

Source notes for

Making Kin Not Population

Edited by Adele E. Clarke and Donna Haraway

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Introducing *Making Kin Not Population*

Adele E. Clarke

1. “Our intervention *Making Kin Not Population...*” The editors and contributors extend special thanks to Prickly Paradigm Press, especially Matthew Engelke, for enthusiasm and generous support of our project. For close readings of this Introduction, I thank Donna Haraway, Susan Bell, Michelle Murphy, Monica Casper, Chris Hanssmann, and Matthew Engelke. For inspiration, I thank the whole Making Kin gang and many other authors cited. Aware of the highly charged politics involved, Donna and I recruited only tenured faculty who had worked on related topics to participate in the panel held at 4S in 2015 that led to this booklet. Yu-ling Huang subsequently joined Chia-ling Wu on their chapter. Alondra Nelson presented in our 2015 4S panel, but had to withdraw from this effort due to time pressures. Ruha Benjamin ably and most generously joined us.

1. “In 1900, world population...” Haraway 2016, *Staying with the Trouble*, 4, 208-210, n. 18. “For survival, food production....” Crist, Mora & Engelman 2017, “The Interaction of Human Population,” 260, note: “Food production will need to increase by roughly 70% by 2050 and double or triple by 2100.” See also Brown 2012, *Full Planet, Empty Plates*. We fully recognize that population censuses and projections are highly problematic creations, often relying upon outdated algorithms or having other problems. While precise numbers may be unknowable, overall trends

remain and devastating environmental consequences proliferate. See e.g., McCann, 2016, *Figuring the Population Bomb*, esp. Chapter 6 and Conclusions; and Curtis 2001, *The Politics of Population*. Moreover, despite the gravity of climate change, we believe the science and technology studies tradition of questioning the ultimate truth of science and examining its constructedness must be sustained. See Stengers 2015, *In Catastrophic Times*.

2. “We seek to bring feminism...” See e.g., Roberts 1997, *Killing the Black Body*, and 2015, “Reproductive Justice, Not Just Rights”; Ross and Solinger 2017, *Reproductive Justice*; Ross 2011, “What Is Reproductive Justice?”; SisterSong n.d., “SisterSong”; and “Reproductive Justice.” See also Petchesky and Judd 1998, *Negotiating Reproductive Rights*; Pollitt 2015, “Reclaiming Abortion Rights;” Schultz and Bendix 2015, “A Revival of Explicit Population Policy;” and Bailey and Peoples 2017, “Towards a Black Feminist Health Science Studies.”

2. “As progressive feminists...” In a section later in this Introduction on “Prior Progressive Feminist Efforts,” I discuss the history of feminist opposition to population control. Historically, we were too often able to label whole organizations and institutions as agents of population control. Today, things are often but not always more complicated, requiring the naming of *specific policies and practices as executing coercive population control strategies*. Thus, today many previously wholly population control-focused organizations can be and usually are admixtures of population control practices and those which we would call reproductive rights and even reproductive justice-oriented. Coercion can be subtle as well

as blatant, thus more challenging to identify. See Clarke 1984, 1989, “Subtle Sterilization Abuse.” Today this issue is especially lively around “Long Acting Reversible Contraceptives” (LARCs), discussed below. Also, the pronouns of gender are increasingly difficult to use with clarity. My uses of “women” and “men” should be understood here to include transgender people, and people who identify as other, or gender fluid.

2. “Challengingly, at the same time...” Crist, Mora & Engelman 2017:260. They also note: “The absence of a dominant scientific opinion on the question of a sustainable human population has also contributed to the silence enveloping population matters...[T]he needs of all human beings—especially for food—imply that projected population growth will undermine protection of the natural world” (p. 260). See also Garvey 2011, “Global Feminist Environmental Justice.” On the very real challenges of implementing Crist, Mora and Engelman’s recommendations, see for example, Murphy’s 2016, “Arc III” in *The Economization of Life*, pp. 113–125. Here Murphy analyzes neoliberal strategies of investment in “the girl” as a site for “return on investment.” While some strategies seem very positive, given the embedded presumptions of liberal demography, others are disturbingly reliant on “development” as entrepreneurial models of “progress.”

2. “‘Making kin’ non-biologically...” Sahlin 2013, *What Kinship Is*. See also Franklin and McKinnon 2002, *Relative Values*.

3. “The human/nonhuman binary...” Ebron and Tsing 2017, “Feminism and the Anthropocene,”

22–24. See also Verran and Turnbull 1995, “Science and Other Indigenous Knowledge Systems”; Verran 2001, *Science and an African Logic*; and Todd 2016, “An Indigenous Feminist’s Take.” Not making or holding tight to the human/nonhuman distinction also immediately ruptures certain Western notions of population. For discussion of persons and kin as *compositions rather than reproduced beings*, see Haraway, this volume, and Guyer and Belinga 1995, “Wealth in People as Wealth in Knowledge.” Also, as a discipline, anthropology has long had distinctive engagements with kinship as an analytic. See e.g., Strathern 1988, *The Gender of the Gift*; Sahlins 2013, *What Kinship Is*; Franklin 2013, *Biological Relatives*; and Krolokke et al. 2016, *Critical Kinship Studies*.

3. “We are well aware...” Williams 1976, *Keywords*.

5. “Our session had...” Some of us have also addressed these issues elsewhere, at times provoking highly charged responses. See e.g., Haraway 2015, “Anthropocene, Capitalocene”; Haraway 2016, *Staying with the Trouble*; Lewis 2017, “Cthulhu Plays No Role for Me”; and Turner 2017, “Life with Ms Cayenne Pepper.” See also Huang 2016, “Bio-political Knowledge”; Murphy 2016, *The Economization of Life*; Benjamin 2013, *People’s Science*; TallBear 2013, *Native American DNA*; Wu 2012, “IVF Policy”; and Clarke 1998, *Disciplining Reproduction*.

6. “To pretend that it’s such a tragedy...” Fountain 2017, “A Search for Reason,” A14.

6. “Black Lives Matter...” See especially Chan 2016, “Black Lives Matter”; Davis 2016, *Freedom Is a*

Constant Struggle; and Taylor 2016, *From #BlackLivesMatter*. On African-American infant mortality, see Garrett, Galley, Shelton and Woods 2006, *Infant Mortality*; Casper 2013, “Biopolitics of Infant Mortality”; and Carpenter 2016, “What’s Killing America’s Black Infants?”

7. “Dakota Access Keystone XL pipeline...” Cancelled by President Obama very belatedly, it was quickly re-implemented by President Trump. Kim TallBear recently noted (in a session of the Society for Social Studies of Science, September, 2017) that for Native peoples, “our hearts were broken long before Trump. We love the land, not the state which is genocidal of human and nonhuman alike.” See Smith and Blinder 2017, “10 Arrested in North Dakota”; and Smith 2017, “Once Home to Masses.” On links to reproductive injustice, see Lorenzo 2016, “At Standing Rock, Environmental Justice Is Reproductive Justice”; Hoover et al. 2012, “Indigenous Peoples of North America”; Smith 2005, *Conquest*; and Native American Women’s Health Education Resource Center n.d., “Reproductive Justice Program.” *Feminist Studies* is planning a special issue on “Indigenous Feminist Politics in Settler Contexts”; see <http://www.feministstudies.org/submissions/guidelines.html#call> (accessed 20 December 2017).

7. “China repealed its one-child policy...” Buckley 2015, “China Ends One-Child Policy.” In Turkey, for example, Schools of Pregnancy have recently been established in hospitals to help the nation achieve its policy of “at least three children” per family. See Erten 2017, “Ethnography of the Unborn.” On the US, see Emba 2017, “Paul Ryan’s Recipe.”

7. “Sterilization abuse...” The Indian nurses’ salaries were docked if they failed to sterilize targeted percentages of a community’s population. See Barry and Raj 2014a, b, “12 Women Die” and “Indian State Recalls”; and Wilson 2015, “The ‘New’ Global Population Control Policies.” See also Clarke 1983, 1989, “Subtle Sterilization Abuse”; and Olszynko-Gryn 2014, “Laparoscopy as a Technology of Population Control.”

