gas impact of a child born in the U.S. over 500% that of a child born in China,⁶¹ and “each new UK birth responsible for 160 times more greenhouse gas emissions than a new birth in Ethiopia.”⁶² Accordingly, a fertility rate

⁵⁶ Brian C. O’Neill, et al., “Global Demographic Trends and Future Carbon Emissions,” *PNAS* 107 (2010): 17521-26.

⁵⁷ Colin Hickey, Travis N. Rieder, and Jake Earl, Population Engineering and the Fight against Climate Change, Forthcoming in *Social Theory and Practice* <http://philpapers.org/rec/HICPEA>

⁵⁸ Climate Ethics and Population Policy, Cafaro, Philip, *WIREs Clim Change* 2012, 3:45–61. doi: 10.1002/wcc.153.

<https://docs.google.com/viewer?a=v&pid=sites&srcid=cGhpbGlwY2FmYXJvLmNvbXx3d3d8Z3g6NGM4Njc3OTg0NjVkJmZlYw>

⁵⁹ MacIver, Corey. "Procreation or Appropriation?" *Permissible Progeny: The Morality of Procreation and Parenting*, eds. Hannan, Brennan, and Vernon (2015): 107-128.

⁶⁰ Even the impact of adopting a plant-based diet (which halves one’s carbon footprint) (see Scarborough, Peter, et al. "Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK." *Climatic change* 125.2 (2014): 179-192), necessarily pales in comparison to the impact of smaller families on the environment, given the aforementioned exponential environmental benefits that grow with each successive generation.

⁶¹ Murtaugh et al, (2009) Reproduction and the Carbon Legacies of Individuals.

⁶² Guillebaud, John, and Pip Hayes. "Population growth and climate change." *BMJ* 337 (2008):

reduction in the U.S. “would have a massive impact on both near-term and long-term global GHG emissions—much more even than proportionally larger fertility reductions in sub-Saharan Africa.”⁶³

Given the strong correlation between wealth and carbon footprint, as well as the history of discriminatory interventions in family planning, the Fair Start model leads by example here in the U.S, with a particular focus on maximizing resources allocation to ensure all children a fair start in life relative to others in their generation.⁶⁴ By the same token, as developing countries continue to build infrastructure and advance technologically, the consumption per person in those countries will grow, perhaps eventually converging with that of persons in the U.S. Given that access to quality medical care, food, shelter and technology generally increases an individuals’ carbon footprint,⁶⁵ the Fair Start model recognizes that consumption cannot be the exclusive focus of efforts to mitigate climate change.⁶⁶ Rather, the model promotes fair starts in life, achieved in large part through smaller families, precisely so that more children can attain a minimum level of wellbeing while consumption in the aggregate remains stable.⁶⁷ That is, while improved quality of life in those still-developing regions will result in a corresponding increase in per person consumption in those regions, such an increase would be offset by the reduced population and consumption in already-developed regions.

The Flawed Optimism and Limited Imagination of Current GHG Mitigation Models

a576. <http://www.bmj.com/content/337/bmj.39575.691343.80>

⁶³ Hickey et al, Population Engineering.

⁶⁴ As the Having Kids Model continues its implementation domestically, the Model, being universal in nature, would be implemented abroad with a similar focus on those more developed nations..

⁶⁵ Martin Fritz et al. Economic development and prosperity patterns around the world: Structural challenges for a global steady-state economy, *Global Environmental Change* (2016).

⁶⁶ Because the Fair Start model seeks to rebuild communities, making them smaller and more connected by decreasing the number and increasing the civic quality of people in them, consumption, at least that caused by relative social isolation and insecurity, should decrease.

⁶⁷ Raworth, K. (2012). A safe and just space for humanity: can we live within the doughnut? Oxfam Discussion Papers <http://www.oxfam.org/sites/www.oxfam.org/files/dp-a-safe-and-just-space-for-humanity-130212-en.pdf>

A majority of scientists and policymakers have concluded that avoiding catastrophic climate change requires limiting the rise in average global temperature to a maximum of a 2°C increase over preindustrial averages, necessitating that atmospheric concentrations of GHGs be limited to 450 parts per million (ppm) (having already passed the 400 ppm milestone in 2013).⁶⁸ ⁶⁹ Setting aside whether this target is sufficiently ambitious (a growing number of scientists believe the rise in average global temperature should be limited to a maximum of a 1.5°C, with GHGs reduced more ambitiously to 350 ppm^{70 71}), the fact remains that even this more conservative limit of 450 ppm will soon be exceeded absent reductions in fertility rates.⁷²

The Intergovernmental Panel on Climate Change, for example, in its 2014 “Summary for Policymakers,” already acknowledges that implementing each of its various mitigation strategies still leaves a 33% chance that temperatures will increase beyond 2°C.⁷³ Yet that 33% figure assumes *universal* compliance with environmental regulations and policy recommendations. In other words, what is already a risky proposition through the IPCC’s rose-colored glasses becomes an impossible one if we account for the inevitability of some noncompliant actors, a certainty in any regulatory context, but especially so in the environmental realm, where enforcement is notoriously difficult⁷⁴ and noncompliance hugely profitable in the short-term.

⁶⁸ Carrington, Damian. “Global carbon dioxide in atmosphere passes milestone level.” *The Guardian* 10 (2013).

⁶⁹ O’Neill, et al., “Global Demographic Trends,” p. 6 of supplemental information.

⁷⁰ James Hansen, et al., “Target Atmospheric CO₂: Where Should Humanity Aim?” *Open Atmospheric Science Journal* 2 (2008): 217-31; and Johan Rockström, et al., “A Safe Operating Space for Humanity,” *Nature* 461 (2009): 472-75.

⁷¹ Indeed, it could be argued that the current targets are but another example of “regulatory slippage,” a phenomenon “as central to environmental law as water resistance is to aquatic life—a ubiquitous condition that limits efforts at movement and shapes the design and development of everything it surrounds.” Daniel A. Farber, *Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law*, 23 Harv. Envtl. L. Rev. 297 (1999).

⁷² Betts, Richard A., et al. “El Niño and a record CO₂ rise.” *Nature Climate Change* 6.9 (2016): 806-810.

⁷³ IPCC 2014, “Summary for Policymakers” (WGIII), pp. 4 (footnote 2), 10, 13 (Table SPM.1).

⁷⁴ Ninth International Conference on Environmental Compliance and Enforcement 2011
ENHANCING COMPLIANCE WITH ENVIRONMENTAL LAWS IN DEVELOPING

Inconceivably, the reduction of fertility rates was not among the 900 or so mitigation strategies the IPCC considered, notwithstanding the fact that, as previously discussed, a reduction in fertility rates of .5 children per woman would account for between 16% and 29% of required emissions reductions by 2050.”⁷⁵

III. An Alternative: the Fair Start Model

The current Isolation Model of parenting, where parents’ subjective desires are the sole component given any weight in reproductive decision-making, is not a legitimate human rights approach to family planning. The model ignores key aspects, like the interests of future children, the community, and more distant future generations, it is unsustainable, and it is not based on objective interests of the sort that must lie at the center of human rights.

