

Melisa Liana Vazquez

## Clashing Overpopulation(s)

### The Religious, the Secular, and the Unnatural “Conception” of Human Multitudes with Rights

#### Abstract

Overpopulation is a fraught concept because it immediately involves several competing ideas. First, the primary objectives of the human race vis a vis reproduction. Second, conflicting ecological understandings of the planet and the human impact on it, and finally, complex contradictions regarding what humans can and should “do” about all these conflicts. At the heart of the ensuing conflicts is the impossibility of definitively casting the issue of overpopulation as an exclusively natural/biological problem or instead a social/cultural problem: population straddles these domains at every angle. Discussions of “human nature,” as something internal and inexorable slide messily into discourse regarding “Nature,” intended as something outside, surrounding us. Any decision taken in an attempt to solve population excesses collides headlong into “natural” circumstances alongside those which are manmade. “Preserving” land or planting trees are often accompanied by the evacuation of people. Clearing land for industrial production similarly produces the displacement of people or the compromising of their living conditions, and then pollution and resource extraction with a broad negative impact on humans. Using medically assisted means to produce children currently results in thousands of “excess” embryos. The choice to avoid all “intervention” in support of “natural” reproduction has similarly led to burgeoning populations. These contradictions demonstrate how it is impossible to cleanly separate (or universally define) “human nature” and “planetary/outside nature” because both are continuously built, or constructed, in evident but also more subtle ways. There is no pre-existing singular “nature” inside nor outside that exists without our inventions and interventions. The positive side of this conundrum is that we have creative tools available to invent and intervene. Both religious and secular approaches to the challenges of “nature” have cognitive as well as ethical/moral contributions that can be leveraged toward the construction of new solutions. We must compare these dimensions meaningfully if we are to have any hope of solving an increasingly cramped ecological coexistence. If we can unpack the components of a wider span of ideas about Nature<sup>1</sup> and its contrasting legitimations, we may find possibilities for categorical openings, ways of seeing that reveal new creative approaches to realizing human needs and desires while simultaneously attending to steadily growing and ever more urgent environmental concerns.

**Keywords:** Overpopulation, nature, environment, religion, assisted reproduction, ecology, law.

---

<sup>1</sup> The literature on the meaning of Nature is, of course, colossal. For the purposes of my strongly interdisciplinary approach, I found important philosophical insights in Birnbacher (2014), sociological perspectives in Konner (1982), and a foundationally important reflection nature and theism in Mill (1874).

---

“Every spirit builds itself a house; and beyond its house a world; and beyond its world, a heaven. Know then, that the world exists for you. For you is the phenomenon perfect. What we are, that only can we see. All that Adam had, all that Caesar could, you have and can do. Adam called his house, heaven and earth; Caesar called his house, Rome; you perhaps call yours, a cobbler’s trade; a hundred acres of ploughed land; or a scholar’s garret. Yet line for line and point for point, your dominion is as great as theirs, though without fine names. Build, therefore, your own world.”  
— Ralph Waldo Emerson, *Nature*<sup>2</sup>

## 1. Introduction

In 1836, when Emerson’s celebrated essay *Nature* was published urging a greater human understanding of and appreciation for our organic surroundings, overpopulation was not yet on the horizon as a global issue. It would be another hundred years before the infamous World Population Conference was to be held in Geneva, bringing together a range of academic voices on issues including fertility, sterility and the biology of population growth. Fast forward to 2019 and we find a steady stream of conferences, publications and strident voices generally, sounding alarm bells against a global population growth that has exceeded all expectations, and by most accounts will presently become impossible to sustain.

Though Emerson’s concern was not so much “environmental” as it used in modern parlance, as spiritual and philosophical, in his inimitably poetic voice he reflects a crucial ambiguity which sits at the heart of the entwined controversies of the overpopulation question. If the world is running out of space for burgeoning humanity, how does our dominion of it require us to respond? Does the world simply exist for us, as it did for Adam? Or is it constructed by us in how we name it? Which, of course, was also Adam’s work. What does it mean to “build your own world” when space and resources are finite? Emerson was exalting freedom, individualism, and human creative capacity, values which are fundamental to the Western view of what it means to be human. But as environmental concerns grow, culturally-shaped conceptions of 1: “Nature,” as a thing-out-there and 2: “Human Nature,” as a thing-in-here, repeatedly clash, with differing views claiming legitimacy based on a wide and various spectrum of values. In the overpopulation domain, Human Rights are used as weapons on behalf of these competing legitimations, in one instance fighting, for example, for the reduction of fertility through education of women, and in others fighting for the right to have children through medically assisted means. The so-called developing world is blamed for environmental destruction while the “developed” world relentlessly enlarges its carbon footprint, already disproportionate, through skyrocketing amounts of air travel, exorbitant personal water use, and growing demand for foods that must be shipped across the globe, to name only a few examples.

Defenses mounted on behalf of “nature” in each case refer to something different. “Nature” may be rainforests, mountains, and oceans, but it is also subway rats, balcony pigeons and city air. It may be considered “natural” for men and women to procreate and raise children together but also to abstain from doing so, to prevent pregnancy, or to raise children in single-gender homes. While in the United States the political battles over abortion regulations are once again making headlines, in

---

<sup>2</sup> Emerson, 2009 (or. 1836).

China the excess number of males vs. females as a result of decades-long sex-selective abortion has been drawing international criticism for several years<sup>3</sup>. Arguments in all these areas are made in the name of religion, secularism, feminism, economics and the environment. In an attempt to disentangle some of the twisted conflicts, I will argue that visions of “Nature out-there” as well as visions of “Nature in-here” are continuously built, or constructed, in evident but also more subtle ways. and should be carefully deconstructed if we wish to understand what lies behind apparently unbending positions. There is no pre-existing singular “nature” inside nor outside that exists without our inventions and interventions. Our categories are as potent today as the biblical recounting of Adam’s naming of all things, determining what exists and what does not, what is possible and what is not. From our creation of “nature preserves” to the embryos we keep stored in laboratories, it is people who overwhelmingly control what Nature “is.” If we can unpack the components of a wider span of ideas about Nature<sup>4</sup> and its contrasting legitimations, we may find possibilities for categorical openings, ways of seeing that reveal new creative approaches to realizing human needs and desires while simultaneously attending to steadily growing and ever more urgent environmental concerns.

## 2. Overpopulation: An Aggregate

The World Bank Group is an internationally recognized entity that has been pooling funds to assist countries with development since the end of World War II. Today, it is also a go-to data source for comprehensive statistics that describe the state of the world, and specifically its development. The primary content on its website is entitled, “Understanding Poverty,” and the topics addressed under this rubric include Agriculture and Food, Climate Change, Energy, Health, Inequality and Shared Prosperity, etc. There is no categorical bucket for overpopulation, or even population. This perhaps speaks to the fraught quality of the concept. Calling out an analysis or excess of population leads immediately to the idea that something must be done to curb population and historically, these solutions have been, to put it mildly, controversial. If population must be “controlled,” who is in charge of the controlling? Who are the demographic targets? How are the limitations to be imposed and with what specific goals? These questions call into play an extensive series of complications that cross epistemic boundaries and show how overpopulation is a kind of aggregate term; in short, it is neither a fully natural/biological problem nor an exclusively social-cultural problem. This becomes immediately apparent when we look at the kind of data used to connect population to environmental health.

For at least the last half century from the beginnings of social science as a discipline, it has been argued that if the natural resources required for human survival are limited, then we cannot allow human populations to exceed those limits. In the early 20<sup>th</sup> century, Raymond Pearl developed his “S model” of population growth as a demonstration that there were “laws of life” that could be found in “any aggregate of living-beings at any scale: bacteria in a petri dish, *Drosophila* in a bottle, and humans too, in a city, nation, class, or planet. The population growth curve, as a line tracing the balance of life and death in a finite container, was abstracted as a universal tendency, repeatable for

---

<sup>3</sup> For a recent pointed analysis, see Hvistendahl, 2011.

all life, everywhere”<sup>5</sup> and it showed that populations whose needs exceed available resources will inevitably die out. Of course, Pearl was offering evidence for an idea that preceded him. Thomas Malthus is often cited for having stated that humans have a “perpetual tendency” to increase beyond their means of subsistence, and that we should have no reason to expect this to change. This is the “natural/biological” case for overpopulation. What was new for Pearl and his colleagues was the rejection of Malthusian pessimism in favor of a more hopeful view that change was both desirable and possible. Pearl was writing before World War II, when the full horrors of the potential of eugenics had not yet made it onto the Euro-American stage. Nevertheless, his position was supportive of the eugenics-friendly climate of his time, synthesized well by his statement, “If it is not possible to make desirable people have more babies, why not try teaching other people to have fewer?”<sup>6</sup>

The parallel birth of economics as a socially-relevant field of study had its own arguments regarding population and specifically quality of life. John Maynard Keynes’ foundation of macroeconomics was also universalistic in outlook and included the idea that with decreases in population came increases in prosperity. This was a social-cultural view of populations in the sense that it both took a stance on economic prosperity as being a universal goal for good living and also made the case that social choices such as birth control (or more darkly, limiting access to vaccines to “allow” populations to “naturally decrease”) could and should address problems of overpopulation. The pairing of these views<sup>7</sup> with Pearl’s studies supporting population control measures was instrumental in the development of today’s most common view: overpopulation is a “natural” and negative tendency that, however, we have the social means to address.