7. “sterilizing tubal ligations done on women prisoners...” Johnson 2013, “Female Inmates Sterilized”; and Schwartz 2017, “Tennessee Inmates.” See also Sufrin 2017, *Jailcare*.

7. “Millions of desperate people...” United Nations 2016, “244 Million International Migrants,” 1.

8. “Women’s access to abortion...” Since 2010, state legislators enacted 338 *new restrictions* on abortion care, decimating clinics. See Cherel 2017, “Abortion without Provider Involvement,” 9.

8. “US funding of the United Nations Population Fund...” Sengupta and Gladstone, 2017, “U.S. Cuts Off U.N. Agency.” In international resistance to the Trump administration, a Dutch government minister helped found “She Decides,” a group devoted to raising money to replace funds withdrawn by the U.S. from aid groups outside the U.S. supporting and providing reproductive care. See Dreifus, 2017, “In Response,” D3; and She Decides Initiative N.d.

8. “Taiwan’s feminist woman President...” Ramzy 2016, “Taiwan Apologizes.”

9. “Across the globe...” In the US in August, 2017, in Charlottesville, Virginia, armed white supremacists *with permits* marched en masse on the University of Virginia campus carrying burning torches, chanting blatantly anti-Semitic Nazi slogans. Local police stood by passively as supremacists attacked and beat and drove a vehicle into largely peaceful counter demonstrators, murdering one young woman. Vividly demonstrating the publically authorized rise of neo-fascism in the US, these events riveted the world, and were defended by President Trump multiple times. However, there also was outcry from students to corporate boardrooms, a mass exodus of corporate leadership from Trump committees, a *unanimously passed* joint resolution by the US Senate and House of Representatives urging the President to denounce racist and anti-Semitic hate groups, and public statements by five of the Joint Chiefs of Staff of the US military condemning hatred and Neo-Nazis because such violence “went against the military’s core values.” Both Facebook and Google have subsequently been publically rebuked by tech industry public guardian groups for allowing ads and searching that facilitate access to racist materials, but the issue of their containment is still contested. See Thrush and Haberman 2017, “Giving White Nationalists an Unequivocal Boost”; *The New York Times* 2017, “The President’s Words on Hatred and History”; Landler 2017, “President Again Says Both Sides Share Blame”; Thrush 2017, “Congress Urges President to Denounce Hate Groups”; Philipps 2017, “Top Leaders of Military Condemn Hate Groups”; and Maheswari and Stevenson 2017, “Major Sites Face Rebuke.”

9. “‘undone science’...” A major feminist example is contraceptive research and development, past and

present. See e.g., Clarke 1998, *Disciplining Reproduction*; Clarke 2000, “Maverick Reproductive Scientists”; Oudshoorn 2003, *The Male Pill*; van Kammen and Oudshoorn 2002, “Gender and Risk Assessment”; and Takeshita 2012, *The Global Biopolitics of the IUD*.

9. “However, such engagements remain thin...” We do not question the need for feminist research on IVF and related technologies. Our point is that interest in such research is disproportionate compared to the proportion of infertile women and couples. Many women’s reproductive issues remain under-researched, especially by feminists, such as differently situated women’s contraceptive *preferences* and desires, variations in preferences at different life stages, cultural issues impeding women’s access to contraception, etc. See Bell 2016, *Misconception*, for a distinctive class and race focused analysis of experiences of infertility and its construction. See also Franklin 2013, *Biological Relatives*.

10. “The key backdrops for *Making Kin...*” The broader histories of feminist activism and scholarship on reproductive, population, and environmental issues, especially where these have intersected, are beyond the scope of this project. We hope to provoke further such work.

11. “The ‘Anthropocene’ is one proposed name...” The initial publication on the Anthropocene was by Crutzen 2002, “Geology of Mankind.” Neither the International Commission on Stratigraphy nor the International Union of Geological Sciences has yet officially approved the term as a recognized subdivision of geological time,

though it is under serious consideration (Kunkel 2017, “The Capitalocene,” 22). On the anthropocene, see e.g., Lewis and Maslin 2016, “Defining the Anthropocene”; Haraway 2015, “Anthropocene”; Haraway 2016, *Staying with the Trouble*; and Moore 2015, *Capitalism in the Web of Life*.

11. “Various ‘start dates’ are debated...” Kunkel 2017, “The Capitalocene,” 22.

11. “However, the concept of...” Moore 2015, *Capitalism in the Web of Life*, quoted in Kunkel 2017, “The Capitalocene,” 23; Mitman 2016, “Life in the Ruins,” 400; and Haraway 2016, *Staying with the Trouble*, especially Chapter 2.

11. “Moore has offered...” Moore 2015, *Capitalism in the Web of Life*. The term “Capitalocene” itself was initially suggested by Andreas Malm. See Haraway 2016, pp. 184–85, n50.

12. “Moreover, it legitimates...” Voyles 2015, *Wastelanding*; and Ebron and Tsing 2017, “Feminism and the Anthropocene.”

12. “‘Capitalism is not an economic system;’...” Moore 2015, *Capitalism in the Web of Life*, 2. Malm proposes the alternative of “Fossil Capital” beginning later, since steam power based on fossil fuels initiated and has sustained global warming. See Malm 2016, *Fossil Capital*.

12. “Moreover, as Haraway notes,...” Haraway 2015, “Anthropocene”; and Haraway 2016, *Staying with the Trouble*. For the conversation that initiated the term

Plantationocene, see Haraway et al. 2015, “Anthropologists Are Talking.”

13. “Winant’s argument that...” Winant 2014, “The Dark Matter,” 313, 315, 318, emphasis added. Colonial economies were also extractive and destructive. In 1700 before the British Raj, the area now largely India accounted for a quarter of the world’s economy, especially through textiles. When the British left in the mid-20th century, India’s share had sunk to 3% thanks to the destruction of the largely non-industrialized textile industry. Mount 2017, “Umbrageousness,” 3.

13. “Another refinement of focus...” Steffen et al. 2015, “The Trajectory of the Anthropocene,” 82, emphasis added; Ebron and Tsing 2017, “Feminism and the Anthropocene,” 661, emphasis added. Ebron and Tsing (pp. 663-68) identify three environmentally devastating patterns: bulldozing (a militarized approach to environments), toxic poisoning (human selection of species), and wastelanding (the creation of “sacrificial zones”). Toxic poisoning was and remains especially dangerous reproductively. See e.g., Bell 2009, *DES Daughters*; Langston 2010, *Toxic Bodies*. Wastelanding particularly affects Indigenous lands and poor communities. See e.g., Voyles 2015, *Wastelanding*; and Taylor 2014, *Toxic Communities*.

14. “In Murphy’s framework...” Murphy 2013, “Economization of Life”; and Murphy 2016, *Economization of Life*. To situate Murphy’s argument, see e.g., Firestone 1972, *Dialectic of Sex*; Haraway 1989, *Primate Visions*; Ginsberg and Rapp 1995, *Conceiving the New World Order*; Clarke 1998, *Disciplining Reproduction*; Franklin 2013, *Biological*

Relatives; and Briggs 2017, *How All Politics Became Reproductive Politics*.

14. “Key here for Murphy...” Murphy 2013, “Economization of Life,” 142-3; see also, Murphy, *Economization of Life*.

14. “The economization of life is a vivid example...” Yanow and Schwartz-Shea 2006, *Interpretation and Method*, 388.

15. “Or, as Amade M’charek stated...” M’charek 2013, “Beyond Fact or Fiction,” 436. See also Star 1983, “Simplification in Scientific Work.”

15. “Murphy further argued...” Murphy 2013, “Economization of Life,” 143-144, 148, emphasis added.

16. “What is to be done?...” Haraway 2016, *Staying with the Trouble*, 2, 5-6, 51-57. On current feminist debates about caring practices, see e.g., Mol 2008, *The Logic of Care*; Puig de la Bellacasa 2011, “Matters of Care”; Thompson 2013, *Good Science*; and Murphy 2015, “Unsettling Care.” Many others have also contributed. Among other things, caring lies at the heart of kinship.

17. “In 1970, early in second wave feminism...” See Faludi’s obituary for Firestone: Faludi 2013, “Death of a Revolutionary.” Italics added to the citation from Faludi.