In contrast, the Fair Start model focuses on the objective interests of three sides: future children, parents, and their communities, all with the goal of creating smaller families that work together to give every child a fair start in life. To more easily apply it, the Fair Start model can be thought of as orienting the cluster of human rights involved in family planning around the core right every child has to a fair start in life, relative to their peers. That means all children have the fundamental human right to begin their lives in conditions that create equitable opportunities relative to other children born in their generation. Correlative to that right, families and communities have a duty to plan together to secure the fair start of every child, , creating and

COUNTRIES: CAN BETTER ENFORCEMENT STRATEGIES HELP? OSTROVSKAYA, ELENA¹ and LEENTVAAR, JAN

⁷⁵ Interestingly, population growth and regulatory noncompliance interact as a sort of vicious cycle, where “The larger the group, the more likely that it contains at least a few bad apples. Even more devastating, people may *expect* that large groups are especially likely to include such defectors, so it may as well be them.” Barash, David P. *The survival game: How game theory explains the biology of cooperation and competition*. Macmillan, 2004; Nosenzo, Daniele, Simone Quercia, and Martin Sefton. "Cooperation in small groups: The effect of group size." *Experimental Economics* 18.1 (2015): 4-14 (“[I]f a group contains one non-cooperator (a ‘bad apple’) cooperation will unravel. In a population containing a fixed proportion of non-cooperators larger groups are more likely to unravel.”) Applying this “bad apple” theory then, the more the population grows, the less likely we are to believe that our cohabitants on this planet can be trusted to act in an environmentally and socially responsible manner, thereby robbing us of our own motivation to act responsibly and comply with the applicable regulations.

promoting smaller families while maximizing resource allocation to improve conditions of entry. The model accounts for all of the relevant human rights, not just those of would-be parents.

As illustrated herein, fair starts in life, achieved in large part through smaller families, foster conditions, through non-coercive role modeling, that promote a minimum threshold of wellbeing whereby (1) children enjoy opportunities that are both equal to others of their generation and sustainable for future generations, and, (2) future adults populate democratic communities bounded by, and respectful of, the nonhuman world. In exchange, the community helps parents create those conditions by shifting resources that would have gone into creating larger families instead towards helping smaller and more equitable families actualize their plan.

Bridging the Disconnect

With the grave threats of as climate change and inequality already apparent to most of us, what remains is to persuade the public that the creation and promotion of smaller families provides the most effective and most equitable vehicle for tackling these issues in the long term. Of course, the challenges of doing so are manifold, among them the tension between good policy and good politics,⁷⁶ as well as pro-natal propaganda espoused by economists.⁷⁷ But perhaps the most fundamental obstacle is the disconnect between the clarity of the here and now with the nebulosity of the future. After all, humans are hardwired to respond to short-term, rather than long-term, problems,⁷⁸ particularly where there is a degree of uncertainty involved.⁷⁹ ⁸⁰ By

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⁷⁷ Jones, Gavin W. "Social science research on population and development in South-East and East Asia: a review and search for directions. Appendix 3." (1978) (finding that individuals tend to perceive the advantages of large families as outweighing the disadvantages due to the pronatalist propaganda in the economic, cultural, and institutional context),

⁷⁸ Wilson, Timothy D., and Daniel T. Gilbert. "Affective forecasting." *Advances in experimental social psychology* 35 (2003): 345-411.

⁷⁹ Kidd, Celeste, Holly Palmeri, and Richard N. Aslin. "Rational snacking: Young children's decision-making on the marshmallow task is moderated by beliefs about environmental reliability." *Cognition* 126.1 (2013): 109-114.

⁸⁰ McGuire, Joseph T., and Joseph W. Kable. "Rational temporal predictions can underlie apparent failures to delay gratification." *Psychological review* 120.2 (2013): 395.

focusing on the specific short-term benefits of having fewer children, the Fair Start model both temporalizes and concretizes the issue, thereby avoiding the pitfalls that previously befell advocates who have raised the issue. This is particularly important, since even those who do recognize the causal relationship between population growth and environmental degradation, may not be aware of the personal and communal benefits of smaller families.⁸¹

On Trend

Notwithstanding the pervasiveness of the Isolation Model, there are some encouraging statistical trends suggesting that the reduction of fertility rates to 1.5 children on average worldwide by 2100 is more plausible than ever before.⁸² Total fertility rates have declined dramatically over the last 200 years,⁸³ and are likely to continue to do so, with the global total fertility rate already projected to decrease to 2.1 by 2070.⁸⁴ Indeed, managing population growth has actually proven more feasible than seeking to reduce consumption and emissions.⁸⁵

There is also a growing recognition of a need for policies that focus on population

⁸¹ U.S. Attitudes on Population. Connolly, Scott; Elmore, Katie; Ryerson, William; World Watch. Sep/Oct2008, Vol. 21 Issue 5, p24-27. <https://www.populationmedia.org/wp-content/uploads/2015/02/PMC-worldwatch-magazine-population-issue-sept-oct-2008.pdf>.

⁸² Gao, George, "Americans' ideal family size is smaller than it used to be," *Pew Research Center* (May 8, 2015), available at <http://www.pewresearch.org/fact-tank/2015/05/08/ideal-size-of-the-american-family/>.

⁸³ Kolk, Martin, Daniel Cownden, and Magnus Enquist. "Correlations in fertility across generations: can low fertility persist?." *Proceedings of the Royal Society of London B: Biological Sciences* 281.1779 (2014): 20132561.

<http://rspb.royalsocietypublishing.org/content/281/1779/20132561>

⁸⁴ World population prospects, the 2010 revision: Standard (median) forecasts. United Nations, Department of Economic and Social Affairs, Population Division, <http://esa.un.org/unpd/wpp/>); Lutz, Wolfgang, Warren C. Sanderson, and Sergei Scherbov. *The end of world population growth in the 21st century: New challenges for human capital formation and sustainable development*. Earthscan, 2004.

⁸⁵ Frederick A. B. Meyerson, "Population Growth Is Easier to Manage than Per-Capita Emissions," Population and Climate roundtable discussion held by the Bulletin of the Atomic Scientists, January 17, 2008.

reduction, and smaller and more equitable families in particular, both as investments in the environment,^{86 87} investments in the economy,⁸⁸ and investments in children.⁸⁹ And while increased access to contraception has been an integral part of this reduction, experts agree that it will take more than family planning, particularly in the developed world, to continue to reduce fertility rates to the requisite levels: something akin to the Fair Start model to “help people to understand the personal benefits in health and wealth for them and their children of limiting and spacing births,” through “role-modeling family planning practices.”⁹⁰ Similarly, social scientists agree that these results may be achieved through role modeling and empowerment, rather than

⁸⁶ Jiang, Leiwen, and Karen Hardee. "How do recent population trends matter to climate change?." Population Action International (2009).

http://sciencepolicy.colorado.edu/students/envs_5720/jiang_hardee_2009.pdf

⁸⁷ “Choosing a smaller family is the most effective way of cutting your carbon emissions.”

Population Matters, Key Facts, available at <https://www.populationmatters.org/the-issue/overview/facts/> (last accessed May 1, 2017).