Since at least the 1930s, top among the goals of leading Western voices is that of educating the developing world and offering them the means to limit their reproduction thus solving the overpopulation problem. While the correlation between decreasing population and increasing prosperity in Western economic terms continues to hold, there are several problematic aspects to this simplified version of the overpopulation “problem” and its solution. The first is that the primary driver behind efforts to reduce population is the claim that excess population bears the greatest responsibility for diminishing resources. The tools available to measure diminishing resources, however, are much more sophisticated today than they were several decades ago. Today we have singled out carbon emissions as being among the most deleterious factors to environmental decay and have developed the “carbon footprint” as a way of assessing exactly which human actions result in meaningful environmental damage. The most recent studies assessing carbon impact have shown that while the developing world is catching up to the levels of industrially-produced environmental damage perpetrated by the West, at the family level, educated higher-income families with fewer children have a greater negative impact on the environment than their more prolific developing world equivalents. Oxfam’s data from 2015 could not be more clear:

---

<sup>5</sup> Murphy, 2017, 2.

<sup>6</sup> Hansen & King, *Sterilized by the State: Eugenics, Race, and the Population Scare in Twentieth-Century North America*, 189.

<sup>7</sup> “Taking the long view of macroeconomy and population, Keynes held that colonial immunization projects in India were misguided, as he believed that reductions in population caused by death from plague in Punjab were correlated with increased wages and prosperity in the generation that followed. Through aggregate and long-view scales, death from plague for Keynes became a ‘beneficent visitation.’” Murphy, 2017, 21.

...the average emissions of a person in the poorest half of the global population are just 1.57 tCO<sub>2</sub> – that equals 11 times less than the average footprint of someone in the richest 10%. The average emissions of someone in the poorest 10% of the global population is 60 times less than that of someone in the richest 10%. While estimates at the extreme top and bottom of the global income distribution are more difficult to make, there is no question the gap is much wider still: the richest 1% may emit 30 times more than the poorest 50%, and 175 times more than the poorest 10%.

Thus, if the concern regarding overpopulation is primarily fueled by concerns about the environmental impact of too many people, making distinctions among people based on their behaviors become necessary. Targeting the individual-level choices of people in the developing world may not be the most effective solution. Addressing the education of women in developing countries as a means of reducing population and “saving the planet” is a particular view that ignores the measured impact of societal behaviors in other parts of the world. As one population researcher points out, an American couple who has no children but decides to embark on a road-trip vacation in Peru will have about the same carbon impact as a baby in its first year.<sup>8</sup> The “individual choice” frame does not appear to make broad sense within the climate change domain except to point out the dramatic difference between the impact of the actions of the wealthy and those of the rest of the world.

Regardless of political positions, it is important to understand the historical and cultural origins of all of these ways of conceptualizing both overpopulation as a concept as well as any proposed solutions. GDP, carbon footprints, even “developing world” are ways of measuring that are historically contingent, and in important ways delimit the field of possible responses. The idea that people can universally be placed on a development scale, after all, is a pillar of Western narratives of progress and has been a key driver of colonization and modernization projects the world over, including programs for limiting population growth. Favored among these programs are those targeting the education of women. There is certainly abundant evidence that the education of women alongside the facilitation of their access to birth control measures and ability to support themselves outside the home leads to reductions in population growth and contributes to the growth of GDP. But the question of whether higher GDP leads invariably to a better quality of life is one that is rarely posed. The formula: fewer people=wealthier people=happier people is taken to be a given as the wider world becomes increasingly molded into a Western capitalistic shape. But the myriad ways we conceive of an “advanced” life are culturally specific and cannot be assumed to indiscriminately and universally further both personal and planetary improvement or “advancement.”

Examining the interconnectedness of variables within these unnamed grand suppositions may offer a different perspective. Women in developing countries, for example, typically breastfeed their children, and often for much longer periods than their Western counterparts. Breastfeeding has been repeatedly proven to lead to substantially healthier children which subsequently require less social health assistance throughout the span of their lives. Nevertheless, there is a taboo in Western nations against breastfeeding after the first year of life because it is seen as “backward.” If it is “advanced” or “developed” to maximize the health of individuals—the ethos behind vaccination programs in both developed and developing nations—then why isn’t breastfeeding for at least 18 – 24 months broadly practiced in the West? Though the numbers are relatively small, the phenomenon of Western couples

---

<sup>8</sup> Stone, 2018.

adopting or making surrogate arrangements with developing world mothers is another small paradox, wherein the “advanced” societies turn to the “less advanced” to solve their family building challenges. There was a global peak in cross-border adoptions in 2005, with nearly 46,000 children being adopted; it has been hypothesized that the subsequent dramatic drop in adoptions was primarily due to legislation prompted by the embarrassment of countries who were seen to be “exporting” babies.<sup>9</sup> International demand for surrogacy, on the other hand has been on the rise in recent years. Precise global figures are difficult to determine, however in 2012 the industry around surrogacy was estimated to be worth \$6bn a year, while in the UK the number of parental orders (legal requests for parental recognition by commissioning parents following a surrogate birth) tripled from 121 in 2011 to 368 in 2018<sup>10</sup>. The country with the most active surrogacy practice at the moment is India, with approximately 3,000 clinics providing services. The general profile in cases of international surrogacy is that of a middle-to-high income family engaging the services of a much lower-income surrogate,<sup>11</sup> prompting sharp criticism of the possibility for exploitation of surrogate mothers<sup>12</sup> but also of the children borne within these arrangements.<sup>13</sup>

Broad social trends often remain unexamined in their broad social effects. When Western women are at their most “modern,” they are working the same or more hours than men and delaying childbirth. This has direct consequences on fertility, fuels a biomedical industry that artificially assists reproduction, and often entails increased medical and social needs for both mothers and their children. A childcare industry is also required to care for children of working families, often placing tremendous financial burdens on these families and changing the dynamics of child-rearing generally. Rates of depression, suicide and violence grow in these “modern” societies. The ever-increasing drive for consumption of both products and services creates illegal and unsafe working conditions for people young and old both in the West and abroad whose survival depends on the manufacture of products and services to meet these demands. Unceasing growth in obesity and drug epidemics in the West, to take one example, would not appear to demonstrate increased “advancement.” To be clear, there are undoubtedly measures of progress that show that comprehensively, there is such thing as global advancement, measured by fewer deaths overall from disease, violence and malnutrition, longer life spans, more diffuse access to basic life provisions. But are we certain that the measures we take today in the name of advancement are actually contributing to global advancement? To circle back to the beginning of this essay, what does it mean to support Human Nature? Planetary Nature?

---

<sup>9</sup>Montgomery and Powell, 2018.

<sup>10</sup>Fenton-Glynn, 2019.

<sup>11</sup>Deonanden, 2015.

<sup>12</sup>“Financially and socially vulnerable women can be targets for surrogacy recruitment, attracted by the sums of money on offer. A surrogate in Ukraine, for example, can earn up to \$20,000 (£15,507) - more than eight times the average yearly income.” Supra, Note 7.

<sup>13</sup>The UN Special Rapporteur on the sale and sexual exploitation of children published a report in January 2018 stating, “Amidst this controversy, the present study identifies a safe harbour, in a simple premise: all States are obligated to prohibit, and to create safeguards to prevent, the sale of children.” UN, 2018.

### 3. Be fruitful and multiply

Both religious and secular arguments are made for the “naturalness” of conception. Both sides argue for the human right to determine in what manner (and quantity) children are conceived. Much has been written about the restrictiveness of Catholic positions with regard to all aspects of reproduction. The standard image is one of an autocratic Church that demands strict adherence to traditional heterosexual marriage followed by unlimited procreation without intervention (apart from personal monitoring of fertility cycles). Believers are seen as victims of an orthodoxy that is sorely out of step with the times. The accompanying secular disapproval of this view of “natural” procreation includes rallying cries for freedom of choice regarding the spacing, timing and number of children couples wish to have, as well as protests in the name of the planetary population control, and the inability of the planet to sustain current growth levels. Institutional Catholic views of “nature” are denigrated on all counts. What happens to those who are caught in the middle, variously impacted and compacted by religious and secular prescriptions and prohibitions? At least one ethnographic study argues that the vision of an overpowering church with helpless subjugated adherents does not accurately reflect the “dynamic interplay between cultural beliefs and institutions, social context, and interpretive agency that takes place when people make decisions regarding reproduction.”<sup>14</sup>

The study analyzed a multi-generational group of women in heavily Catholic<sup>15</sup> rural Mexico to investigate beliefs and practices regarding reproduction. It was found that both older and younger women had strong opinions regarding their agency in making reproductive decisions, and that there were varying paths selected by women when it came to upholding their beliefs and planning their families as desired. Whereas secular government campaigns in Mexico to reduce family size leveraged the rhetoric of freedom and better living<sup>16</sup>, there were those for whom such “opportunities” backfired; some women chose to have more children than “recommended” quite deliberately, as a way of living their faith, against the exhortations of the government, whose efforts were seen as manipulative and unrelated to people’s wellbeing. The author cites one subject, who when asked about her family desires replied,

...our Lord told us to be fruitful and multiply . . . and now it’s the government who is insisting that we have smaller families so that they can get loans from the United States. [...] I think that those who have larger families, in my experience, we live much better than those who have small families... I haven’t lacked for anything; I haven’t needed to bother anyone by asking for help; and why is that? Because I have my large family, God has not failed me. [I’ve been provided with] sustenance for my children.’