17. “In Firestone’s own words...” Firestone 1970, *The Dialectic of Sex*, 200, emphasis added.

17. “Firestone’s solutions...” In a recent major reappraisal of *The Dialectic of Sex*, Franklin noted that Firestone’s engagement with reproduction, science and especially technology was not again equaled in feminist thought until Haraway’s “Cyborg Manifesto” appeared in 1985. See Franklin 2010, “Revisiting Reprotech,” 32. Firestone had carefully noted that the “*misuse* of scientific developments is very often confused with technology itself” as the problem, including among progressives, a point the “Cyborg Manifesto” underscored. See Firestone 1972, *The Dialectic of Sex*, 196, original emphasis.

17. “Distinctively resonating here...” Firestone 1972, *The Dialectic of Sex*, 193.

17. “In Sarah Franklin’s recent reappraisal...” Franklin 2010, “Revisiting Reprotech,” 39.

18. “Most of all, Firestone wondered...” Firestone 1972, *The Dialectic of Sex*, 193, emphasis added.

18. “Significantly, as Franklin underscores...” Franklin 2010, “Revisiting Reprotech,” 41, emphasis added.

18. “With foreboding, Firestone had written...” Firestone 1972, *The Dialectic of Sex*, 200.

18. “Today, in the absence...” Ironically, some feminist objections to reproductive technologies, especially those associated with FINRRAGE, have been reinvigorated at the very same time that women and men are flocking to them transnationally in record numbers, including surrogacy. See Franklin 2013, *Biological Relatives*. Women are also voicing ambivalence about

and resistance to fertility treatments which are rife with unassessed health risks. See, e.g., Bell 2014, *Misconception*; Daum 2016, *Selfish, Shallow and Absorbed*; Dow 2016, *Making a Good Life*; Krause and Marchesi 2007, “Fertility Politics as ‘Social Viagra’”; Ma 2014, “25 Famous Women on Childlessness”; Spar 2006, *The Baby Business*; and Wilson 2014, *Not Trying*.

18. “Superficial readings by some feminists...” Of course, the “booming silence” may also be due to our dwelling in a swamp of eugenic and (post)colonial histories and presents. Eugenic policies have been vividly *selectively* pro-natalist for those deemed “aristogenic,” while searingly anti-natalist regarding those deemed “cacogenic,” thereby *promoting* stratified natalism and reproduction. See e.g., Burdette and Richardson 2007, *Eugenics Old and New*; and Bashford and Chaplin 2016, *The New Worlds of Thomas Robert Malthus*. For a critical reading of Firestone, especially vis-à-vis race, see Spillers 1984, 2003, “Interstices.”

19. “Key contributors included...” Ware 1970, *Woman Power*; Harris 1993, “Whiteness as Property”; Benjamin 2013, *People’s Science*; and Nelson 2013, *Body and Soul*. Lesser known at least in part because she was Black, Cellestine Ware’s *Woman Power* framed a broad sense of women’s empowerment, but did not focus on reproduction.

19. “In our view, making kin today...” The invited panel on “Reproductive Justice and Injustice,” organized by Banu Subramaniam and moderated by Evelyn Hammonds at the 2017 meetings of the Society for Social Studies of Science underscored these very points

yet again. Khiari Bridges specifically noted the continued “demeaning of the reproduction of the poor, especially African American mothers,” echoing Patricia Hill Collins’ 1999 paper, “Will the ‘Real’ Mother Please Stand Up?” decades later. On the health of Black women in the US, see Newman 2017, “The Status of Black Women in the United States.”

19. “She traced American left feminist...” Rapping 1990, “The Future of Motherhood.” For a summary of continued engagements with arguments initially posed by FINRRAGE, see Franklin 2013, *Biological Kin*, 200–218. FINRRAGE is still lively in some places today, now opposing “assisted reproductive technologies” (ARTs), no longer new, but continuously elaborating. For a summary of continued engagements with arguments initially posed by FINRRAGE, see Franklin 2013, *Biological Kin*, 200–218.

20. “It demonstrated how socialist analysis...” Rapping 1990, “The Future of Motherhood,” 541, emphases added.

20. “In a post-Reagan world...” Rapping 1990, “The Future of Motherhood,” 542.

20. “Who—which women...” Colen 1995, “Like a Mother to Them”; Collins 1999, “Will the ‘Real’ Mother”; and Richie 2012, *Arrested Justice*.

21. “An array of progressive...” Progressive reproductive rights organizations in the US included the New York-based Committee to End Sterilization Abuse (CESA, f. c1974), the Committee for Abortion Rights and Against Sterilization Abuse (CARASA, f. 1979),

the San Francisco-based Committee to Defend Reproductive Rights (CDRR, f. c1976), and others. For a time they coalesced nationally as the Reproductive Rights National Network (R2N2, f. 1978). See Nelson 2003, *Women of Color*, esp. 133–177; Clarke and Wolfson 1990, “Class, Race and Reproductive Rights.” On US women of color reproductive rights and justice organizing and major organizations, see Silliman, Fried, Ross, and Gutierrez 2004, 2016, *Undivided Rights*. On state-sponsored interventions, see Schoen 2005, *Choice and Coercion*.

21. “Mol biting described ‘choice’...” Mol 2008, *The Logic of Care*, x.

21. “Underscoring these issues...” Murphy 2012, *Seizing the Means of Reproduction*; and Harris 1993, “Whiteness as Property.”

22. “Feminist *reproductive rights* advocates...” Halfon 2007, *The Cairo Consensus*. Halfon aptly describes the “consensus” achieved as a “structured disunity” among delegates that at least temporarily dealt with a crisis in international population policy that included critiques from *both* left and right. Both the points about education, and “empowerment” rather than “population control” rhetoric, were very important to a wide range of feminist participants. Of course, many organizations with *conservative* and deeply anti-woman population control commitments subsequently reinvented themselves with new names, logos, and freshened rhetorics, appropriating earlier *progressive* feminist language. Thus in defense of women and our bodies, progressive feminists must not only continue to be on the alert for blatant manifestations

of population control, but also for subtler versions—“the wolf in sheep’s clothing” as it were.

22. “Yet in practice, the broader...” Hartmann describes the gains of Cairo as “tepid.” Hartmann 2016, *Reproductive Rights and Wrongs*, 153–155. The term “reproductive justice” was coined in 1994 by African American women after the International Conference on Population and Development in Cairo, Egypt. See Loretta Ross, 2011, “Understanding Reproductive Justice.” See also, on the US, e.g., Nelson 2003, *Women of Color*; Ross and Solinger 2017, *Reproductive Justice*; Silliman et al. 2004, 2016, *Undivided Rights*; and Schoen 2005, *Choice and Coercion*. Internationally, see Petchesky and Judd 1998, *Negotiating Reproductive Rights*; Connelly 2008, *Fatal Misconception*; Greenhalgh 1995, *Situating Fertility*; and Halfon 2007, *The Cairo Consensus*.

22. “Instead, Shellee Colen’s concept of ‘stratified reproduction,’...” Colen 1995, “Like a Mother to Them.”

22. “Grasping this, progressive feminist theorizing...” An early example is Michaelson 1981, *And the Poor Get Children*. Recent feminist work on population control more generally includes Hartmann 2016, *Reproductive Rights and Wrongs*; Solinger and Nakachi 2016, *Reproductive States*; and McCann 2016, *Figuring the Population Bomb*. Hardin’s 1993 *Living within the Limits* sustained the Ehrlichs’ concerns. On population studies, see e.g., Connelly 2008, *Fatal Misconception*; Bashford 2014, *Global Population*; Greenhalgh 1995, *Situating Fertility*; and Greenhalgh 1996, “The Social

Construction of Population Science.” On China, see Greenhalgh 2008, *Just One Child*; Greenhalgh 2009, “The Chinese Biopolitical”; and Riley 2017, *Population in China*. On Puerto Rico, see Briggs 2002, *Reproducing Empire*; on India, see Hodges 2008, *Contraception, Colonialism and Commerce*; on Haiti, Maternowska 2006, *Reproducing Inequities*; on South Korea, see Moon 2005, *Militarized Modernity*; on Taiwan, see Huang 2016, “Bio-political Knowledge.” On East Asia, see the 2008 Special Issue on Gender and Reproductive Technologies in East Asia of *EASTS: East Asian Science and Technology Studies: An International Journal* 3 (1). On Asia more broadly, see the 2016 Special Issue: Population Control and Reproductive Politics in Cold War Asia, guest edited by Homei and Huang, *EASTS: East Asian Science and Technology Studies: An International Journal* 10 (4).