⁸⁸ Bongaarts, John, and Steven W. Sinding. "Family planning as an economic investment." SAIS Review of International Affairs 31.2 (2011): 35-

44.http://www.populationmatters.org/documents/economic_investment.pdf;

⁸⁹ Child Endowments and the Quantity and Quality of Children Author(s): Gary S. Becker and Nigel Tomes Source: The Journal of Political Economy, Vol. 84, No. 4, Part 2: Essays in Labor Economics in Honor of H. Gregg Lewis (Aug., 1976), pp. S143-S162 Published by: The University of Chicago Press Stable URL: <http://www.jstor.org/stable/1831106>

⁹⁰ Ryerson, William N. "Population: The multiplier of everything else." The Post Carbon Reader: Managing the 21st Century's Sustainability Crises (2010): 153-75. http://mahb.stanford.edu/wp-content/uploads/2014/02/2010_Ryerson_TheMultiplierofEverythingElse_PostCarbonReaderSeries.pdf; Dean Moore K, Nelson M, eds. Moral Ground: Ethical Action for a Planet in Peril. San Antonio, TX: Trinity University Press; 2010 (emphasizing the importance of personalizing the issue: “It’s easy to think of overpopulation as a moral failing of other people, other religions, other continents. But if you have more than one or two children, overpopulation is a moral problem in your household. No one ‘deserves’ more children than anyone else; in fact, affluent Americans may have difficulty claiming even equal rights to children, given the global impacts of our lifestyles and life spans.”); Conly, S. (2016). One child: do we have a right to more? Oxford: Oxford University Press (through philosophical analysis Sarah Conly also comes to the same conclusion that no one deserves more children than anyone else, and further, and convincingly, makes the case that no one deserves to have more than one child).

coercion,⁹¹ focusing instead on cultural shifts and patterns established through intergenerational fertility preferences and social networking.⁹² Social scientists also agree that as social norms evolve, it is helpful to track and understand how and why those changes come about and the implications of those changes. In this vein, the Fair Start Model will (pending availability of funds) be studied by social scientists at the University of Denver, from pre-implementation assessments of how young people currently plan their families (currently a significant gap in the literature), through implementation, and longitudinally to monitor the health and well-being of children, families and communities where the Fair Start Model has been adopted. The University of Denver is ideally located within a state that has implemented some of the most promising family planning programming that within just seven years decreased birth and abortion rates by close to 50 percent in teens 15-19 and by 20 percent in women aged 20-24.⁹³ Additional good news to tax payers is the \$54.6-60.6 million in public assistance costs that were averted for births that were avoided in women 15-24 years of age.

Harnessing the Power of Role Models

There is substantial precedent for effectively utilizing role models and media campaigns to shape family planning and fertility preferences, beginning most famously in 1977 with Miguel Sabido's prime-time telenovela, *Accompany Me*.⁹⁴ The family-planning themed show was

⁹¹ Markowitz, Ezra M., and Azim F. Shariff. "Climate change and moral judgement." *Nature Climate Change* 2.4 (2012): 243-247. <http://sharifflab.com/wp-content/uploads/downloads/2012/03/MarkowitzShariff2012.pdf>; Guillebaud, John. "Voluntary family planning to minimise and mitigate climate change." *BMJ: British Medical Journal* 353 (2016) ("Wise and compassionate promotion of contraceptive care and education in a rights based, culturally appropriate framework offers a cost effective strategy to reduce greenhouse gases.")

⁹² Kolk, Martin, Daniel Cownden, and Magnus Enquist. "Correlations in fertility across generations: can low fertility persist?." *Proceedings of the Royal Society of London B: Biological Sciences* 281.1779 (2014): 20132561.

⁹³ Colorado Department of Public Health and Environment, *Taking the Unintended Out of Pregnancy: Colorado's Success with Long-Acting Reversible Contraception*, January 2017.

⁹⁴ Institute for Communication Research A.C. (Televisa), "Towards the Social Use of Commercial Television: Mexico's Experience with the Reinforcement of Social Values through

hugely successful, resulting in a 33% increase in attendance at family-planning clinics and a 23% increase in birth control sales, and leading to the development of four additional family-planning soap operas.⁹⁵ During the nine-year run of the five programs, population growth in Mexico declined by 34%.⁹⁶ Sabido's mass media strategy for influencing reproductive behavior has since been successfully replicated in numerous countries the world over, with empirical research on these interventions demonstrating significant shifts in viewers' beliefs about family planning as well as ideal family size.⁹⁷ Indeed, "nations as culturally and politically diverse as Bangladesh and Brazil, Columbia and Cuba, Thailand and Tunisia, and regions such as Kerala in India, have halved their fertility rates in about the same time as China, yet without a coercive one child policy."⁹⁸

The success of these media campaigns makes clear that family size is not predetermined by biology or genetics or socioeconomic status. Rather, with the proper encouragement, individuals may recognize the benefits of family planning and smaller families, where the decision to have children and how many to have merits rigorous thought. And while parents may be obvious potential role models when it comes to family size preference, even nonparents have the power to affect fertility rates via media and social networks.⁹⁹ In this way, the Fair Start model may shape family size preferences without requiring any sanction or rule of law, instead

TV Soap Operas," paper presented at the annual conference of the International Institute of Communications, Strasbourg, France, September, 1981, page 51

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Barber, Jennifer S., and William G. Axinn. "New ideas and fertility limitation: The role of mass media." *Journal of marriage and family* 66.5 (2004): 1180-1200; Stuart Basten, *Mass media and reproductive behavior: Serial narratives, soap operas and telenovelas. The Future of Human Reproduction*, Working Paper no. 7. Oxford, England: University of Oxford.

⁹⁸ Guillebaud, John. "Voluntary family planning to minimise and mitigate climate change." *BMJ: British Medical Journal* 353 (2016).

⁹⁹ Kolk, Martin, Daniel Cownden, and Magnus Enquist. "Correlations in fertility across generations: can low fertility persist?." *Proceedings of the Royal Society of London B: Biological Sciences* 281.1779 (2014): 20132561.

<http://rspb.royalsocietypublishing.org/content/281/1779/20132561>

creating a social pattern whereby norms may be rationally internalized rather than coerced.¹⁰⁰ This would be different (and potentially more effective)¹⁰¹ than many of the current modeling efforts, in that families would be modeling around an objective norm rather than something akin to subjective parental choice. The Fair Start model may also prove effective with studies having shown that voluntary adopters of a particular behavior are more likely to persist in that behavior over the long-term.¹⁰² Additionally, it is relatively common knowledge that when girls and young women have sufficient access to education to pursue a future that they can better craft for themselves, as well as access to family planning education and contraceptives, they naturally delay childbearing and limit the size of their own family. In this way, they can continue to contribute to society in their chosen career while also being an additional breadwinner that in turn provides more security for her own children.¹⁰³

IV. The Fair Start Model Best Promotes Five Fundamental Values

. Family planning solutions go to the primary core of human rights, by focusing on the creation of the humans that actually comprise systems of *human* rights, the constituent parts of those systems. That focus makes the human rights norms around family planning unique, and uniquely important. Those norms have to ensure the creation of humans capable of making human rights and democratic systems actually work, and those norms have to precede and override other norms that subsequently flow from those systems. For example, any system of human rights would require a capability such as the maintenance of a minimum level of

¹⁰⁰ Alex Geisinger, A Belief Change Theory of Expressive Law (2002) 88 Iowa L. Rev. 35, 62; Robert Cooter, Expressive Law and Economics (1998) 27 J. Legal Stud. 585, 592.