The study includes several different examples of women finding ways to harmonize their religious beliefs and family planning needs. An older woman traveled to another town to get permission from a priest to stop growing an already large family. Another made the case that having fewer children is the right thing to do for the sake of the children because in this way the families can provide more to

<sup>14</sup> Hirsch, 2008.

<sup>15</sup> A 2014 census found Catholics to be 81% of the population. Pew Research Center. Available at: <https://www.pewresearch.org/fact-tank/2016/02/10/a-snapshot-of-catholics-in-mexico-pope-francis-next-stop/>

<sup>16</sup> The study subject specifically cited the government campaign titled, “La familia pequeña vive mejor.” See, [http://www.conapo.gob.mx/es/CONAPO/27\\_de\\_marzo\\_El\\_Consejo\\_Nacional\\_de\\_Poblacion\\_cumple\\_40\\_anos?page=2](http://www.conapo.gob.mx/es/CONAPO/27_de_marzo_El_Consejo_Nacional_de_Poblacion_cumple_40_anos?page=2)

them. Still another felt that using birth control is a way of honoring and nurturing the bond of marital intimacy and love. Some felt that family planning should be undertaken as a way of honoring a religious principle of self-help (i.e., “God helps those who help themselves”). One young woman argued the benefits of abstinence in lieu of birth control, because it offers a way of satisfying one’s religious conscience while at the same time making an autonomous move, one that both partners are complicit in and responsible for. Women reported using breastfeeding as a kind of fertility control, as well as choosing to be sterilized after having had their desired number of children. As this wide range of behaviors demonstrates, the impact and influence of religion in people’s lives is not something that can be meaningfully captured by their membership to a given domination as captured on a survey. Nevertheless, it is significant that while Mexico remains among the countries with the highest concentrations of self-declared Catholics in the world, the number of children per family has dropped from 7 in 1975 to 2 in 2017.<sup>17</sup> This dramatic change, as the study cited above underscores, does not necessarily constitute a disregard for religious beliefs, but rather a consistent series of creative interpretations that allows for harmony between “traditional” and “modern” points of view. The women in the study showed various approaches to reproductive practices that sought to balance individual, marital, family, and community needs. The focus was on well-being, on individual but also communal good, revealing how neither religion nor “birth control” need quash the possibilities for rich family relationships and quality of life.<sup>18</sup>

Institutional Catholicism is perhaps the most restrictive of all the major religions when it comes to reproductive issues. While a comprehensive comparative analysis of theologies regarding reproductive issues is beyond the scope of this essay, it is notable that both Islam and Judaism make provisions for interventionist reproductive methods. In the case of Islam, having children is considered to be an indispensable and natural part of life for married couples. Therefore, a couple unable to have children is seen to be suffering from a kind of illness that can and should be treated. To this end, a fatwa<sup>19</sup> issued by the Grand Shaykh of Egypt’s religious university Al-Azhar in 1980, just two years after the birth of the world’s first IVF baby in England<sup>20</sup>, made medically assisted

<sup>17</sup> <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=MX>

<sup>18</sup> Sociologist Barbara S. Okun who has written about these issues in the Israeli context is quite direct on this point: “Scriptural writings can often be interpreted in different ways; moreover, popular understandings of religious teachings do not always correspond with scriptural writings. Thus, the connection between *particularized theology* and actual demographic behavior is often tenuous or nonexistent.” Okun, 2017. To be clear, I do not suggest a reductionist reading of the influence of religion. Several sociological studies have been undertaken studying the correlation between differing levels of religious practice and fertility practices. In more than one context, higher levels of religiosity (in these cases Catholicism and Judaism) have been proven to correspond to larger families (Okun 2017, Waldman 2006, Adsera 2006). There is some evidence to support the argument that the fertility decline in Spain since the 1980s, for example, was at least in part due to the separation of church and state proscribed by the 1978 constitution which led to a substantial decline in church attendance and religious practice. And yet, the same study shows that the use of contraceptives among women in Spain is consistent across “practicing” and “non-practicing” Catholics. (Adsera 2006). This discrepancy supports the need for a more nuanced reading of the role of religion in people’s decision-making when it comes to fertility and family planning.

<sup>19</sup> “If a ‘trustworthy physician recommends in vitro fertilization and shall be responsible for its appropriateness, then it is permissible and obligatory as a treatment of a woman who has pregnancy impediments,” (Egypt’s Gad El-Haq Ali Gad El-Haq, grand imam, 1980, quoted in Inhorn, 2003.

<sup>20</sup> Though artificial insemination procedures were documented as early as 1785 by the pioneering reproductive scientist John Hunter, UK-born Louise Brown is typically cited as the first “IVF baby” because she was born as the result of an egg that was fertilized outside of the mother’s body and then re-implanted in the mother.



reproduction permissible in Egypt, and the practice quickly spread to other Sunni Muslim countries. By 2003 there were dozens of fertility clinics in Egypt with a handful receiving state funding.<sup>21</sup> Various guidelines and fatwas have been issued across the Muslim world over the last three decades in support of the view that infertility is a malady that can and should be treated.<sup>22</sup> Although an exception to Sunni majority practices, in majority Shi'i Iran even third-party donations (egg and sperm) and surrogacy are permitted.

Judaism similarly sees bearing children as a fundamental duty of married couples; the first commandment of the Torah is based on the verse "Be fruitful and multiply and replenish the earth."<sup>23</sup> It has been claimed that the importance of this drive has led to Israel's placement at the forefront of global research and development for new reproductive technologies, holding the highest number of fertility clinics per capita in the world and producing 10 times more births per capita from IVF than the United States.<sup>24</sup> The subsidization of assisted reproduction by the Israeli state is undoubtedly an important factor; Israel's National Health Insurance Fund provides unlimited IVF treatments for up to two live births for childless couples as well as women seeking to become single mothers.<sup>25</sup> Another interesting aspect of assisted reproduction processes in the Jewish community is the practice of *hashgacha* or supervision. Since establishing parentage is extremely important within the Jewish tradition, a process has been established both in Israel and abroad in which religious authorities are trained in the laboratory processes of assisted reproduction. They then serve as third-party supervisors of the process, making sure there are no mistakes made. The idea is that only a third-party can lend the necessary objectivity<sup>26</sup> to ensure an error-free process.<sup>27</sup> The pro-natalist stance of the faith here embraces technology to support the crucial directive to have children. Even in this very brief review it is clear that there is no single standard for the "religious approach" to fertility and that the values underlying both doctrine and practice are complex.

When it comes to legal regulation of reproduction technologies, here too we can see an interesting array<sup>28</sup> that does not perfectly reflect the expected positions given the majoritarian religious affiliations in these European countries:

<sup>21</sup> Inhorn, Patrizio, and Serour, 2010

<sup>22</sup> Al-Bar M.A, Chamsi-Pasha H., 2015.

<sup>23</sup> Schenker, 2005. The Halacha, the Jewish text that forms the legal part of the Talmud, states that there is a religious obligation to bear one female and one male child, giving additional sense to the two-child maximum.

<sup>24</sup> Waldman, 2006, 81, citing Landau, 2003.

<sup>25</sup> Waldman, 2006, 82.