23. “A new wave of progressive feminist research...” On the rebirth of pronatalism generally, see Shorto 2008, “No hay bebés?”; on Italy, see Krause and Marchesi 2007, “Fertility Politics as ‘Social Viagra’”; on Japan, see Frühstück 2003, *Colonizing Sex*; on Taiwan, see Jones, Straughan, and Chan 2009, *Ultra-low Fertility in Pacific Asia*; and Huang and Wu (this volume). On the US, see Emba 2017, “Paul Ryan’s Recipe.” On Denmark, see Spies Rejser 2015, “Do It for Mom.” This is a YouTube video recommending that mothers seeking to be grandmothers send their child and his/her mate on a romantic vacation to conceive to help the welfare state, now viewed nearly 10 million times. On the continuations of eugenics thought, see e.g., Burdette and Richardson 2007, *Eugenics Old and New*; and Bashford and Chaplin 2016, *The New Worlds of Thomas Robert Malthus*.

23. “Feminist and related critical progressive analyses of demography...” e.g., Greenhalgh 1996, “The Social Construction of Population Science”; Mackinnon 1995, “Were Women Present”; Riley 2003, *Demography*; Halfon 2007, *The Cairo Consensus*; Solinger and Nakachi 2016, *Reproductive States*; McCann 2016, *Figuring the Population Bomb*; and Riley 2017, *Population*.

23. “Since c1995, feminist STS scholarship...” This strand includes research on reproductive sciences (e.g., Clarke 1998, *Disciplining Reproduction*), contraceptive development (e.g., Oudshoorn 1996, “The Decline of the One-size-fits-all Paradigm”; Oudshoorn 2003, *The Male Pill*; van Kammen and Oudshoorn 2002, “Gender and Risk Assessment”; Clarke 2000, “Maverick Reproductive Scientists”; Saetnan, Oudshoorn and Kirejczyk 2000, *Bodies of Technology*; and Takeshita 2012, *The Global Biopolitics of the IUD*), including microbial contraception to *also* protect women against HIV/AIDS (Bell 2003, “Sexual Synthetics”).

23. “Used transnationally in population control...” Clarke 2000, “Maverick Reproductive Scientists.” “Woman-controlled” means of contraception lie in the woman user’s hands (e.g., diaphragms, pills, thermometers) and she can stop using at will. “Imposables” are placed inside women’s bodies by (hopefully trained) others (e.g., IUDs, implantables, shots), requiring skilled assistance for removal, if possible. Historically, the discourses of producers and users of LARCs are quite disparate and contested. For an excellent brief overview of feminist debates with population control/scientific perspectives, see Halfon 2007, *The*

Cairo Consensus, Chap. 9 (pp. 191–218). On LARCs, see Christopherson 2016, “NWHN-SisterSong Joint Statement.” SisterSong is a national membership organization seeking to improve institutional policies and systems that impact the reproductive lives of marginalized communities. See SisterSong. N.d. “SisterSong Women of Color.” On the National Women’s Health Network, see National Women’s Health Network N.d. “NWHN Website.” On LARCs, see e.g., Schultz and Bendix 2015, “A Revival of Explicit Population Policy”; on removal issues, see Jervis 2015, “The Great LARC Debate”; on related bioethical issues, see Grzanka, Brian and Shim 2016, “My Bioethics Will Be Intersectional.”

24. “Over five *million* ‘test tube babies’...” For statistics, see Franklin 2013, *Biological Relatives*, 1. The procedure that produced a “three parent baby” (meaning it has the DNA of three adults) involved moving the DNA from an egg of the mother, who had mutated mitochondria, and placing it in the egg of a healthy egg donor—after first removing the healthy donor’s nuclear DNA from her egg cell. Then that egg, with its healthy mitochondria and the mother’s DNA, could be fertilized in the lab via IVF techniques.

24. “Such work is increasingly transnational...” On infertility and treatments especially in the U.S., see e.g., Almeling 2011, *Sex Cells*; Spar 2006, *The Baby Business*; and Thompson 2005, *Making Parents*. Internationally, see Franklin 2013, *Biological Relatives*; Inhorn and Patrizio 2015, “Infertility Around the Globe”; Wu 2012, “IVF Policy”; Franklin 2005, “Revisiting Reprotech”; and Wahlberg and Gammeltoft 2018, *Selective Reproduction in the 21st Century*. Increasingly

widespread, selective reproductive technologies (SRTs) aim to prevent or promote the conception and birth of particular kinds of children. Wilson's 2014 *Not Trying* innovatively discusses women's ambivalence about childlessness and refusal to pursue IVF. See also Ma 2014, "25 Famous Women on Childlessness"; and Daum 2016, *Selfish, Shallow and Absorbed*.

24. "IVF, egg donation, sperm banks..." Spar 2006, *The Baby Business*; and Thompson 2005, *Making Parents*.

24. "In response, FINRRAGE..." Franklin 2013, *Biological Relatives*, 200–218. On kinship studies, see Franklin and McKinnon 2002, *Relative Values*; Sahllin 2013, *What Kinship Is*; and Krolokke, Myong, Adrian and Tjornhoj-Thomsen 2016, *Critical Kinship Studies*.

24. "For progressive feminists..." On subtle and blatant forms of coercion, see Clarke, "Subtle Sterilization Abuse." See also Murphy 2012, *Seizing the Means*; and Nelson 2013, *Body and Soul*. For an excellent and important recent reproductive justice policy intervention *with care providers*, see Christopherson 2016, "NWHN-SisterSong Joint Statement of Principles on LARCS." Issues of transsexual reproductive justice are also emerging today, including sterilization abuse. Sterilization has often been procedurally required as part of accessing gender transitioning surgeries. See Hanssmann 2017, *Care in Transit*.

25. "Moreover, individualized analytics..." Murphy 2012, *Seizing the Means*; and Nelson 2013, *Body and Soul*. See Casper and Moore 2009, *Missing Bodies*,

14–15, on using an "ocular ethic" to render hidden information more analytically visible. Special thanks to Susan Bell for editing.

25. "Second, as progressive feminists..." On IVF and eggs, see e.g., Franklin 2013, *Biological Relatives*; and O'Riordon and Haran 2009, "From Reproduction to Research." On race and genetics, see e.g., Nelson 2013, *Body and Soul*; Benjamin 2013, *People's Science*; and TallBear 2013, *Native American DNA*. For a moving personal account by a developmental biologist, who herself experienced prolonged suffering due to social blindness to the pain of involuntary infertility that is *enhanced* by fertility treatment imperatives, see Gilbert and Pinto-Correia 2017, *Fear, Wonder, and Science*, especially pp. 175–193.

25. "For example, Greenhalgh has argued..." Greenalgh 2009, "The Chinese Biopolitical," 205. See also Sheoran, Deomampo and Van Hollen 2015, "Extending Theory"; and chapters by Benjamin and Haraway in this volume.

25. "Moreover, feminist reproductive politics..." For example, The Zika Social Science Network is "an interdisciplinary feminist collective utilizing mixed methods of qualitative social science to document and critically analyze the social lives of the Zika virus. Our focus is to study how knowledge is formed, interventions mobilized, and lives shaped." See Zika Social Science Network 2017, "ZSSN Website."

25. "In *Seizing the Means*..." Murphy 2012, *Seizing the Means*, 8, emphasis added.

25. “Others also emphasize...” Clarke 1995, “Modernity, Postmodernity and Human Reproductive Processes.” On siloing, see Almeling 2011, “Reproduction.”