¹⁰¹ See Yilin Nie & Robert J. Wyman, The One-Child Policy in Shanghai: Acceptance and Internalization, 31 POP. & DEV. REV. 313, 333-34 (2005) (concluding that the one-child policy today is considered so normal in Shanghai that its status as a law might be unnecessary). 138. Consideration of Reports Submitted by; see also <https://www.theglobalist.com/iran-a-model-for-family-planning/>

¹⁰² Cooter, 1998.

¹⁰³ Basu, A. M. (2002). Why does education lead to lower fertility? A critical review of some of the possibilities. World Development 30(10), 1779-1790.

empathy¹⁰⁴ that in turn manifests in compassionate and altruistic behaviors in the humans that comprise that system. Given the fact that our levels of empathy are largely contingent on the conditions in which we are born and raised,¹⁰⁵ wouldn't those systems have to support the conditions in which children are born and raised in order to function?

The simple fact is that family planning involves decision-making that determines the quality of human life, including our level of individual freedom, more than any other category of decision-making. We, and the people around us, are products of our past, largely influenced by the conditions of our early childhood development and how we were raised. Multiply that influence by the billions of people living on Earth, and family planning becomes that which dictates our human experience and determines our level of freedom. We cannot overcome a “might makes right” state of affairs in this world—one that fails to account for the interests of prospective children--without a foundational human rights norm, or a *grundnorm*, that frees us as we enter the world.

Unlike the Isolation Model, the Fair Start model can be thought of as orienting the cluster of human rights involved in family planning around the core right every child has to a fair start in life, relative to their peers. Orienting the core right in that way answers the crucial questions the Isolation Model ignores, and promotes five objective values and rights that are the building blocks of human freedom, and together form the *grundnorm* for human rights and democracy. Those five values are: (1) improved continuity, (2) wellbeing, (3) fairness, (4) nature, and (5) democracy, each of which is interconnected, as recognized by the model.¹⁰⁶

¹⁰⁴ https://link.springer.com/chapter/10.1007%2F978-94-017-8672-0_7#page-1

¹⁰⁵ Eisenberg, N., Spinrad, T.L., & Morris, A. S. (2013). Prosocial development. In Zelazo, P.D. (Ed.). *The Oxford Book of Developmental Psychology, Volume 2: Self and Other*. pp. 1-54.

¹⁰⁶ Cilo Mora and Peter F. Sale, “Ongoing Global Biodiversity Loss and the Need to Move Beyond Protected Areas: A Review of the Technical and Practical Shortcomings of Protected Areas on Land and Sea,” *Marine Ecology Progress Series*, vol. 434 (2011), pp. 251–66 (“The fact that human population growth may also lead to economic . . . and societal . . . problems suggests that targeting human population growth directly would be worthwhile and could become more effective if advocated simultaneously from social, economic and ecological perspectives.”)

Improved Continuity

Perhaps the most foundational objective good of parenting is that a person's life continue through his or her children, such that those children enjoy a level of emotional and social fulfillment equal to or above that of the parents' own lives (as fostered by a safer, more supportive environment, and a fairer, more democratic community). The universality of the value of continuity--as achieved by concerted attention to the health and development of offspring--serves as an anchor and baseline objective value that may serve to guide all parenting decisions, regardless of the more idiosyncratic and subjective reasons some parents may wish to have children, such as having children to labor on one's farm, of having a third child in the hopes of having a boy, of having something adorable to dote upon, or of demonstrating one's virility.¹⁰⁷ In this way, the model recognizes procreation as a legitimate human right, but one that may be balanced against just as weighty and legitimate competing rights, chief among them, a child's right to a fair start in life.¹⁰⁸

As family size increases, so do life's disruptions in the form of strain on familial finances and time, as well as personal and marital stress,¹⁰⁹ making it more difficult for parents to continue to improve their lives and their children's. Specifically, smaller families reduce the likelihood of divorce, welfare participation, high blood pressure, smoking, and obesity.¹¹⁰ The strain on finances is substantial, given that, on average it costs \$233,610 to raise a child in the United States, including only "major budgetary components" from birth to age 17.¹¹¹ As expenses increase, parents must work longer hours to make ends meet, whereas smaller families allow parents more time to devote to leisure.¹¹² The time stress of a larger family is particularly

¹⁰⁷ Carter Dillard, *Valuing Having Children*, 12 J.L. & Fam. Stud. 151, 191–92 (2010).

¹⁰⁸ See *id.*

¹⁰⁹ Cáceres_Delpiano, J. And M. Simonsen. 2010. *The Toll of Fertility on Mothers' Wellbeing*. Department of Economics, University Carlos III Madrid, Working Paper 10-06.

¹¹⁰ *Ibid.*

¹¹¹ Lino, Mark, et al. "Expenditures on Children by Families, 2015." *Center for Nutrition Policy and Promotion Miscellaneous Report 1528-2015* (2017).

¹¹² Population Matters, *The Benefits of Smaller Families*, available at

acute for mothers, with the effects lasting several years.¹¹³ Moreover, mothers who delay having their first child until age thirty and hence tend to have fewer children have greater economic and professional success.¹¹⁴

Wellbeing

Since it is taken for granted that all parents should aim to provide for some minimum level of wellbeing for their children,¹¹⁵ it stands to reason that communities should foster conditions that allow for the achievement of that minimum level of wellbeing. That is, as children have no say in the choices and circumstances that ultimately lead to their existence, the least that parents and society can do is to help plan their entry into the world. This would necessarily include providing birth control to those who do not want children but lack the means to prevent pregnancies,^{116 117} as well as fairly distributing resources, both between and within families. And if providing a minimum level of wellbeing for all children were not its own reward, studies have shown time and again that doing so is critical to creating a society of cooperative, empathic adults.¹¹⁸

http://www.populationmatters.org/documents/families_smaller.pdf (last accessed Oct. 5, 2016),

¹¹³ Buddelmeyer, Hielke, Daniel S. Hamermesh, and Mark Wooden. *The Stress Cost of Children*. No. w21223. National Bureau of Economic Research, 2015.

¹¹⁴ Hofferth, S. L. (1984). Long-term economic consequences for women of delayed childbearing and reduced family size. *Demography*, 21(2), 141-155; Trillingsgaard, Tea, and Dion Sommer. "Associations between older maternal age, use of sanctions, and children's socio-emotional development through 7, 11, and 15 years." *European Journal of Developmental Psychology*(2016): 1-15.

¹¹⁵ Freeman, Michael, *The Moral Status of Children: Essays on the Rights of Children*, The Hague: Kluwer Law International (1997); "Loving Future People" in J. Callahan, (ed.), *Reproduction, Ethics and the Law*, Bloomington, IN: Indiana University Press (1995).

¹¹⁶ Tavernese, Sabrina, "Colorado's Effort Against Teenage Pregnancies Is a Startling Success," (July 5, 2015). *The New York Times*, available at https://www.nytimes.com/2015/07/06/science/colorados-push-against-teenage-pregnancies-is-a-startling-success.html?_r=1

¹¹⁷ Having Kids, "Having Kids and the Colorado LARC Program," (July 13, 2016), available at <http://havingkids.org/colorado-larcs-having-kids/>.