<sup>26</sup> "The husband and wife are not in an objectively emotional state to be capable of supervising, and the medical staff is also not impartial to the procedure's success. Therefore, a third party must be selected who has undergone training and who will not be compensated more or less depending on the procedure's outcome." Kumer, D. published online at [https://www.chabad.org/theJewishWoman/article\\_cdo/aid/536755/jewish/In-Vitro-Fertilization-IVF.htm#footnoteRef2a536755](https://www.chabad.org/theJewishWoman/article_cdo/aid/536755/jewish/In-Vitro-Fertilization-IVF.htm#footnoteRef2a536755)

<sup>27</sup> For a description of this supervision, see: <https://www.puahfertility.org>

<sup>28</sup> <https://www.institutobernabeu.com/en/ib/spanish-law-on-assisted-reproduction/>

European legislation on the field of assisted reproduction	Treatments for single women	Sperm Donation	Egg Donation	Donor Confidentiality	Preimplantation Diagnosis	Embryo Adoption	Postmortem Fertilization	Sex Selection
France	No	Yes	Yes	Yes	Yes	Yes	No	No
Germany	No	Yes	No	No	No	No	No	No
Italy	No	Yes	No	Yes	No	No	No	Yes*
United Kingdom	Yes	Yes	Yes	No	Yes	Yes	No	Yes*
Spain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes*

\*Only for cases of gender-related hereditary disease

While Germany's population is estimated to be about 30% Catholic, it has the most restrictive policies of all the countries cited, more so than Italy. Spain, on the other hand, whose population is estimated to be about 70% Catholic, is the least restrictive of all the countries. Though perhaps simplistic, this data supports the view that while religious positions certainly influence individual behaviors and national regulations, the results are varied and complex. In summary, any argument that holds the major religions solely responsible for limitations or excesses in reproductive practices does not reflect an accurate understanding of how religious beliefs are actually being lived nor how regulation responds.

#### 4. Reproductive Secular Suppositions

The gap between religious and secular positions regarding how “natural procreation” is defined is in many cases not as wide as might be imagined. Consider the following assertions. Regarding assisted reproduction:

We are living in a time of experimentation with life. But a bad experiment. Making children rather than accepting them as a gift, as I said. Playing with life. Be careful, because this is a sin against the Creator: against God the Creator, who created things this way.<sup>29</sup>

Regarding fetal gene manipulation:

If true, this experiment is monstrous. [...] The embryos were healthy. No known diseases. Gene editing itself is experimental and is still associated with off-target mutations, capable of causing genetic problems early and later in life, including the development of cancer.<sup>30</sup>

<sup>29</sup> Pope Francis at the 2014 meeting with the Association of Italian Catholic Doctors, transcript available at: [http://www.archivioradiovaticana.va/storico/2014/11/15/pope\\_urges\\_doctors\\_to\\_witness\\_to\\_sanctity\\_of\\_life/en-1111251](http://www.archivioradiovaticana.va/storico/2014/11/15/pope_urges_doctors_to_witness_to_sanctity_of_life/en-1111251)

<sup>30</sup> Julian Savulescu, director of the Oxford Uehiro Centre for Practical Ethics at the University of Oxford, cited in Holland and Wang, 2018.

The first statement was part of a speech given by Pope Francis at a Meeting with the Association of Italian Catholic Doctors in November 2014. The second is a comment from a scientist in 2018 on the as yet unconfirmed report that a doctor in China successfully modified the genes of twin embryos to make them resistant to HIV. While the reasons for opposing assisted or interventionist reproduction and further, gene manipulation, are different, the conclusions are similar. Both are positions taken on a continuum of ideas about what is considered natural and unnatural in reproduction. The nub that emerges again and again in these conflicts is: what constitutes a “bad experiment”?

There is no question that the last 40 years have seen an explosion of scientific breakthroughs that have led to unprecedented possibilities for reproductive science and an accompanying “Wild West” of legal and ethical conflicts. From debates over precisely which kinds of technology can be used to create embryos (in an ever-growing set of technologies) to the “ownership” and rights accorded to fertilized embryos, to the permissions and rights for their subsequent use, storage, or destruction, the law has struggled to keep up with medical advancements and social changes. Today, embryos can have up to three different genetic contributors and a fourth person in whom the embryo is then implanted. Legal cases have seen babies with no legal parent,<sup>31</sup> embryos involved in “custody battles,”<sup>32</sup> children resulting from post-humous genetic contributions,<sup>33</sup> and more. Court decisions have run the gamut, and regulation across jurisdictions is highly inconsistent.

The state of Arizona in the US has recently passed a statute<sup>34</sup> specifically addressing embryos resulting from in vitro fertilization that takes a decidedly “pro-child” stance. The law stipulates that in the case of any conflict, embryos will be “awarded” to “the spouse who intends to allow the in vitro human embryos to develop to birth.” Secondly, if both spouses intend to allow development but are in dispute for another reason, the dispute will be resolved “in a manner that provides the best chance for the in vitro human embryos to develop to birth.” The statute also shows a strong allegiance to the material biological contribution toward the embryo, specifying that the spouse who “provided the gametes,” if there is only one, has greater rights than a non-contributing spouse. The language and positioning here is very much grounded in a traditional, Christian-roots view of the importance of the

<sup>31</sup> A famous 2008 case in India resulted when a Japanese couple used IVF consisting of the father’s sperm and an anonymous Indian woman’s egg to create an embryo that was then implanted in another Indian woman serving as surrogate. The commissioning couple divorced before the baby was born. When the baby was born, neither the birth mother nor the commissioning mother wanted the baby. The father did want the baby but was legally prevented from becoming the sole parent. See, *Baby Manji Yamada v. Union of India & Anr.* (2008) INSC 1656 (29 September 2008). Judgement in the Supreme Court of India Civil Original Jurisdiction Writ Petition (C) No. 369 of 2008.

<sup>32</sup> In 2014, Ruby Torres was diagnosed with cancer. Her fiancé at the time Joseph Terrell agreed to donate sperm for the creation of embryos in the event that the cancer treatment would make her infertile. They married but then divorced. Torres sought to obtain the embryos, as she was indeed unable to become pregnant without them. The court found in favor of Terrell’s right to not be compelled to be a parent and ordered that the embryos be donated to a third party. Torres then appealed, and the appeals court found in her favor. See, *Terrel v. Torres* No. FN 2016-001785.

<sup>33</sup> In 1991, William Kane deposited 15 vials of his sperm in a sperm bank leaving specific written instructions that they were to become the custody of his partner, Deborah Hecht in the event of his death. Weeks later, he committed suicide. His adult children from a previous marriage litigated against Deborah Hecht to prevent her from retrieving the sperm. Upon appeal, the Superior Court of Los Angeles County reversed the decision and allowed Hecht to access to all cryobanked sperm left to her under Kane’s will. See *Hecht v. Superior Court (Kane)*, 37 Cal. App. 4th 1577 - Cal: Court of Appeal, 2nd Appellate Dist., 7th Div. 1995. Hecht has successfully given birth to two children as a result.

<sup>34</sup> Ariz. Rev. Stat. § 25-318.03

biological genetic connection<sup>35</sup> between parents and their potential offspring, under an umbrella of paternalistic support from a state that seeks to “care for all its children.” It is perhaps not surprising, however, that the state of Arizona is also responsible for one of the most controversial senate bills<sup>36</sup> in the last decade entitled, “Support our Law Enforcement and Safe Neighborhoods Act.” Though the bill was contested and as a result stripped of three of its four provisions, the final provision, referred to as the “show your papers” provision, requires police to arrest anyone they believe has committed a crime and whom they think is in the country illegally, and hold the individual until their immigration status can be checked with federal officials. It has been broadly condemned as a blatant example of racial profiling and a direct message to all people of a racial or ethnic minority that they are not wanted in Arizona. I connect these two legal provisions because they highlight the territorial logic of modern Western ideas of who belongs and who does not, who should be protected and who should not. While an unborn embryo that may or may not be ultimately wanted by its parents is to be protected at all costs, the people who are already present in the same social context are subject to detainment and scrutiny under duress *in case* their citizenship status is not in compliance with the law. It goes nearly without saying that the birth rate in Arizona has seen a sharp decline over the last decade from nearly 103,000 births in 2007 to 81,000 in 2017, a 20% drop,<sup>37</sup> a trend that would seem to support the pro-natalist IVF legislation, but problematize, based on sheer numbers, the anti-immigration legislation, since it has been particularly a decline in Hispanic births that has characterized the trend.<sup>38</sup>

What is at work here is a massive conflation of ideological elements which take several silent positions in direct contrast with one another. A proper elaboration of these conflicts would span the length of at least one book if not more, but an albeit limited summary should be useful nevertheless. When it comes to the idea of overpopulation, there are at least two big “camps” of issues. On one side there is the concern over the impending end to what has been called “cheap natural resources” which is usually tightly linked to discussions of population control. It is easy to see where populations are outgrowing their environs, and cartograms like that prepared by “Our World in Data” demonstrate how dramatic the contrast is between the most populous states and the rest of the world. To take just one representative factoid, “13 countries in the world are home to more than 100 million people: China (1.415 billion), India (1.354 billion), United States (326.8m), Indonesia (266.8m), Brazil (210.9m), Pakistan (200.8m), Nigeria (195.9m), Bangladesh (166.4m), Russia (144m), Mexico (130.8m), Japan (127.2m), Ethiopia (107.5m), Philippines (106.5m). A 14th country is very close though, Egypt is expected to reach 100 million next year. Together these 13 countries are the home of 4.75 billion people, 62% of the world population.”<sup>39</sup> It is statistics like these that have prompted organizations like the Bill and Melinda Gates Foundation to host international conferences intended to spur significant action to “fight” population growth in the countries that are

<sup>35</sup> For a fascinating and in-depth analysis of the paradoxical role of “blood ties” in a Christian-rooted Western legal context, see Ricca (2019).