26. “While environmental issues have never lain dormant...” Feminist geographers have been particularly active. With a crucial commitment to collaboration, Diane Rocheleau propelled feminist political ecology in the 1990s. See Mehta 2016, “Diane Rocheleau.” For examples see e.g., Rocheleau, Thomas-Slayer, and Wangari 1996, *Feminist Political Ecology*; Kuletz 1998, *Tainted Desert*; Casper 2003, *Synthetic Planet*; and Murphy 2006, *Sick Building Syndrome*. For an ambitious recent review, see Ebron and Tsing 2017, “Feminism and the Anthropocene.”

26. “For example, since 1991, the CWPE...” See Silliman and King 1999, *Dangerous Intersections*; and CWPE 2001–2013, “Environment.” CWPE is also internationally active in reproductive and environmental policy. A related group, The Population and Development Program at Hampshire College, publishes *Different Takes* online. A recent issue (No. 91, Fall 2017) centered on “Dangerous Environmentalisms in the Era of Trump,” including “the greening of hate—a political strategy to attract liberal environmentalists to support anti-immigration agendas by blaming environmental degradation on overpopulation.” See Schubiner 2017, “Dangerous Environmentalisms.” See also Population and Development Program N.d., “PopDev/Hampshire College.”

27. “As Ebron and Tsing note...” Ebron and Tsing

2017, “Feminism and the Anthropocene,” esp. pp. 679–83.

27. “Another generative intersection...” Sasser 2014c, “Giving What to Whom?” 3; Sasser 2014a, “The Wave of the Future?”; and Sasser 2014b, “From Darkness into Light.” See also Zimmerman and Miao 2009, *Fertile Ground*.

27. “In refreshingly new and different ways...” On recent feminist ethical concerns, see e.g., Thompson 2013, *Good Science*; and Grzanka, Brian and Shim 2016, “My Bioethics Will Be Intersectional.”

27. “Their mission baldly states...” *Conceivable Future* 2015–18, “Conceivable Future,” emphasis added.

27. “In related work...” Dow 2016, *Making a Good Life*. See also Ludden 2016, “Should We Be Having Kids.” Ostrander 2016, “How Do You Decide,” notes that people “weighed not only their desires and finances but the state of the world” in ways that felt historically quite different, pointing at the very blurred boundaries among the individual, social, political, and environmental. Population Matters is an international membership charity that addresses population size and environmental sustainability in the belief that population growth contributes to environmental degradation, resource depletion and other problems. See Population Matters 2018, “For a Sustainable Future.”

28. “An array of what we consider companion interventions...” See e.g., Mortimer-Sandilands and Erickson 2010, *Queer Ecologies*; Tsing 2016, “Earth Stalked by Man”; Tsing, Swanson, Gan and Bubandt 2017, *Arts of*

Living on a Damaged Planet. See also the list of new books and works-in-progress in Ebron and Tsing 2017, “Feminism and the Anthropocene,” pp. 68–82.

28. “For example, the Cambridge-based ‘Reproducing the Environment Project’...” This collaborative is led by Katie Dow and Janelle Lamoreaux, and based in ReproSoc, the Reproductive Sociology Group at Cambridge University, headed by Sarah Franklin. See e.g., Reproductive Sociology Research Group, Cambridge University: <http://www.reposoc.sociology.cam.ac.uk/> (accessed 6 January 2018).

28. “Specific interests include...” On use of reproductive technologies in non-humans, see Friese 2013, *Cloning Wild Life*. See also the Panel at the Conference on Anthropology, Weather and Climate Change, “Reproducing the Environment: Climate Change, Gender, and Future Generations,” 2016, 27 May. Available at <http://www.nomadit.co.uk/rai/events/rai2016/panels.php5?PanelID=3789> (accessed 10 January 2018).

28. “My last example...” Over the last half a billion years, five mass extinctions—when the diversity of life on earth suddenly and dramatically contracted—have occurred. Scientists are currently monitoring the sixth, predicted to be the most devastating extinction event since the asteroid impact that wiped out the dinosaurs. Kolbert 2014, *The Sixth Extinction: An Unnatural History*.

29. “In *Imagining Extinction...*” Heise 2016, *Imagining Extinction*. See also Demos 2016,

Decolonizing Nature; Tsing, Swanson, Gan, and Bubandt 2017, *Arts of Living on a Damaged Planet*; Collard, Dempsey and Sundberg 2015, “A Manifesto for Abundant Futures.” Benjamin’s 2016 “Racial Fictions, Biological Facts,” and other work encourages speculative futurity towards generating more space for breathing and living against technologized state violence. See also Dery 1994, “Black to the Future”; and Acquaye 2017, “Black to the Future: OkayAfrica’s Introduction to AfroFuturism.”

31. “UNICEF’s latest estimate...” Mutler, Wong and Cray 2017, “Global Effort to Get Kids Out,” A4.

31. “We need further legitimation...” e.g., Graham 2017, “Pain of Australia’s ‘Stolen Generation’”; and Richie 2012, *Arrested Justice*. On adoption, see e.g., Riley and Van Vleet 2012, *Making Families through Adoption*; and Briggs 2012, *Somebody’s Children*. In 2013, an entire *Science Times* section of *The New York Times* was devoted to “Families,” emphasizing the increasing diversity of “what counts as family” in the US today. See Angier 2013, “Families.”

32. “‘Population’ is thus a problematic ‘boundary object’...” Star and Griesemer 1989, “Institutional Ecology”; Star 2010, “This is Not a Boundary Object”; and Bowker et al. 2015, *Boundary Objects and Beyond*, esp. 171–262.

32. “We desperately need better ways...” On the challenges of community, see Joseph 2002, *Against the Romance of Community*. The documentary film about James Baldwin directed by Raoul Peck, titled *I am Not Your Negro*, is remarkable not only for elaborating his

grasp of racisms in his own words, but also for his profound critique of American culture and the ways in which it *intentionally* breeds ignorance and hatred of anything and anyone “other.” Baldwin’s cultural as well as racial critiques are both sadly pertinent and poignant today. See Peck 2017, *I Am Not Your Negro*.

32. “New(er) concepts for ‘making kin’...” “Logical family” is the term used by Armistead Maupin to refer to his gay kith and kin. Webster 2017, “The Untold Tales.”

32. “We use the term ‘making kin’...” Special thanks to Susan Bell for thoughtful suggestions about kin making and stratification. One question to ask is whether a concept like stratified kinship helps to bring feminism, reproductive justice and environmentalism together and to disengage from ongoing colonizing frames of knowledge and practices, including human exceptionalism and division of natures and cultures?

33. “People have varying capacities...” On social and cultural stratifications, see Shim 2010, “Cultural Health Capital.” On stratified reproduction, see Colen 1995, “Like a Mother to Them.” On class and race stratification of infertility, see Bell 2016, *Misconception*. On human stratifications of nonhuman species, see e.g., Friese 2013, *Cloning Wild Life*. On hierarchy and stratification among animals, as well as between animals and humans, in Western classificatory, popular, philosophical, and conservation-advocacy contexts, see Small 2011, “The New Noah’s Ark”; Ritvo 1997, *The Platypus and the Mermaid*; Wolfe 2003, *Zoontologies*. For reproductive stratification of animal breeds, see Ritvo 1987, *Animal Estate*; Ritvo 1997, *The Platypus*

and the Mermaid; and Shukin 2009, *Animal Capital*. Feminists have long questioned these divisions and also provide rich ways to overcome them. See Adams and Donovan 1995, *Animals and Women*; Plumwood 1993, *Feminism and the Mastery of Nature*; Despret 2016, *What Would Animals Say?*; and Chen 2012, *Animacies*. Outside Western frameworks, ways of relating in the intersections of interest in this booklet are diverse, many, and consequential. See Tsing 1993, *In the Realm of the Diamond Queen*; and Tsing 2004, *Friction*. North American Indigenous scholars are also central here. See e.g., Todd 2014, “Fish Pluralities”; and Todd 2016, “An Indigenous Feminist’s Take on the Ontological Turn.”