¹¹⁸ Centers for Disease Control and Prevention. Mental health surveillance among children — United States 2005–2011. *MMWR* 2013;62(Suppl; May 16, 2013):1-35.

Unfortunately, there is currently very little in the way of such planning, with large families persisting despite the children in those families being less likely to receive the minimum level of wellbeing they require to thrive.¹¹⁹ ¹²⁰ This is what is known as the “quantity-quality trade-off, where increases in family size dilute the resources that parents can provide each child, thereby increasing the likelihood of behavior problems and cognitive deficits.¹²¹ Similarly, improving the quality of children's’ lives costs more for larger families, where a smaller parental investment may create a meaningful improvement in quality of life for a child in a smaller family.¹²²

The effects of the quantity-quality trade-off continue into adulthood, with children of larger families earning less money.¹²³ Moreover, larger family size is a “robust predictor of antisocial behavior,”¹²⁴ having been shown as the most important predictor of adult criminal convictions.¹²⁵ Relatedly, children raised in smaller families are more likely to demonstrate

¹¹⁹ Insufficient food and/or persistent hunger during early childhood has severe detrimental effects’ on learning abilities later in childhood and persisting into adult hood. See Jyoti, Diana F., Edward A. Frongillo, and Sonya J. Jones. "Food insecurity affects school children’s academic performance, weight gain, and social skills." *The Journal of Nutrition* 135.12 (2005): 2831-2839.

¹²⁰ In developing countries, greater space between births has been shown to reduce child mortality. Fotso, Jean Christophe, et al. "Birth spacing and child mortality: an analysis of prospective data from the Nairobi urban health and demographic surveillance system." *Journal of biosocial science* 45.06 (2013): 779-798.

¹²¹ Juhn, Chinhui, Yona Rubinstein, and C. Andrew Zuppann. *The Quantity-Quality Trade-off and the Formation of Cognitive and Non-cognitive Skills*. No. w21824. National Bureau of Economic Research, 2015.

¹²² Gary S. Becker and Nigel Tomes, “Child Endowments and the Quantity and Quality of Children.” *The Journal of Political Economy*, Vol. 84, No. 4, Part 2: Essays in Labor Economics in Honor of H. Gregg Lewis (Aug., 1976), pp. S143-S162

¹²³ Ibid; Downey, D. B. (1995). When bigger is not better: Family size, parental resources, and children's educational performance. *American Sociological Review*, 746-761.

¹²⁴ Lindenberg, Siegwart, et al. "Solidarity and prosocial behavior: A framing approach." *Solidarity and prosocial behavior*. Springer US, 2006. 3-19

¹²⁵ Farrington, David P. "Childhood origins of teenage antisocial behaviour and adult social dysfunction." *Journal of the Royal Society of Medicine* 86.1 (1993): 13-17.

empathic behavior,¹²⁶ which is in turn a reliable predictor of their adult capacity for empathy and prosocial behavior.¹²⁷ Nor is there any merit to the myth of the socially maladjusted only child, with studies showing that only children actually score significantly higher than other groups in achievement motivation and adaptability.¹²⁸ Unsurprisingly then, the oldest child, having enjoyed at least some portion of early childhood as the sole child, tends to score better on IQ tests.¹²⁹

Finally, smaller family size is highly correlated with a child's resilience, i.e. his or her ability (developed in early childhood) to overcome the damaging effects of adversity experienced later in life.¹³⁰ Consider, for example, that parents who have less time to spend with their children frequently resort to the provision of high levels of technology instead,¹³¹ where young children exposed to high levels of technology consumption display lower levels of ability to self-

¹²⁶ Rehberg, Heather R., and Charles L. Richman. "Prosocial behaviour in preschool children: A look at the interaction of race, gender, and family composition." *International Journal of Behavioral Development* 12.3 (1989): 385-401. Labay, Larissa E., and Gary A. Walco. "Brief report: empathy and psychological adjustment in siblings of children with cancer." *Journal of Pediatric Psychology* 29.4 (2004): 309-314.

¹²⁷ McDonald, Nicole M., and Daniel S. Messinger. "The development of empathy: How, when, and why." *Moral Behavior and Free Will: A Neurobiological and Philosophical Approach* (2011): 341-368.

¹²⁸ Polit, Denise F., and Toni Falbo. "Only children and personality development: A quantitative review." *Journal of Marriage and the Family* (1987): 309-325.

¹²⁹ Lehmann, Jee-Yeon K., Ana Nuevo-Chiquero, and Marian Vidal-Fernandez. "The early origins of birth order differences in children's outcomes and parental behavior." *Journal of Human Resources* (2016): 0816-8177.

¹³⁰ Masten, Ann S., Karin M. Best, and Norman Garmezy. "Resilience and development: Contributions from the study of children who overcome adversity." *Development and psychopathology* 2.04 (1990): 425-444.

¹³¹ Radesky, J. S., Silverstein, M., Zuckerman, B., Christakis, D. A. (2014). Infant self-regulation and early childhood media exposure. *Pediatrics* 133, 1172-1178.

regulate,¹³² higher levels of relational aggression,¹³³ poorer well-being outcomes,¹³⁴ decreased cognitive outcomes,¹³⁵ and decreased commitment to nature.¹³⁶ These characteristics do not make for a resilient society ready to take on and cope with upcoming challenges..¹³⁷

At bottom, child-welfare is determined not just by how we treat extant children but also by how they are brought into existence - and the Fair Start model is meant to make clear that both parts are crucial.

Fairness

It is similarly uncontroversial that a poor child is just as deserving of the opportunities to thrive as children born into wealthy families. Yet life in the U.S continues to be tragically “unfair,” with persistent gross economic inequality¹³⁸ and a corresponding sharp decline in

¹³² Radesky et al 2014 (supra)

¹³³ Ostrov, J. M., Gentile, D. A., & Mullins, A. D. (2012). Evaluating the effect of educational media exposure on aggression in early childhood. *Journal of Applied Developmental Psychology* 34, 38-44.

¹³⁴ Hinkley, T., Verbestel, V., Ahrens, W., Lissnar, L., Molnar, D., Moreno, L. A., Pigeot, I., Pohlabein, H., Reisch, L.A., Russo, P., Veidebaum, T., Tornaritis, M. Williams, G., DeHenauw, S., DeBourdeaudhuij, I. (2014). Early childhood electronic media use as a predictor of poorer well-being. *JAMA Pediatrics* 168(5), 485-492.

¹³⁵ Carson, V., Kuzik, N., Hunter, S., Wiebe, S. A., Spence, J. C., Friedman, A., Tremblay, M. S., Slater, L. G., & Hinkley, T. (2015). Systematic review of sedentary behavior and cognitive development in early childhood. *Preventative Medicine* 78, 115-122.

¹³⁶ Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books of Chapel Hill.

¹³⁷ Raising Compassionate Kids: Humane Education and Interventions for Early Learners certificate program through the University of Denver
<http://www.du.edu/humananimalconnection/programs-education/humaneeducation.html>

¹³⁸ Saez, Emmanuel. "Striking it richer: The evolution of top incomes in the United States (Updated with 2014 preliminary estimates)." *Economics Department, UC Berkeley* (2015).

economic mobility.^{139 140 141} This value, fairness, is really at the heart of the Fair Start model. Fairness is necessarily comparative, and breaks the Isolation Model by asking families to work together to create the conditions every child deserves at birth.