<sup>36</sup> S.B. 1070, 49th Leg., 2d Reg. Sess. (Ariz. 2010). 2010 *See Arizona v. United States*, SCOTUSBLOG, <http://www.scotusblog.com/case-files/cases/arizona-v-united-states/> (last visited October 5, 2016).

<sup>37</sup> US Census Bureau cited by CNN Business, available at: <https://money.cnn.com/2018/06/27/news/economy/arizona-birth-rates-economy/index.html>

<sup>38</sup> Ibid.

<sup>39</sup> Roser, 2018

the biggest “offenders,” in this case, India. If there is one thing on which one can rely, however, when population control is taken on by wealthy countries, it is that equity and social justice are not the beneficiaries of the efforts. To wit: when in 2012 the Foundation announced a \$2.6 billion family planning strategy to get 120 million more girls and women in the poorest countries to use ‘voluntary family planning’ by 2020, the response of the Indian Union Ministry of Health was to order an increase in payment to organizations involved in carrying out sterilization in the poorest states. The UK Department for International Development (DFiD) aid, in turn, contributed to the funding for forcible sterilizations in the Indian state of Madhya Pradesh and Bihar<sup>40</sup>, leading, among other consequences, to the creation of “sterilization camps” with medical conditions so deplorable that a dozen women (at least) died.<sup>41</sup> It does not seem to be a stretch to say that despite the rhetoric of “family planning assistance,” the realities on the ground are dark. Furthermore, the fertility rate in India has already fallen from six children per woman in the 1960s to 2.35 children today<sup>42</sup>, which while higher than Western averages, is only slightly above the so-called replacement rate needed to keep a population from declining. It would appear that “family planning,” in India, if intended as birth-prevention, is not necessarily the dire concern that Western NGO’s make it out to be. That both large-scale sterilization efforts and international surrogacy clinics are on the rise in India demonstrates an almost grotesque asymmetry between what family planning means for wealthy western nations vs. for developing nations.

Indeed, at the other end of the population spectrum are the efforts of wealthy countries to protect their “right” to create biological children at any expense,<sup>43</sup> and the (surely belated) concern that wealthy populations are aging dramatically, and that the decline of birth rates means that white Europeans, for example, are already on the road to extinction. When Israel offers nearly unlimited funding to IVF procedures and Denmark includes pro-procreation rhetoric as part of its sex education classes<sup>44</sup>, there is a logic of the “naturalness” of a biologically supported nationalism lurking beneath. In short, the blind pursuit of self-interest is responsible for the gross disparities between how we see the “rights” of populations.

What if we attempted, instead, to look beyond traditional ideas of territory and biology? The cartograph that makes manifest the overwhelming majority of the populations in China and India could be seen, as a start, as an opportunity to rethink geographical boundaries and land distributions. Today, both India and China have a larger population than the entire world population in

---

<sup>40</sup> These two states are singled out by the Bill and Melinda Gates Foundation as targets for assistance: “Given our focus on improving conditions for the India’s poorest people, we are making significant investments in two states in particular: Bihar and Uttar Pradesh. With a combined population of more than 300 million and a high burden of disease, these states have disproportionate needs that their governments are working with partners to address.” In 2015, partnering state India’s Health Ministry gave Dr. R. K. Gupta, the doctor who single-handedly conducted 83 surgeries in less than three hours at one of the Chhattisgarh [sterilization] camps, an award for performing a record 50,000 surgeries during his career. (Wilson, 2015).

<sup>41</sup> For an eye-opening report on the grave injustices galvanized by population control measures and carried out in the name of women’s reproductive freedom, see Wilson, 2015.

<sup>42</sup> UN Population Division, 2017.

<sup>43</sup> While the sociological consequences of the world of artificial reproduction are appreciable, the monetary cost is also nothing to sneeze at, by at least one estimate averaging \$20,000 for a 40% chance of achieving viable pregnancy. See Uffalussy, 2014.

<sup>44</sup> Hakim, 2015.

1850 (when the world population was around 1.26 billion people)<sup>45</sup> and yet they rank at 2% and 6.3% respectively in terms of landmass<sup>46</sup>. On the other hand, Russia holds the largest percentage of land mass of any country in the world at 11%, while housing less than 2% of the world population. Similarly, Nigeria's population, approaching 200 million, is equivalent to 2.61% of the global population, dwarfing that of most other countries in Africa, and yet the largest African country in terms of land mass is Algeria, housing 0.56% of the global population. "Overpopulation" at this historical moment cannot be considered meaningfully without looking at population distribution. Efforts to leave the planet behind and migrate to Mars notwithstanding, we are not going to make more room on the planet. Options remaining are slowing global growth and making better use of the space available. Practical as these pithy ideas might appear, however, they call for a radical shift in our categorical models of space and stewardship. Models of a "natural" use of space that include private gardens, forests preserved as "oases of nature," or water sources maintained for our visual pleasure, are aligned with a historically contingent Western model of personal freedom and aesthetic beauty that simply may be outdated if we are to take seriously the current state of the planet. An insistence on genetically produced children at any cost motivated by the belief that having biological children is a critical part of being human may be similarly suspect at this point in humanity's timeline. And yet models for alternative ways of conceptualizing the sharing of the space and the growth of families that focus on a more communal stewardship have long been present, even in the West. Furthermore, such models can be found in both religious and scientific contexts.

Perhaps the last place one might look to for models of environmental stewardship, and especially those supporting birth control, is American Evangelical Christianity. Enter Richard Cizik. He is currently the President of the New Evangelical Partnership for the Common Good, a faith-based organization which advocates for social-justice causes including human rights, health-care access, and an end to war. But for ten years, Cizik was the Vice President for Governmental Affairs of the National Association of Evangelicals, and one of the most prominent Evangelical lobbyists in the United States. He describes have attended Climate Forum 2002, held in Oxford, England, which produced the "Oxford Declaration" on global warming. After hearing scientist and fellow Evangelical John Houghton present evidence on global warming, Cizik had what he describes as a conversion experience: he realized, with a dramatic suddenness, that climate change is a phenomenon of "biblical proportions" and should therefore be a part of the Evangelical political agenda. He refers to his position as "creation care," and places its roots firmly in the scriptures:

It is simply our articulation of a biblical doctrine, which is that we are commissioned by God the Almighty to be stewards of the earth. It is rooted not in politics or ideology, but in the scriptures. Genesis 2:15 specifically calls us 'to watch over and care for' the bounty of the earth and its creatures. Scripture not only affirms this role, but warns that the earth is not ours to abuse, own, or dominate. The Bible clearly says in Revelation 11:18 that 'God will destroy those who destroy the earth.'<sup>47</sup>

---

<sup>45</sup> Supra at Note 36.

<sup>46</sup> See, <https://www.worldometers.info/geography/largest-countries-in-the-world/>

<sup>47</sup> Little, 2005.

He has a similar take on the continuity between a religiously-motivated “pro-life” moral commitment and family planning. He argues, “Shouldn't it be a Christian imperative to help an estimated 125 million women worldwide avoid the social, emotional, and spiritual trauma – and for some, the life-threatening risk – of not having access to family planning?” He continues, “Making information, education, and contraception easily available is an effective way to be faithful to God's commands. By providing this help, we also supply, in effect, a ‘green technology’ that reduces greenhouse gas emissions.”<sup>48</sup> Cizik is an interesting figure because he has been an important leader in the evangelical community, but also a strong influencer in general; in 2008 he was included on TIME Magazine's list of “TIME 100” most influential people and in Fast Company Magazine's list of “Most Creative Thinkers.” He draws attention because he resists the traditional boundaries that typically divide the concerns of the religious right “versus” environmentalists or more broadly, the political left. He does not sit comfortably in either of the ideological boxes because he takes iconic ideas from one side, such as environmental care, and engages them seriously, finding points of resonance with iconic ideas from the other, such as Christian stewardship. And in fact, it is precisely this kind of movement and search for continuities that make his positions interesting as an example of what can be called “categorical migration.”<sup>49</sup> This is a key component of a cognitive methodology that sees categories as a constellation of related features or characteristics which are lassoed together through a creative cognitive effort, typically in order to achieve certain ends. Every idea we have consists of such categories, whether explicit or implicit, and is often rich in metaphor that aids inter- and intra-categorical connections. This may sound abstract but is actually quite experiential. Categories like “family,” “nature,” “education” are like umbrella terms, complex icons that encapsulate a rich cultural set of beliefs and practices. The features or characteristics which collected together make up these categories are not exclusive, quite the contrary. An abundance of conceptual building blocks repeat across categories, creating continuities. Within “nature,” for example, there are ideas of an organic or holistic provenance, ideas of origins, of how the environment we live in might be if we did not disturb it, organic health, interspecies cooperation, conservation, preservation, feeding and care, nutrition, and so on. The existence of these continuities, in turn, make possible the shifting of categorical boundaries, the re-framing of our governing ideas. If we look at Cizik's use of the phrase “green technology,” for example, we can see how he is taking a pat phrase from environmental quarters and re-configuring it to encompass contraception, as well as information and education more broadly. He does this by finding the continuity between the Christian ideas of caring for all other humans and stewardship of the planet, and the parallel secular ideas of human and environmental protection. That reducing the number of children born has a direct impact on the reduction of greenhouse gas emissions becomes a uniting feature of what might otherwise be contrasting categories. We need not share the belief that “God will destroy those who destroy the earth” to find common cause in nevertheless not destroying it. It is important to point out that this kind of categorical move is effective because each “side” stays in some way intact, or true to its tenets. Cizik motivates his people based on his interpretation of the Bible, not because he is trying to