Chapter 1

Black AfterLives Matter: Cultivating Kinfulness as Reproductive Justice

Ruha Benjamin

41. “normal, primary, or expected...” Merriam Webster, n.d. “Afterlife.”
42. “drove me and my friends home...” @Official_Lov, Twitter post, 12/3/2014, 6:48pm.
42. “Only one charged was black...” @Cecilyk, Twitter post, 12/3/2014, 4:18pm.
42. “gave it all back...” @hunktears, Twitter post, 12/3/2014, 9:54pm.
42. “threat of a ticket #CrimingWhileWhite...” @Its____abby, Twitter post, 12/5/2014, 5:59pm.
42. “‘looked like a nice family...’” @hijinksensue, Twitter post, 12/3/2014 7:28pm.
43. “never went to jail...” @SeanMcElwee, Twitter post, 12/4/2014, 12:05am.
43. “paid by emancipation...” Hartmann 1997, *Scenes of Subjection*, p. 134.
43. “enforced ‘kinlessness’ of the enslaved...” Hartman 1997, *Scenes of Subjection*, p. 67.

43. “incarceration and impoverishment...” Hartman 2007, *Lose Your Mother*, p. 6; emphasis added.
44. “dead child’s last ambulance ride...” Lee 2016, “Cleveland Asked Tamir Rice’s Family to Pay \$500 for Their Child’s Last Ambulance Ride.”
44. “fines as the basis for city revenue...” Sances and Hye Young You 2017, “Who Pays for Government?”
44. “It’s easy to see the drama of a fatal police shooting...” Johnson 2015, “Ferguson’s Fortune 500 Company.”
45. “who have not been convicted...” Minton and Zheng 2015, “Jail Inmates at Midyear 2014.”
45. “could not post bail...” Wing 2016, “Our Bail System Is Leaving Innocent People To Die In Jail.”
- 45–46. “a key feature of racist state violence...” Gilmore writes, “Racism, specifically, is the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death.” Gilmore 2007, *Golden Gulag*, p. 28.
46. “Sandra Bland died in a jail cell in Texas...” Meyerson 2016, “Read the Short, Devastating Speech Sandra Bland’s Mother Just Made to Congressional Leaders,” emphasis added.
46. “spiritual kin who can animate social movements...” Boyd 2017, talk delivered at “1800 and More.”

47. “care for them is no longer a reality...” Collins 2008, *Black Feminist Thought*, p. 198.
48. “revenants of a disremembered past...” Hartman 1997, *Scenes of Subjection*, p. 72.
49. “black children stranded and kinless...” King 1971, “It’s Easier to Adopt Today,” p. 124.
49. “family members are raising children...” Children’s Defense Fund, n.d., “Kinship Care Resource Kit.”
49. “need all the family we can get...” Young 2017, “Do White People Have Cousins?”
50. “donated a kidney to her ailing sister...” Pollock 2015, “On the Suspended Sentences of the Scott Sisters.”
50. “maintain Confederate cemeteries...” Palmer 2017, “For the Forgotten African American Dead.”
51. “freedom of those restless underground...” Morrison 1987, *Beloved*, p. xix; see also, Gossett 2014, “We Will Not Rest in Peace.”
51. “agency exercised by living nonhumans...” Beyond actor-network theory (ANT), in which nonhuman agents are characterized as *actants* that transcend the distinction between humans and nonhumans (Latour 1999, “On Recalling ANT”). Donna Haraway narrates the blurred boundary between organisms and machines, describing how “myth and tool mutually constitute each other” (1991, *Simians, Cyborgs and Women*, p. 164). And more recently Chen 2015,

Animacies, p.3, develops the idea of animacy to “theorize current anxieties around the production of humanness in contemporary times... Animacy activates new theoretical formulations that trouble and undo stubborn binary systems of difference, including dynamism/stasis, life/death, subject/object, speech/nonspeech, human/animal, natural body/cyborg.”

51. “forging multispecies justice...” Kirksey ed. 2014, *The Multispecies Salon*, and Haraway 2016, *Staying with the Trouble*.

51. “ancestral landscapes described above...” For an exception, see TallBear 2017, “Beyond the Life/Not-Life Binary,” p. 191, who describes an indigenous metaphysic framework that “posits relations not only between humans and ‘animals,’ but also between humans and ‘energy,’ ‘spirits,’ ‘rocks,’ and ‘stars,’ in the constitution of American Indian knowledge about the world.”

51. “disrupt the human-machine distinction...” In questioning the lack of attention to race in theorizing the cyborg, for example, Weheliye 2014, *Habeas Viscus*, insists on expanding critical discussions beyond the “liberal humanist figure of Man.” His intervention builds on black feminist theorizations of the human, particularly the work of Wynter 1984, “The Ceremony Must Be Found: After Humanism,” who posits race as a master code word for “genres” of humanity. Racialization, in this formulation, is the process of disciplining humanity into “full humans, not-quite humans, and nonhumans.” A black feminist approach to posthumanism is not about including the oppressed in the fold of (western liberal) humanism or

about casting out humanism writ large, but about abolishing one particular genre, “Man,” so that other ways of being human may come to light. Weheliye 2014, *Habeas Viscus: Racializing Assemblages, Biopolitics, and Black Feminist Theories of the Human*, p. 29.

51. “kin making and reproduction specifically...” TallBear 2017, “Beyond the Life/Not-Life Binary,” p. 191.

51. “buried in secular theorizations of techno-science...” See for example, Beliso-De Jesus 2015, *Electric Santería*.

52. “She lowered her voice to a whisper...” Butler 1979, *Kindred*, p. 145.

52. “employing speculative methods...” Benjamin 2016, “Racial Fictions, Biological Facts.”

53. “cause babies to die hours after birth...” Zak 2015, “A Ground Zero Forgotten.”

53. “inter-generational harm caused by radiation fall-out...” Georgescu 2012, “Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management,” p. 14.

54. “the slum of the Pacific...” Zak 2015, “A Ground Zero Forgotten.”

55. “I worked on a thesis project...” Sebring n.d., “Mississippi Appendectomy.”

56. “disparaged and repressed...” Clarke and Olsen 1999, *Revisioning Women, Health, and Healing*; Collins 1999, “Will The ‘Real’ Mother Please Stand Up?”; Richie 1999, “The Social Construction of the Immoral Black Mother.”

56. “California prisons revealed this trend...” Johnson 2013, “Ferguson’s Fortune 500 Company.”

56. “prisoners who agreed to be sterilized...” Hawkins 2017, “Judge to Inmates: Get Sterilized and I’ll Shave Off Jail Time.”

56. “How does it feel to be a problem?” DuBois 1903, *The Souls of Black Folks*.

57. “book series adapted for television, called *The Expanse*...” *The Expanse* 2015.

58. “cannot access the medicine they need...” Robinson 2016, “How SyFy’s *The Expanse* Cast Its Multiracial Future.”

58. “simply reflect the natural order...” It is worth pointing out that biological determinism is not an essential feature of racial science. Notions of plasticity and epigenetics lend themselves to racist inference, as much as biological determinism. In fact, *epigenetic determinism* may place more onus, and thus more blame, on those affected by some condition to “change their lifestyle” or mindset or whatever else is posited as causing illness. See Waggoner and Uller 2015, “Epigenetic Determinism in Science and Society.”

59. “practices that helped produce them...” M’Charek 2013, “Beyond Fact or Fiction: On the Materiality of Race in Practice,” p. 436.

59. “attend to materiality without fixing race...” M’Charek 2013, “Beyond Fact or Fiction: On the Materiality of Race in Practice,” p. 424.

59. “contemporary black, Latinx, and indigenous writers continue in this speculative tradition...” For example, see Thomas 2000, *Dark Matter: A Century of Speculative Fiction from the African Diaspora*, and Thomas 2004, *Dark Matter: Reading the Bones*; Brown and Imarisha 2015, *Octavia’s Brood*; Due 1998, *My Soul to Keep*; Gomez 2005, *The Gilda Stories*; Hopkinson 1998, *Brown Girl in the Ring*; Hairston 2016, *Will Do Magic for Small Change*; Jemison 2010, *The Hundred Thousand Kingdoms*; Okorafor 2015, *Binti*; Shawl 2017, *Everfair*; and Barker 2017, “The Seeders.”

61. “profound and profoundly unequal ways...” Roberts 1998, *Killing the Black Body*; Thompson, 2007, *Making Parents*.

61. “as a ‘deadly symbiosis...” Wacquant 2004, *Deadly Symbiosis: Race and the Rise of Neoliberal Penalty*.