Recognizing that it is objectively unfair that a poor child's future has been substantially limited before he or she is even born, it begs the question, would it be more fair if a wealthy family directed the funds they would have spent on a third or fourth child to a poorer family planning for just one child? Of course, while large families of wealth have the resources to invest in a greater number of children, this also leads to greater consumption, which in turn translates into greater environmental degradation that is then felt most acutely by the poor.¹⁴² Worse yet, wealthy and middle class families in the U.S. are currently incentivized to have more children via the earned income tax credit and dependency exemptions,¹⁴³ whereas as those poor families who need the financial assistance receive neither benefit.¹⁴⁴ That is why the Fair Start model encourages wealthy and middle class parents in particular to have fewer children, investing what would have been spent on additional children in the futures of those less fortunate.¹⁴⁵

¹³⁹ Carr, Michael, and Emily E. Wiemers. *The Decline in Lifetime Earnings Mobility in the US: Evidence from Survey-Linked Administrative Data*. Mimeo, 2016.

¹⁴⁰ The Fading American Dream: Trends in Absolute Income Mobility Since 1940
Raj Chetty, David Grusky, Maximilian Hell, Nathaniel Hendren, Robert Manduca, Jimmy Narang, *Science* 356(6336): 398-406, 2017

¹⁴¹ Alexander, Karl, Doris Entwisle, and Linda Olson. *The long shadow: Family background, disadvantaged urban youth, and the transition to adulthood*. Russell Sage Foundation, 2014.

¹⁴² For a discussion of the broader resource trade-offs and philosophical questions implicated by large families of means, see Rachels (note 7), articulating the "Famine Relief Argument against Having Children," where one "should immunize, feed and clothe impoverished children who already exist rather than spend hundreds of thousands of dollars on having one child of our own."

¹⁴³ Zelenak, Lawrence. "Redesigning the Earned Income Tax Credit as a Family-Size Adjustment to the Minimum Wage." *Tax L. Rev.* 57 (2003): 301.

¹⁴⁴ Ibid, Donald B. Tobin, *Investing in Our Children: A Not So Radical Proposal*, 73 U. Cin. L. Rev. 457 (2004).

¹⁴⁵ In light of the millions of orphaned children worldwide, some have called upon families of means to adopt in lieu of procreation. Friedrich, Daniel. "A duty to adopt?." *Journal of Applied Philosophy* 30.1 (2013): 25-39; Rulli, T. (2014) The unique value of adoption, In *Family*

Nature

In the Fair Start model, nature is a value that represents the health and complexity of the biotic and abiotic world as it would have existed before the environmental devastation wrought by humans, particularly since the eighteenth century. Nature as a value here is political, and represents nonpolity or the relative absence of human power. Is the normative baseline required for liberalism to remain coherent, and liberal political systems to become legitimate?¹⁴⁶ Conceiving of nature in this way sets a specific baseline against which the progress of civilization can be judged, where the goal is to allow nature's processes to restore the nearly 60% loss in biodiversity that has occurred since 1970¹⁴⁷ and preserve half of Earth for nature.¹⁴⁸ In this way, we ensure that all persons have a fundamental right of access to nature and nature's processes, along with a corresponding duty to preserve nature for future generations. This is the normative baseline that environmentalism has long lacked, a deficiency that explains its limited success.

The urgency of the problem cannot be overstated, when “every week an extra 1.5 million people need food and somewhere to live,” which “amounts to a huge new city each week, somewhere, which destroys wildlife habitats and augments world fossil fuel consumption.”¹⁴⁹ As Jane Goodall notes, it is human population growth and the resulting deforestation that pose the greatest threat to our closest genetic relatives, the chimpanzee.¹⁵⁰ Indeed, 7% of the planet’s

Making: Contemporary Ethical Challenges, Francoise Baylis and Carolyn McLeod (Eds.), Oxford University Press. While the Having Kids model certainly

¹⁴⁶ Carter Dillard, *The Primary Right*, 29 *Pace Envtl. L. Rev.* 860, 865 (2012)

¹⁴⁷ World Wildlife Fund, 2016 Living Planet Report, available at http://www.livingplanetindex.org/projects?main_page_project=LivingPlanetReport&home_flag=1

¹⁴⁸ Wilson, E. O. (2016). *Half-Earth: Our planet's fight for life*. New York: W. W. Norton & Company, Inc.

¹⁴⁹ Guillebaud, John, and Pip Hayes. "Population growth and climate change." *BMJ* 2008; 337; a576.

¹⁵⁰ Garcia, Evan, “Jane Goodall: ‘Human Population Growth’ the Biggest Threat to Chimpanzees,” *Chicago Tonight*, (Aug. 19, 2016), available at <http://chicagotonight.wttw.com/2016/08/19/jane-goodall-human-population-growth-biggest->

forests have been destroyed since just 2000.¹⁵¹ While conservatives may counter that the extinction of species is a natural phenomenon which occurred long before humans existed, “the frequency of these extinctions is rising at an unprecedented rate,” where “increases in human population growth and environmental dominance and manipulation have set the stage for the global mass extinction that has already begun.”¹⁵² In this way, it is clear where population growth has and will lead not just for humans, but for animals as well..

Environmental protection organizations have shied from the very issue that most threatens the fulfillment of their very own missions. Instead of being forthright with their supporters about the human population crisis and the resulting impacts on nature and wildlife, environmental organizations take what they feel to be the less off-putting route and deal with the other main drivers of environmental destruction and species loss, such as consumption and faulty economic models. This is a version of the order error economists make, described further below. There can be no assessment of what “we” should do environmentally without an account of who we should be, qualitatively and quantitatively, including in that account the fact that the “we” is temporally dynamic and determined by family planning models.

We worry that this choice is one that their supporters will least likely forgive them, as the last gorilla, the last whale, the last wolf and the last giant panda perish due to our unwillingness to face hard truths. As more people die of dehydration, insufficient nutrition, overexposure, etc, due to insufficient resources available to our burgeoning populace, will the public not wish we'd pushed them a little harder, provided them with more inconvenient truths? We do not pretend to

threat-chimpanzees.

¹⁵¹ Harvey, Chelsea, “Humans have destroyed 7% of Earth’s pristine forest landscapes just since 2000,” *Washington Post* (January 13, 2017).

¹⁵² McKee, Jeffrey K., and Erica N. Chambers. "Behavioral mediators of the human population effect on global biodiversity losses." *Human Population*. Springer Berlin Heidelberg, 2011. 47-59; Jeffrey McKee, Erica Chambers, and Julie Guseman, “Human Population Density and Growth Validated as Extinction Threats to Mammal and Bird Species,” *Human Ecology*, vol. 41, no. 5 (October 2013), pp. 773–78, (“[H]uman population density is demonstrably at the core of extinction threats to mammals and birds”)

think these are easy topics for organizations to take on in a highly competitive philanthropic atmosphere, but a recent meta-analysis¹⁵³ of environmental literature provides some guidance.