<sup>48</sup> Excerpted from Cizik's blog post “Family Planning is Both Godly and Green” (2012) available at: <http://goodstewardcampaign.org/family-planning-is-both-godly-and-green/>

<sup>49</sup> The idea of categorical migration is one developed extensively throughout the works of Mario Ricca, see indicatively, Ricca, 2017. It is, however, inspired by and grounded in Peircean semiotics, for which see, to begin, Pierce 1998 (or. 1903).

accommodate or compromise with environmentalists. Similarly, secular activists motivate their constituents based on beliefs about a secular duty to protect natural resources. If they unite beneath a banner of reducing greenhouse gas emissions, they do so sincerely, finding their own meaningful reasoning. There can be no fallacious compromises or disingenuous positioning in the ambit of effective categorical migrations. To be sure, this kind of integrity comes at a cost.

Cizik was ousted from the National Association of Evangelicals because his re-framings were met with great resistance from those who felt that too much was “lost” in the shifting. Specifically, he was forced to resign after he gave an interview in which he confessed a concern over his community’s fiery opposition to same-sex civil unions, “We have become so absorbed in the question of gay rights and the rest that we fail to understand the challenges and threats to marriage itself – heterosexual marriage. Maybe we need to reevaluate this and look at it a little differently.”<sup>50</sup> Cizik was attempting to look holistically at the institution of marriage, perhaps to uncover the bonds of affection, care and duty that it, at least in theory, incapsulates. Many have argued (and legislation is beginning to agree in some areas) that if the essence of marriage is that of a caring bond between two people, and same-sex people are interested in the institution of marriage because they wish to honor that kind of bond, it is not clear why they would legally be excluded. This is particularly relevant if we extend the discussion to include the issue of childrearing. Many couples choose to marry with the explicit goal of raising children. Though international statistics are difficult to find, one study<sup>51</sup> recorded that in the United States in 2016, 114,000 same-sex couples were raising children. This number may not seem terribly significant. What is deeply compelling in a discussion of populations (and especially “overpopulation”), however, is that the same study found that same-sex couples were significantly more likely than different-sex couples to be raising adopted or foster children. Among couples with children, over one-fifth (21.4%) of same-sex couples were raising adopted children compared to just 3% of different-sex couples, and 2.9% of same-sex couples were raising foster children compared to 0.4% of different-sex couples. The willingness of couples to raise adopted and foster children is unquestionably of great importance to any discussion regarding overpopulation, as well as any meaningful assessment of the global care of children. A mindset of stewardship for both the planet and the planet’s children elevates adoption to the plateau of universal rights and obligations, and this has ramifications for the institution of marriage, something of which Cizik was surely aware.

The cognitive thread that runs through these positions is a nuanced understanding of the continuum between the “naturalness” of reproduction (including the related societal component, marriage) and the “naturalness” of nature itself, its preservation/conservation, or even right to continue to exist. If one believes that humans can and should reproduce and flourish, and also that the earth should can and should continue to develop/evolve and flourish, it must be understood that the consequences of human actions in these domains are necessarily linked. It is precisely this link that makes the idea of overpopulation (and its cortege of concerns) so fraught. We cannot support an unfettered right to reproduce while simultaneously ignoring the environmental consequences of such a right. Nor can we impinge on certain populations to reduce their growth while promoting unlimited growth for others. The concept of stewardship is useful here. Whether the object of

---

<sup>50</sup> Transcript of interview with Terry Gross, Fresh Air, National Public Radio, December 2, 2008.

<sup>51</sup> <https://williamsinstitute.law.ucla.edu/research/parenting/how-many-same-sex-parents-in-us/>



concern is an individual child or the entire planet, both require a regime of care, and the actions of each impact the other. So, caring for children means ensuring they have access to clean air, clean water, healthy nutrition, etc., all of which are of course also the definition of a cared-for planet. The regime of care for the Western wealthy child also increasingly includes, however, a life-time of products made in developing countries (clothing, toys, electronics, etc.), use of car transport for schooling and extracurricular developmental activities, travel to other countries, and even the latest and greatest innovations in nutrition which frequently imply the importation of foods from faraway lands via international transport. It might be also be noted that the products imported from developing countries are, in some cases, the result of the labor of other children.<sup>52</sup> What, then, is to be included within a “right” to reproduce? While there are evermore legal instruments designed to protect the interests of children, comparably explicit rights of parents to reproduce are not in evidence beyond general provisions of “right to family life.” In fact, there is a strong case to be made that protecting the rights of children means taking a wide view that encompasses a range of factors in the family and social environments of children.<sup>53</sup> A consideration of children with a view to universal stewardship would necessarily require some kind of balancing between the interests and rights of children across vastly differing social spectrums, and this would have direct consequences on regimes of reproduction.

Similarly “competing interests” are found in secular environmentalist domains. “Green colonialism” is a term used to identify the appropriation of land from residents by organizations who wish to preserve land “for nature.” This conservation template has been used to create some of the most famous natural landmarks such as the Yosemite and Yellowstone National parks, whose native inhabitants were forcibly evacuated in the name of “preservation.” In fact, today, protected areas take up more than 15 percent of the Earth’s land surface. Furthermore, they “produce and recycle much of the planet’s fresh water, absorb gigatons of excess carbon, exhale a fifth of the oxygen we breathe, and contain 80 percent of the Earth’s terrestrial biodiversity.”<sup>54</sup> While there is no question that these areas are therefore of extreme importance to the health of the planet, political/economic interests have a way of imposing their priorities even when it comes to the alleged protection of these areas, and in paradoxical ways. When the “nature” that is to be the object of protection is defined as unpopulated wilderness, it follows that indigenous people are evacuated. But what happens when these people are actually the most qualified to protect the area in question?<sup>55</sup> In Ecuador, a small indigenous movement has begun to try to regain control of the Cayambe Coca, a protected area that, rather than being shielded from industry by governmental management, has increasingly suffered from the results of illegal mining activity, in some cases thanks to concessions overtly given by the

---

<sup>52</sup> Ethiopia, for example, has one of the worst records in child labor reports. Children there work harvesting bananas and coffee, among other high-demand products (UNHCR).

<sup>53</sup> For a deep analysis of this issue in the context of intercountry adoption see Ricca, 2019.

<sup>54</sup> Zaitchik, 2018.

<sup>55</sup> “In 2012, the science journal *Forest Ecology and Management* published a study comparing 40 protected areas and 33 forests managed by indigenous communities. Every community-managed forest was better protected, with lower and less variable annual deforestation rates than state-run protected areas. In 2016, a study issued jointly by the Rights and Resources Initiative, the Woods Hole Research Center, and the World Resources Institute (WRI) affirmed that titled indigenous lands in three Amazon countries had two to three times lower deforestation rates over a period of more than a decade than lands the state hadn’t formally recognized as indigenous forests.” Ibid.

government. Indigenous Cofán activists met with Environment Ministry officials in September 2017 to report on the contamination resulting from these trespassing miners. They were advised by the government to negotiate a payment system and act as brokers for the illegal and polluting activity.<sup>56</sup> So, the indigenous people who have been deemed not to belong in the area are now lobbying the government that excludes them to allow them to protect the governmentally “protected” land. In this case, it is capitalism that reigns, but sometimes even altruistic efforts that privilege land and animals do so at the expense of people.