61. “US has had a parent behind bars...” Murphey and Cooper 2015, “Parents Behind Bars.”

62. “communities is the carceral system...” Davis 2003, *Are Prisons Obsolete?*; Gilmore 2007, *Golden Gulag*; Zurn and Dilts 2016, *Active Intolerance*.

62. “social consequences of mass incarceration...” Carney 2012, “Corrections Through Omniscience.”

62. “more aptly be called ‘e-carceration...” As founder and Executive Director of the Center for Media Justice, Malkia Cyril stresses, “There is increasing evidence that the algorithmic formulas used to make these decisions [about who should be assigned e-monitoring] contain deep-seated racial bias, so we must explore the extent to which EM both infringes upon core civil rights and represents a new frontier to compile surveillance data.” Cyril 2016, “e-Carceration: Race, Technology, and the Future of Policing and Prisons in America.”

In Philadelphia, to “figure out which inmates could be safely released, the city will start using a machine learning-based risk assessment tool: a computer algorithm that uses data on the history of other defendants to determine the likelihood someone will skip mandatory court dates or be arrested again while waiting for trial.” Colaneri 2016, “\$3.5 Million Grant to Help Philly Cut Inmate Population, Launch Other Prison Reforms.”

62. “back into custody because of ‘technical violations...’” Gordon 2017, “New Report Faults California’s Electronic Monitoring of Youth.”

63. “spend a day with their children and other family members...” Kaba 2017, “Help Criminalized Survivors of Violence for the Holidays!”

63. “regardless of race, age, residence, or alleged crime...” Gilmore 2004, “Pierce the Future for Hope: Mothers and Prisoners in the Post Keynesian California Landscape.”

64. “losing their loved ones into the prison system...” As Gilmore explains, the “insistence on the rights of mothers to children, and children to mothers, is not a defense of ‘traditional’ domesticity as a separate sphere; rather it represents political activation around rising awareness of the ways that the working-class ‘domestic’ is a site saturated by the racial state.” Gilmore 2004, “Pierce the Future for Hope: Mothers and Prisoners in the Post Keynesian California Landscape, p. 30.

64–65. “a creative process of fashioning care and reciprocity...” As Alondra Nelson explains, even scientifically-derived forms of genetic kinship entail creative interpretation: “the scientific data supplied through genetic genealogy are not always accepted as definitive proof of identity; test results are valuable to ‘root-seekers’ to the extent that they can be deployed in the construction of their individual and collective biographies.” Nelson 2008, “Bio Science: Genetic Genealogy Testing and the Pursuit of African American Ancestry,” pp. 71–72. See also Nelson 2016, *Social Life of DNA*.

Chapter 2

Making Kin in the Chthulucene: Reproducing Multispecies Justice

Donna Haraway

67. “Making Kin in the Chthulucene...” I owe heartfelt thanks to the colleagues and friends who have read and commented on numerous drafts of this essay, as well as listened to me pour out my passions on the subject, offering rich suggestions and amendments, both stylistic and political. I have experienced the kind of feminist solidarity, in conflict and collaboration, which I long for. Thanks especially to Adele Clarke and the other contributors to this volume (Kim TallBear, Michelle Murphy, Ruha Benjamin, Chia-Ling Wu and Yu-Ling Huang, as well as Alondra Nelson). I owe special gratitude to Rusten Hogness, Susan Harding, Marco Harding, Anna Tsing, Chris Connery, Mary Scott, Beth Stephens, Annie Sprinkle, T.J. Demos, Jenny Reardon, Marilyn Strathern, Marisol de la Cadena, Dai Jinhua, Sarah Franklin, Vinciane Despret, Isabelle Stengers, Scott Gilbert, Michael Hadfield, Deborah Gordon, Jason Moore, Jenny Turner, Sophie Lewis, Eileen Crist, Richard Stith, Karen Barad, Megan Moodie, Martha Kenney, Joanne Barker, Natalie Loveless, Sha LaBare, Eric Stanley, Harlan Weaver, Scout Calvert, Heather Swanson, Rachel Cypher, Elaine Gan, Karen DeVries, Katie King, Lochlann Jain, Helene Moglen, Sheila Namir, Jim Clifford, Judith Aissen, Lesley Green, and Thyrsa Goodeve.

67. “curses and blandishments of the Plantationocene, Anthropocene, and Capitalocene...” In Haraway 2015, “Anthropocene, Capitalocene, Plantationocene, Chthulucene,” I proposed “Plantationocene” for the litter of terms we need for current discussions in order to signal the earth-changing transportations, forced life, and forced death of peoples, plants, and animals in radical simplification of worlds in order to produce the kind of wealth related to relentless growth and extractable profit. Anthropocene and Capitalocene were the other two obvious terms. The Plantationocene is also contemporary to us; witness all the oil palm plantations and vast mono-cropping over the earth. See also Haraway, et al 2015, “Anthropologists Are Talking.” To understand the Capitalocene, see especially Moore 2015, *Capitalism in the Web of Life*; and Moore 2016, *Anthropocene or Capitalocene?* Both “chthulucene” and “chthonic” should be pronounced with a soft “th” and silent “c”: thuluseen, thonic.

67. “times of appropriation, exploitation, extractivism, and extinctionism...” Moore 2015, *Capitalism in the Web of Life*; Murphy 2017, *Economization of Life*; Demos 2016, *Decolonizing Nature*. On the core matter of extractivism in Latin America especially, see Blaser and de la Cadena 2017, “The Uncommons.”

68. “opportunistic sym-poietic liveliness of our mortal planet...” My “sympoiesis”—“making-with,” “in generative relations,” “making kin in relentless relationalities”—is similar to the concept of “en” developed by Huang and Wu, this volume.

68. “mode of speculative feminism...” SF is developed in Haraway 2016, *Staying with the Trouble*.

68. “potent contribution of Women of African Descent for Reproductive Justice in 1994...” See SisterSong, n.d., “Reproductive Justice.”

68. “People come together to make another world possible...” Reardon 2017, *The Postgenomic Condition*, p. 215.

69. “‘double death,’ the surplus killing of ongoingness...” Rose 2006, “What If the Angel of History Were a Dog?” p. 75.

70. “That is my speculum for this essay...” See Haraway 1997, “Fetus: The Virtual Speculum in the New World Order.”

70. “Other realities persist...” Pignarre and Stengers 2005, *La sorcellerie capitaliste*. They argue that capitalism and modernity confront us always with infernal choices: in essence, comply or die; there is no other world possible. That is the big lie. Critical theorists have long understood that the established disorder *is*, but *is not* necessary. A revolution of the imagination is not a luxury. See Stengers 2015, *In Catastrophic Times*.

71. “the rise of mega cities on every continent...” See Simone 2004, *For the City Yet to Come*, for a more open and complex approach to these cities and the savvy people living their lives in them. Multitudes of the earth’s multibillions of human people are in the recent and growing global mega cities in SF-worthy scenes of great wealth and intense mass immiseration. But these cities are also sites of complex creative practices for surviving and even flourishing by the world’s poorest people. I think of these mega cities as the

native homes of the Born Ones, as well as all too often the Disappeared.

71. “the inflection points for Will Steffen and his colleagues’ Great Acceleration...” See Steffen et al. 2015a, “Planetary Dashboard”; and Steffen et al. 2015b, “The Trajectory of the Anthropocene.”

71. “intersectional dilemmas of human population, food production, and biodiversity protection...” I share Moore’s Marxist approach in his *Capitalism in the Web of Life* (2015), but I also align with the science-idiomatic approach of Crist, et al. 2017, “The Interaction of Human Population, Food Production, and Biodiversity Protection.” In good faith, I inhabit both domains and try to nudge the scientists to a more world-ecological analysis. Crist, Mora, and Engelman argue that so-called “sustainable intensification” in food-growing approaches, while necessary and possible, will not stem biodiversity decline, extinction cascades, and other debacles. Food production for the Born Ones in the capitalist mode accounts for immense destruction of water sources, grasslands, and much else. For example, for both grain and animal production, “[t]emperate grasslands are among the hardest hit, with habitat conversion exceeding habitat protection by a ration of 8:1” (Crist et al. 2017, p. 3). Food production, no matter how reimaged and reorganized, has to increase by about 70% over present harvests by 2050 to feed anticipated numbers of human beings. Making things much worse, the old dichotomy between the high-consuming North and the exploited, high-reproducing South is fatally flawed (as well as racist), as 1) birth rates in the so-called South have fallen dramatically, and 2) climate-change-

promoting consuming classes are proliferating globally without mitigating inequality, indeed, exacerbating it everywhere. “A global middle class of 3.2 billion people in 2016 is expected to roughly double to 5 billion by 2030” (Crist et al. 2017, p. 2). Continued ruination in the forms of unequally borne human immiseration and nonhuman extinction seem inescapable. The hard feminist question is, what is to be done?