Organizations can take a "one health"¹⁵⁴ approach and help their supporters to see that through protecting the environment, their support also helps to protect humans (human rights) and other animals (species preservation and welfare). As environments are degraded, the poorest and least responsible for the damage are impacted most because they only have access to the fringes of resource use and often live in the most politically unstable regions.¹⁵⁵ In terms of other animals, they are relegated to collateral damage in human pursuits for access to resources and short-term profit. However, it is critical to keep in mind that species preservation is not just the purview of "bunny huggers" but should be of utmost concern for all humans as species' activities within our abiotic world provide the services and resources we need to survive, services such as pollination, water purification, storm buffering, seed dispersal, insect suppression, disease moderation, and so much more. So, discussing human population could perhaps be approached via family planning versus human population. Access to family planning and reproductive health services are basic human rights that simultaneously protect the environment and other species. In lock step, is the Fair Start model, for all the same reasons.

Democracy

True democracy requires that persons are able to meaningfully participate in continuing to shape the shared values and agreed upon rules of the community. A democracy requires an engaged populace with a stake in the outcomes of elections and the development of institutions. However, as a matter of basic arithmetic, as the population grows, each person's role in their respective political system is diluted, and correspondingly, the person's motivation to cooperate and contribute to the broader community is diminished. Thus, while Democrats and Republicans

¹⁵³ Robert Engelman et al., *Family Planning and Environmental Sustainability: Assessing the Science* (Washington, DC: Worldwatch Institute, 2016).

¹⁵⁴ Zinsstag, J., Schelling, E., Waltner-Toews, D. & Tanner, M. (2011). From "one medicine" to "one health" and systemic approaches to health and well-being. *Preventative Veterinary Medicine* 101, 148-156.

¹⁵⁵ also Engleman 2016 (and others, but E has it covered)

in the U.S. argue about small versus big government, the more important issue may actually be small versus big populace. Consider, for example, that Article I of the Constitution states that "The number of Representatives shall not exceed one for every thirty thousand..." And yet there are now over 600,000 persons per member of U.S. House of Representatives, or an average rate of loss of democracy at the national level has been about 1.4% per year since the country was founded.¹⁵⁶

The increased role of money in political campaigns can also be explained as a function of population growth, with the vacuum left by the lack of meaningful voter participation easily filled by the dollars of a few wealthy individuals.¹⁵⁷ It is no wonder then that voter ignorance persists at such high levels: "The insignificance of any one vote to electoral outcomes makes it rational for most citizens to devote little effort to acquiring political knowledge. They also have little incentive to engage in unbiased evaluation of the information they do know."¹⁵⁸

V. Applying the Fair Start Model

The goal of the Fair Start family planning model is to maximize human freedom by balancing the five values that appear to be its building blocks, with the goal of creating communities of free and equal people deciding the rules under which we will live. How does that work in practice? Given the current the state of affairs in the world, that balance is generally achieved with this simple formulation: Shifting any resources that incentivize larger families to instead incentivize smaller families who cooperate to give every child a fair start in life. In other words, maximizing resources to raise entry for all. While difficult to do out of the context of reforming a particular family planning system (which would probably be operating under the Isolation Model), it's possible to provide a framework.

Family planning agencies currently determine a minimum threshold of entry using the

¹⁵⁶ Bartlett, Albert A. "Democracy cannot survive overpopulation." *Population and Environment* 22.1 (2000): 63-71.

¹⁵⁷ Ibid.

¹⁵⁸ Somin, Ilya. *Democracy and political ignorance: Why smaller government is smarter*. Stanford University Press, 2013.

legal concept of parental fitness as a floor (below which the state would normally seize children). The Fair Start model could begin to be applied in this context, using this threshold, with non-enforceable and expressive law court orders.¹⁵⁹ The first directive for the agencies would be to create the greatest noncoercive and cooperative incentives possible to ensure that all births are above the minimum threshold of fitness. Incentives could include but not be limited to things like cooperative funding for family planning services in conjunction with things like state/private funded child health care and educational programs. However, under the Fair Start model these incentives would be publicly funded through progressive scaling redistributions, much like progressive tax systems, but with family size included as factor, so that funds are initially redirected from subsidies that support and/or incentivize the largest and wealthiest families in terms of birth position, and then through other sources as needed. Subsequent application of the model would repeat the process, moving away from the margins of fitness towards more aspirational targets, like the Children's Rights Convention, and moving down the scale in terms of funding sources, towards a true Fair Start parity.

Note the Fair Start model could be applied between families directly, with a wealthy family choosing to forgo an additional child, and using those savings to cooperatively incentivize family planning for a family on the other end of the income spectrum, through trusts and other devices. Applying the model in this way begins to balance the five values, which can be contextualized and applied to create a balance point for every family planning decision.

How would organizations advocate for the Fair Start model, even in the face of political resistance? The Fair Start Model will be realized using 1) justice programs that target the Isolation Model through local, state, federal, and international law reforms, especially in the area

¹⁵⁹ Carter Dillard, *Child Welfare and Future Persons*, 43 GA. L. REV. 367 (2009) (demonstrating the moral and legal duty a prospective parent has to be fit when he or she has a child, a duty arising from or creating correlative claim-rights shared by the state and prospective children); Carter Dillard, *Prospective Parents and the Children's Rights Convention*, 25 AM. U. INT'L L. REV. 485 (2010) (interpreting the Convention from a prospective-child-centered perspective, and exploring whether the Convention requires states to pursue policies that heighten prospective parents' perceptions of the duties they owe their prospective children before having them).

of tax, family, environmental law, and a radical form of federalism that gradually subdivides polities and emancipates truly democratic-sized communities as they develop; 2) corporate programs that encourage for-profit companies to adopt the Fair Start model in their corporate and family benefit programs, and non-profit companies (especially those that advocate for child welfare, environmental protection, and human rights and democracy) to adopt the model as part of their advocacy; and 3) grassroots programs where families voluntarily adopt the Fair Start model, ideally working in conjunction with other families.

It's vital to keep in mind that the Fair Start model is the re-imagination, articulation, and balancing of the values at the core of a valid human rights system, reconfiguring them in a way to eliminate conflicts and ensure a functional system. It is the unified right that makes the humans in human rights systems.

VI. Fakenomics

For decades, neoclassical economists have been doggedly encouraging high fertility rates, all with the single-minded goal of increasing GDP. But their calculations are incomplete and short-sighted, founded on an illusion of growth unlimited by the physical world, callous to the destruction of nature and the suffering of nonhuman animals, blind to our sheer dependency on the health of Earth's natural systems, and compounded by a lack of concern for inequities in the distribution of short-term growth and long-term burdens.¹⁶⁰

The Order Error

Economic systems are unjustified unless they occur within human-rights compliant and truly democratic political systems. The former follow and are subservient to the latter, that is, the state regulates the economy. This is doubly true when it comes to the norms that create the people that actually comprise the democratic political systems, the people around us, with whom we share the world, who determine the quality of our lives. Population growth, as well as the

¹⁶⁰ Ehrlich, Paul R., and Anne H. Ehrlich. "Population, Resources, and the Faith-Based Economy: the Situation in 2016." *BioPhysical Economics and Resource Quality* 1.1 (2016): 1-9 ("pro-growth proponents stubbornly refuse to recognize increasing biophysical constraints" while "also ignor[ing] the possibilities for reorganizing the economy on a more equitable basis.")

related problems of failure to ensure children's wellbeing and the development of functional systems of human rights and democracies, flow in large part from growth economics. Instead of producing objective value, growth economics, enabled by the Isolation Model and worse models that came before it, simply added more people to artificially inflate economic systems and the undemocratic governments that benefited from that growth. The truth is that human-rights compliant and truly democratic political systems begin with the people in them, and require smaller and well-connected communities made up of people of high civic dedication who *have time the capabilities* to participate. Those communities are built in part through the Fair Star model, which must precede the creation and maintenance of any economic system. The Fair Start model will replace the growth economics model of building economies by pushing women to have more children to become workers, consumers, and taxpayers, rather than free and equal democratic citizens. In other words, humans precede human rights-based democracies, which in turn precede, and override conflicting, economic systems.