In Israel in 2003, the so-called ‘separation barrier’ was being erected to take over parts of the West Bank, wreaking havoc for Palestinians by blocking access to people’s jobs, separating families, etc. It was not, however, human rights concerns that motivated the most prominent opposition to the wall. As journalist Naomi Klein reported:

Yehudit Naot, Israel’s then environment minister, was more worried about a report informing her that ‘The separation fence ... is harmful to the landscape, the flora and fauna, the ecological corridors and the drainage of the creeks.’ ‘I certainly don’t want to stop or delay the building of the fence,’ she said, but ‘I am disturbed by the environmental damage involved.’ As the Palestinian activist Omar Barghouti later observed, Naot’s ‘ministry and the National Parks Protection Authority mounted diligent rescue efforts to save an affected reserve of irises by moving it to an alternative reserve. They’ve also created tiny passages [through the wall] for animals.’<sup>57</sup>

The cyclical and indivisible way that Nature is conditioned by human presence while human presence is conditioned by Nature makes it impossible to ignore one side or the other without losing all integrity. Every day we become more aware of just how interconnected human activity has become across the planet and how it is rapidly crumbling under the weight of irresponsible exploits. Regardless of one’s view of overpopulation concerns, there is no denying that culture drives our decision-making in everything from the use of the term overpopulation to the myriad ways solutions are formulated to address it. As I have tried to show in this essay, however, univocal impositions of cultural suppositions will only exacerbate planetary problems. If, instead, we think in terms of categorical migration, we might consider a term like *distribution*. The issue of planetary population distribution was previously broached earlier in this essay, but distribution is an interesting concept on more than one level. What might a vision of “distributed reproduction”<sup>58</sup> look like, for instance? As mentioned above, we cannot divorce the act of reproduction and the lifelong regime of care that follows from the birth of a child. Thus, reproduction is also about sustaining life, and how that life is sustained has consequences on all surrounding lives and environments. If the “lasso” were drawn around a broader scope of factors, we might be able engage a values-connection between sustaining lives and sustaining the planet that hosts them (and then the factors comprising these terms and the related conception/semantic spectrum). One of the perhaps more objectionable terms in overpopulation discourse is the “averted births” number that is touted as a sign of the success of developing world educational programs. And yet, not giving birth (deliberately or otherwise), contributing to the birth/raising of children ‘bodily’ or ‘socially’ (including gamete donations,

<sup>56</sup> Ibid.

<sup>57</sup> Klein, 2016.

<sup>58</sup> This term comes from Michelle Murphy, see Notes 2 and 4.

surrogacy, adoption, etc.) are also ‘reproductions,’<sup>59</sup> that together create our social fabric and planetary presence.

We can find a useful metaphor in the language of gamete donations. Allogenic donations are those given without a specific donor in mind (e.g., “sperm banks” with anonymous donors), while autologous donations are processes of banking tissue for the donor’s own future use; the latter type are on the rise. Autologous orientations are not unlike the environmental trends described above, in the sense that emphasis is placed on individual gain, profit at any cost, embryos as property, even, without regard for ecological—intended in the broadest sense—consequences. Allogenic, on the other hand, becomes aligned with the idea of stewardship, of privileging community needs over individual ones, of considering the extended consequences of each action.

Another important variable not yet discussed is the role of time in our reproductive interventions. When gametes are stored, biological time is manipulated, and traditional generational flows are transformed. Children can be conceived after one or both parents have died, and parents can produce children much later in life. Nor is this constant drive to extend life limited to reproduction domains, as developed nations around the world decry the negative effects to come of their aging populations. All of this of course has important consequences for population flow: while the fertility rate in India has fallen dramatically over the last several decades, for example, population momentum means that population growth will continue for another four decades.<sup>60</sup> Given the resource drain and myriad associated problems that follow from only recently curtailed growth areas and longer-standing aging populations, is extending life at any cost a tenable practice? What about all the prohibitions (both legal and sociocultural) for end-of-life interventions?

The manipulation of biological time also creates legal/ethical conundrums. After more than four decades of assisted reproduction technology, some industry experts estimate that there are currently millions of embryos in storage, many of them without a preordained future. They are the result of the dissolution of couples, indecision, or even economic abandonment (the cost of storage is so high that some are unable to keep up with the payments). When these are viewed as children, it becomes quite complex to determine what to do with them. Couples who have embryos in storage and do not wish to enlarge their families any further can choose to keep them in storage (though usually not indefinitely) ask the clinic to dispose of the embryos, donate them for research, donate them to other couples, or, in the latest attempt to resolve ethical distress, request a “compassionate transfer.”<sup>61</sup> This is a process in which implantation of embryos into the mother is performed at a time in her cycle when she is unlikely conceive. Remarkably, the vast majority of couples do not wish to donate their embryos to others, despite the tremendous time and economic advantage to infertile couples that such donation would bring.<sup>62</sup> The ever-growing embryo population thus remains locked in a categorical logic of ownership and the superiority of “genetic” or “blood-related”<sup>63</sup> children.

<sup>59</sup> Neimanis, 2014.

<sup>60</sup> Roser, 2018.

<sup>61</sup> Despite the terminology, the practice has been called unethical by at least one commentator who points out that knowingly implanting an embryo that will not develop is directly comparable to simply destroying the embryo. See Lee, 2017.

<sup>62</sup> One woman writing about her experience for an American national magazine put it this way: “The easiest [option] to dismiss was donating them to be used by someone else. This would involve giving the embryos to a clinic, or directly to a couple or individual who could implant it and, should it lead to a live birth, raise it. In order to create an embryo without

## 5. Conclusion

As I have tried to outline in this essay, the challenges and dilemmas that arise around reproduction, population and the environment in which they occur, require both cognitive and ethical/moral engagement. Despite biases to the contrary, religious and secular responses to these questions do actually engage at both these axes. What is called for is a willingness to compare dimensions, to see the persistent morality that lurks beneath prescriptions of “human nature,” as well as the cognitive opportunities nestled within new and old approaches to stewardship and human care. I hope that I have shown how there is no singular “nature out there,” nor “nature in here,” but rather a series of creative inventions, potent and dangerous, each generating consequences that variously open up and shut down other alternatives. If we are to make any headway, this creativity must emerge out into the open and be acknowledged as such. A spectrum of ideas as diverse as the people who come up with them needs to be given the space to speak, but also to listen. “Making kin,” and “distributed reproduction” should engage with ideas of Christian stewardship and the sanctity of marriage if we are to have any hope of peaceful resolutions. More generally, openness to the possibility of detaching our behaviors from our culture is vital. In this vein, law, too, would need to come to terms with the cultural streams that shape it and set its limits. Modesty in these developments and a willingness to mutate our profoundly cultural categories is fundamental to any such efforts. Unfortunately, the global consequences of our actions to date are making it impossible to ignore the impending threat of the exhaustion of resources and the shrinking aspect of our planetary environment. The biblical prophecy of man’s dominion on earth has perhaps become self-fulfilling. The question now is: what we will do with our power? We can exercise control over significant portions of both nature-inside and nature-outside. Will we engage regimens of stewardship and universal care for life on Earth oriented toward a horizon of justice and possibility? Or will we condemn future generations to a sure and dismal end? It is impossible to know how current day predictions for population will turn out. We can only know that facts and values will always intersect and contribute to each other’s construction. It is no longer in any way legitimate to pass off singular cultural models as universal scripts for being. Though perhaps over-cited, like a cliché, it is repeated because it resonates broadly; it seems that our planet has become, in the lexicon of *The Little Prince*, something “tamed.” We can no longer afford to deny his recapitulation, “You become responsible, forever, for what you have tamed.”<sup>64</sup>

---

any of their biological material, an infertile couple might have to pay for donor sperm and a donor egg, and then pay for a clinic to combine them and then transfer one or more resulting embryos to the womb, all of which can easily cost tens of thousands of dollars. While it is against the law to sell biological material, clinics are allowed to charge for the time and effort that goes into making sperm and eggs. Embryos, on the other hand, are generally a byproduct of a process done for another purpose and therefore can’t be assigned any monetary value. The cost of using a donated embryo includes only legal fees and the cost of transferring the embryo to the womb, which adds up to around \$5000. I could never donate my embryos because I’d be certain that I’d spend the rest of my life looking for what I would still consider my child. Most couples dealing with the disposition question feel the same. According to research done by Nachtigall and others, only a small number of couples—just 6% in one study—decide to donate their embryos.” Strauss, 2017.

<sup>63</sup> See Note 50 for a rich philosophical analysis of the meaning of “blood ties” and their far-reaching implications for the global care of children.

<sup>64</sup> Saint-Exupéry 2000 (or. 1943).