The Growth Fetish as Ponzi Scheme

The dangers of increased population growth have been obvious for centuries, discounted as mere “externalities” in order to preserve the traditional growth model, where the profits are privatized and the costs socialized. That is, “costs and benefits of overpopulation under globalization are now distributed by class more than by nation,” with “labor bear[ing] the cost of reduced wage income [and] capital enjoy[ing] the benefit of reduced wage costs.”¹⁶¹ Conversely, a decreased population provides workers with more leverage, allowing them to bid up wages, and this is acknowledged by none other than the notoriously conservative Heritage Foundation.¹⁶² Indeed, the only group worse off under the current growth model than today's

¹⁶¹ Daly, Herman E., *World Watch Magazine*, Population, Migration, and Globalization September/October 2004, Volume 17, No. 5.

¹⁶² Heritage Foundation, *The Great Worker Shortage*, (April 2015) (admitting that “When Wal-Mart announced last month that wages for many starter workers would rise to \$9 an hour, well above the federal legal minimum, they weren't being humanitarians. They were responding to a tightening labor market.”)

poor are the poor of tomorrow, who are poised to face not only greater income inequality, but paralyzing environmental injustice, having fewer safeguards to cope with more frequent natural disasters and increased pollution.¹⁶³

Hidden Costs of Population Growth

The environmental degradation associated with economists' growth obsession is only now beginning to receive the attention it deserves because those costs are now directly affecting human quality of life.¹⁶⁴ ¹⁶⁵ As leading ecological economist Herman Daly writes, "While the world was still relatively empty growth displaced mainly nature. Now the world is so full that growth displaces human beings and their activities to an ever-greater extent." In particular, the singular emphasis on GDP and the associated encouragement of high fertility has exacerbated the unequal distribution of the benefits and burdens of population growth (both as to rich versus poor, and present versus future generations). The vast majority of models that seek to predict the costs and benefits associated with population growth, even when accounting for environmental costs, mask the adverse effects on the future poor by averaging the economic outcomes rather than looking at income per capita.¹⁶⁶

¹⁶³ Dennig, Francis, et al. "Inequality, climate impacts on the future poor, and carbon prices." *Proceedings of the National Academy of Sciences* 112.52 (2015): 15827-15832; Poverty and Climate Change, Eighth Conference of Parties to the United Nations Framework Convention on Climate Change, 2003.

Reducing the Vulnerability of the Poor through Adaptation

¹⁶⁴ Daly, Herman E. *Ecological economics and sustainable development*. Edward Elgar Publishing, 2007.

¹⁶⁵ Gillis, Justin, Flooding of Coast Caused by Global Warming has Already Begun, *New York Times*, available at http://www.nytimes.com/2016/09/04/science/flooding-of-coast-caused-by-global-warming-has-already-begun.html?_r=0&mtrref=www.prb.org&gwh=0A21FD43D102204E4CB7013380760B4C&gwt=pay

¹⁶⁶ Turner, Adair. "Population priorities: the challenge of continued rapid population growth." *Philosophical Transactions of the Royal Society of London B: Biological Sciences* 364.1532 (2009): 2977-2984; Ashraf, Quamrul H., David N. Weil, and Joshua Wilde. "The effect of fertility reduction on economic growth." *Population and Development Review* 39.1 (2013): 97-130.

Contrary to popular belief, incomes tend to be lower in faster growing areas, and unemployment rates tend to be higher. In fact, between 2000-2009, of the 100 largest metro areas, those that have fared the best have the lowest growth rates. Residents of the slowest-growing metro areas averaged \$8,455 more per capita in personal income than those of the fastest-growing area.¹⁶⁷ Put simply, “fertility reduction, while not a sufficient condition for economic growth, may well be a necessary one.”¹⁶⁸

Worse yet, population growth increases the burden on public infrastructure and government resources, reducing the standards of living. Conversely, reducing fertility allows populations to enjoy greater quality of life. Take Japan, for example, where even pro-growth propaganda acknowledges that “Japanese people remain rich, live very long lives — contributing to the large proportion of elderly — and Japan is safe, clean, comfortable and modern, despite having experienced anaemic economic growth since the early 1990s.”¹⁶⁹ Thus, while the demographic dividend of reducing age dependency is widely recognized, less well known but more important is the dividend from reducing fertility and thereby alleviating the need to expand infrastructure capacity.¹⁷⁰ Moreover, unlike the demographic dividend, the infrastructure dividend does not reverse as population's age.¹⁷¹

Achieving Prosperity without Growth

¹⁶⁷ Fodor, Eben. "Relationship between growth and prosperity in the 100 largest US metropolitan areas." *Economic Development Quarterly* 26.3 (2012): 220-230.

¹⁶⁸ Sindig, Steven W. 2009. "Population, poverty and economic development," *Philosophical Transactions of the Royal Society B*, 364(1532): 3023-3030.

¹⁶⁹ Armstrong, Shiro, "Japan's Greatest Challenge (And It's Not China): Massive Population Decline," *The National Interest* (May 16, 2016) (lamenting that Japan's aggregate economy will inevitably shrink due to population decline, thereby jeopardizing "Japan's place in the world" as a "trailblazer," yet also arguing that "[t]he primary objective of Japanese economic policy should be to maintain living standards and increase per capita incomes, not grow the aggregate economy.")

¹⁷⁰ O'Sullivan, Jane N. "Revisiting demographic transition: correlation and causation in the rate of development and fertility decline." *27th IUSSP International Population Conference*. IUSSP, 2013.

¹⁷¹ *Ibid.*

Given that the sole consistent benefit of the growth model is that it makes the rich even richer, we agree with ecological economists who argue that the growth model should be replaced by a sort of “stable community model, [where] the financial resources formerly required to support growth could be directed to other beneficial investments,”¹⁷² also referred to as a “steady-state economy.”¹⁷³

The Fair Start model seeks to do just that, achieving genuine economic prosperity, where nature's inherent value is recognized and respected, and the extraction of that value has a recognized corresponding cost (i.e. the depletion of a natural resource), while investing instead in families and ensuring that children enter the world with a fair start. Additionally, and perhaps more importantly, rather than solely focusing on GDP, the Fair Start model recognizes and helps to shrink the wealth gap by contemplating (1) household resources rather than national economies, (2) level of access to public services such as health, education, transportation, and (3) air quality, biodiversity, animal welfare etc. You build real value by investing in people, not just making more of them.

¹⁷² Foder, 2013.

¹⁷³ Daley, Herman E., 2007.