## Bibliography

- Al-Bar M.A and Chamsi-Pasha H. 2015. *Contemporary Bioethics: Islamic Perspective*. 2015. Chapter 11, Assisted Reproductive Technology: Islamic Perspective. Cham (CH): Springer; Published online 2015 May 28. Available at: [https://www.ncbi.nlm.nih.gov/books/NBK500175/doi/10.1007/978-3-319-18428-9\\_11](https://www.ncbi.nlm.nih.gov/books/NBK500175/doi/10.1007/978-3-319-18428-9_11)
- Birnbacher, D. 2014. *Naturalness. Is the 'Natural' Preferable to the 'Artificial'?* (trans. David Carus). Lanham: University Press of America. Originally published in German as *Natürlichkeit* by de Gruyter Verlag, Berlin, 2006.
- Deonanden, R. 2015. *Recent trends in reproductive tourism and international surrogacy: ethical considerations and challenges for policy*. *Risk Manag Healthc Policy*. 2015;8:111-119. Published 2015 Aug 17. doi:10.2147/RMHP.S63862
- Emerson, R.W. 2009 (or. 1836). *Nature and Other Essays*. Mineola: Dover Publications.
- Fenton-Glynn, C. 2019. *Surrogacy: Why the world needs rules for 'selling' babies*. *BBC News*. April 26, 2019. Available at: <https://www.bbc.com/news/health-47826356> Accessed 5 October, 2019.
- Hamilton, M.P. (ed.) 1970. *This Little Planet*. New York: Scribner.
- Hansen, R. and King, D. 2013. *Sterilized by the State: Eugenics, Race, and the Population Scare in Twentieth-Century North America*. New York: Cambridge University Press.
- Haraway, D. 2016. *Staying with the Trouble. Making kin in the Chthulucene*. Durham and London: Duke University Press.
- Hirsch, J. S. 2008. *Catholics Using Contraceptives: Religion, Family Planning and Interpretive Agency in Rural Mexico*. *Studies in Family Planning*, June 2008; 39(2): 93-104.
- Hitzhusen, G.E. 2007. *Judeo-Christian theology and the environment: moving beyond skepticism to new sources for environmental education in the United States*. *Environmental Education Research*, Taylor & Francis.13:1, February 2007, 55-74. DOI: 10.1080/13504620601122699
- Holland, O. and Wang, S. *Chinese scientist claims world's first gene-edited babies, amid denial from hospital and international outcry*. *CNN online*, November 27, 2018, available at <https://edition.cnn.com/2018/11/26/health/china-crispr-gene-editing-twin-babies-first-intl/index.html>
- Hvistendahl, M. 2011. *Unnatural Selection: Choosing Boys Over Girls, and the Consequences of a World Full of Men*. New York: PublicAffairs (Perseus Books Group).
- Inhorn, M.C. 2003. *Local Babies, Global Science: Gender, Religion and In Vitro Fertilization in Egypt*. New York, Abingdon: Routledge.
- Kates, C.A. 2004. *Reproductive Liberty and Overpopulation*. *Environmental Values*, 13:1, 51-79, February, 2004. White Horse Press. <https://doi.org/10.3197/096327104772444776>
- Katz, K.D. 2006. *Parenthood from the Grave: Protocols for Retrieving and Utilizing Gametes from the Dead or Dying*. *The University of Chicago Legal Forum*. Vol. 2006: Iss. 1, Article 1. Available at: <http://chicagounbound.uchicago.edu/uclf/vol2006/iss1/11>
- Khorfan, R. and Padela A.I., 2010. *The Bioethical Concept of Life for Life in Judaism, Catholicism and Islam: Abortion When the Mother's Life is in Danger*. *JIMA* 2010 Nov; 42: 3, 99-105. Published online 2010 Oct 26. doi: 10.5915/42-3-5351. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3708674/#b6-jima-42-3-5351>
- Konnor, M. 1982. *The Tangled Wing. Biological Constraints on the Human Spirit*. London: William Heinemann Ltd.
- Klein, N. 2016. *Let Them Drown*. *London Review of Books*, 2016, 38: 11, 11-14.
- Landau, R. 2003. *Religiosity, Nationalism and Human Reproduction: The Case of Israel*, *23 Int'l J. Sociology & Soc. Policy*, 2003. 64, 68.

- Lee, K. 2016. *What Happens to the Leftovers? Is Compassionate Transfer Ethical?* Voices in Bioethics: An Online Journal. Columbia University. Available at: <http://www.voicesinbioethics.net/newswire/2017/2/17/sw388nseb7x0o0e0odngdp5q3m0yg1>
- Little, A. 2005. *An Interview with Green Evangelical Leader Richard Cizik*, Grist.org, October 6, 2005. Available at: <https://grist.org/article/cizik/>
- Livingston, Julie, 2019. *Self-devouring Growth. A Planetary Parable as Told from South Africa*. Durham and London: Duke University Press.
- Maguire, D.C. and Rasmussen, L.L, 1998. *Ethics for a small planet: New horizons on population, consumption and ecology*. Albany: SUNY Press.
- Mill, J.S. 1874. *Nature, the Utility of Religion and Theism*. London: Longmans, Green, Reader and Dyer.
- Montgomery, M. and Powell, I. 2018. *Saving International Adoption: An Argument from Economics and Personal Experience*. Nashville: Vanderbilt University Press.
- Murphy, M. 2017. *The Economization of Life*, Durham and London: Duke University Press:
- Murphy, T. F. and White, G. B. 2005. *Dead Spear Donors or World Hunger: Are Bioethicists Studying the Right stuff?* The Hastings Center Report, 35: 2 (Mar-Apr 2005).
- Neimanis, Astrida, 2014. *Speculative Reproduction. Biotechnologies and Ecologies in Thick Time*. philoSOPHIA, 4:1, Winter 2014,108-128.
- Okun, B.S. 2017. *Religiosity and Fertility: Jews in Israel*. Eur J Popul. 2017; 33(4): 475–507. doi:10.1007/s10680-016-9409-x
- Peirce, Charles S. 1998 (or. 1903). *The Essential Peirce: Selected Philosophical Writings*. Vol. 2 (1893-1913).
- Ricca, M. 2019, *Children in Tatters across the Earth. Transnational Adoptions, Intercultural Discriminations*. Forthcoming.
- Ricca, Mario. 2017. *Ignorantia Facti Excusat: Legal Liability and the Intercultural Significance of Greimas' 'Contrat de Véridition'*. In International Journal for the Semiotics of Law 31: 101. <https://doi.org/10.1007/s11196-017-9529-6>.
- Ricca, M. 2014, *Intercultural Law, Interdisciplinary Outlines: Lawyering and Anthropological Expertise in Migration Cases Before the Courts*, E/C Rivista Telematica dell'Associazione Italiana di Studi Semiotici, March 2014. [http://www.ec-aiss.it/index\\_d.php?recordID=709](http://www.ec-aiss.it/index_d.php?recordID=709)
- Roser, M. 2018. *The Map We Need if We Want to Think About How Global Living Conditions are Changing*. Our World in Data, Published online, September 12, 2018 available at: <https://ourworldindata.org/world-population-cartogram>
- Saint-Exupéry, A. 2000 (or. 1943). *The Little Prince*, (trans. Howard, R.). Orlando: Harcourt.
- Schenker, J.G. 2005. *Assisted Reproduction Practices: Religious Perspectives*. Reproductive Biomedicine Online. 2005; 10(3): 310-319. doi: 10.1016/S1472-6483(10)61789-0
- Sen, A. 1990. *More Than 100 Million Women Are Missing*, New York Review of Books, December 20, 1990.
- Stone, L. 2018. *Why you shouldn't obsess over 'overpopulation': we can't solve our climate change problems by having fewer babies*. Vox, July 11, 2018.
- Strauss, E. 2017. *The Leftover Embryo Crisis*. September 29, 2017. Elle Magazine online. Available at: <https://www.elle.com/culture/a12445676/the-leftover-embryo-crisis/>
- UN Special Rapporteur. 2018. *Report of the Special Rapporteur on the sale and sexual exploitation of children, including child prostitution, child pornography and other child sexual abuse material*. Human Rights Council Thirty-seventh session 26 February–23 March 2018. Available at: [https://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/HRC/37/60](https://www.un.org/en/ga/search/view_doc.asp?symbol=A/HRC/37/60) Accessed 5, October, 2019.
- Waldman, E. 2006. *Cultural Priorities Revealed: The Development and Regulation of Assisted Reproduction in the United States and Israel*. Health Matrix, 2006. 16:65, 66-106. Available at: <https://scholarlycommons.law.case.edu/healthmatrix/vol16/iss1/6>

- Wilder, B.L. 2002. *Assisted Reproduction Technology: Trends and Suggestions for the Developing Law*. *Assisted Reproduction Technology*, 18:1, 177-209.
- Wilson, K. 2015. *The 'New' Global Population Control Policies: Fuelling India's Sterilization Atrocities*. *Different Takes*, 2015, 87, Winter. Population and Development Program. Available at: [https://pdfs.semanticscholar.org/9e0f/1a2740379b068b55df8b0ce016d7a9081ee3.pdf?\\_ga=2.229048476.1840484107.1569329110-1120878760.1556828789](https://pdfs.semanticscholar.org/9e0f/1a2740379b068b55df8b0ce016d7a9081ee3.pdf?_ga=2.229048476.1840484107.1569329110-1120878760.1556828789)
- Uffalussy, J.G. 2014. *The Cost of IVF: Four Things I Learned While Battling Infertility*. February 6, 2014. Forbes online, available at: <https://www.forbes.com/sites/learnvest/2014/02/06/the-cost-of-ivf-4-things-i-learned-while-battling-infertility/#7b431ee624dd>
- Zaitchik, A. 2018. *How Conservation Became Colonialism. Indigenous People, Not Environmentalists, Are The Key To Protecting The World's Most Precious Ecosystems*. *Foreign Policy online*. July 16, 2018. Available at: <https://foreignpolicy.com/2018/07/16/how-conservation-became-colonialism-environment-indigenous-people-ecuador-mining/>

[melisalvarez@gmail.com](mailto:melisalvarez@gmail.com)

Published on line on November 13, 2019