72. “‘World Scientists’ Warning to Humanity: A Second Notice’...” See Ripple et al. 2017, “‘World Scientists’ Warning to Humanity.” The conventional and enforced separation of nature and society in knowledge-making institutions goes a long way to explain why almost all the biologists whom I speak with think human population numbers are an obvious and major problem, to the extent that it hardly needs saying, while almost all the progressive social scientists and humanists I speak with are sure that capitalism, racism, colonialism, consumption, misogyny, neo-Malthusianism, and imperialism are the enemy and human numbers are not the problem and need not be discussed. May not be discussed. Indeed, to do so is to traffic in racist discourses. My essay for *Making Kin Not Population* is driven by my desperation to persuade both camps that we must think and act differently about human numbers. The best critique in the world of neo-Malthusianism and economism is only the beginning. The urgent question is how to reshape world-ecology on an earth with more than 7.6 billion human beings and increasing, most of whom need to be more not less wealthy, no matter how wealth is redefined in non-capitalist terms. Reimagining and reinventing wealth is obviously central. Moore 2015, *Capitalism in the Web*

of *Life*, is essential reading; also Stengers 2015, *In Catastrophic Times*.

72. “systematic environmental destruction for the second half of the twentieth century...” Quotations from Ebron and Tsing 2017, “Feminism and the Anthropocene, p. 664. I remember that Anna Tsing had already brought Engels’s thesis into multispecies feminist Marxist theory around 2005. See Tsing n.d., “Unruly Edges: Mushrooms as Companion Species.”

73. “Nowhere are these kinds of counting done for humans and nonhumans together...” See United Nations Refugee Agency 2017, “Figures at a Glance”; and *Living Blue Planet Report* 2015. The figures for nonhumans are based on trends in 10,380 populations of 3,038 mammal, bird, reptile, and amphibian species and subspecies, with a 95% confidence limit surrounding the trends.

74. “Carole McCann in *Figuring the Population Bomb*...” McCann 2016, *Figuring the Population Bomb*. If they exist at all, census data are often based on highly flawed practices. Extrapolations to present numbers for populations are not infrequently made from old and often bad censuses, when new ones cannot be taken for economic, cultural, and political reasons. Good models depend on both good algorithms and good data. The uncounted are often in the most precarious circumstances. Being counted can mean being further oppressed, or just the opposite, depending on many things invisible in mass numbers. However, these criticisms do not make the press of really existing and increasing numbers of unequally distributed and unequally impactful living human

beings and their industrial critters go away. Critique is necessary, but the temptation of misplaced concreteness—mistaking the idea or the critique for the semi-otic-material world—applies to analysis from progressive sources as much as to analysis from conventional or reactionary sources.

74. “namely 8.5 billion people (United Nations statistics)...” World Population History 2016, “Interactive Map”; United Nations 2015, “World Population Prospects: Key Findings and Advance Tables, 2015 Revision.” “[O]ne can say with a 95 per cent degree of confidence that global population will be between 8.4 and 8.6 billion in 2030 and between 9.5 and 13.3 billion in 2100.” United Nations 2015, “World Population Prospects,” p. 3.

75. “comparative carbon footprint, a widely cited globalizing category...” See Wikipedia 2012, “List of Countries by Carbon Dioxide Emissions per Capita”; Oxfam 2015, “Extreme Carbon Inequality”; and Roberts 2017, “Best Way to Reduce Your Personal Carbon Emissions.” Roberts’s subtitle makes the argument plain: “Don’t Be Rich.” “Strikingly, our estimates of the scale of this inequality suggest that the poorest half of the global population—around 3.5 billion people—are responsible for only around 10% of total global emissions attributable to individual consumption, yet live overwhelmingly in the countries most vulnerable to climate change.” *Environmental Research Letters* published an “infographic” in 2017 that dramatized the effect of having one extra baby in the US compared to any other action open to individuals to reduce climate change. The rich baby broke the scale by orders of magnitude. That “one extra baby” was not

examined for class and race differentiations of impact. See Wynes and Nicholas 2017, “The Climate Mitigation Gap,” Figure 1. The material I cite here is individualistic and exclusively humanist in approach and far from the world-ecological demography we need, but it can fertilize story telling usefully nonetheless.

76. “the global population explosion of industrial food animals...” On 14 January 2018, Anna Ravn, a Danish journalist for *Dagbladet* asked me to comment about food, justice, and climate change in terms of nonhuman animals. That day I was thinking about my uncomfortable (to me and others) positions as I prepared to speak at the Minding Animals conference in Mexico City in January 2018, where animal-advocate friends, activists, and scholars abound. I wrote the passage below as a current personal/public summary and provocation to think and feel further. This passage develops some of the intersectionality in multispecies reproductive and environmental justice that this booklet argues for.

“Briefly, I support Indigenous hunting in most contexts (e.g., Inuit seal and whale hunts), oppose all industrial meat production and eating of such meat, and support most local animal husbandry that pays real attention to human-animal relations throughout the chain of processes (health of grasslands, carbon footprint, human and nonhuman labor conditions, full animal lives, serious slaughter reforms, etc. etc.). MUCH LESS MEAT EATING, especially in rich countries but also in the fast-growing global consuming classes (which are already very large), is obviously necessary. In ways that cannot be reduced to cost-benefit calculations or any other accounting system, animals (and plants) themselves matter, not just human

beings, or vice versa. Transitioning to much less meat eating requires great political, emotional, cultural, and economic innovation and commitment from many communities and individuals. But worldwide, the trends show MORE industrial meat manufacture and eating, with animal and human abuse (feedlots, confined animal facilities, transport, extreme breeding, slaughter conditions, etc. etc.) as signs of “prosperity.” Inexcusable.

My respect for vegans grows by the minute, but I can’t go there. I know MANY progressive, human-nonhuman, multispecies, intersectional, vegan thinkers who take destruction from plant agribusiness very seriously. The growing Plantationocene/Capitalocene production, marketing, and consumption system targeting vegans is part of the problem, not part of the solution. However, many vegan production practices are not part of this nexus. Nonetheless, I can’t be a vegan because I support much local animal husbandry, including many farmers in Europe, North America, and elsewhere and other humans and nonhumans in working relations that include eating animals, where mutual survival is embedded in those relations.

Restoring and repairing the lives of critters and their habitats, both so-called wild and domestic, are crucial. In our times, multispecies justice must redo the relationalities of humans and nonhumans almost (but not quite) everywhere. Many (not all) Indigenous and some (many?) other surviving and past practices in all parts of the world, with lands, waters, airs, plants and animals, are good models for still possible flourishing. Closely related to animals as food is the Plantationocene economy of monocropping and use of grains to feed billions of industrial animals, with immense implications for land use and water, as well as human displacements.

I haven't even mentioned the impact of palm oil plantations yet! Large carbon-increase contributions to climate change, impacting especially the most vulnerable humans and nonhumans, are one obvious result. It is impossible to practice multispecies food justice without taking plants, soils, water, microbes, and much else seriously.

Revolt!!”

See Crist, Eileen et al. 2017. “The Interaction of Human Population, Food Production, and Biodiversity Protection,” for figures on the growth of the global consuming classes, expected to reach 5 billion human beings by 2030. Also, for the relationalities of care required to think well about soils, see Puig 2015, “Making Time for Soil.”

76. “basic story is clear from sources...” Weis 2013, *Ecological Hoofprint*. See also Brown 2012, *Full Planet, Empty Plates*: “World consumption of meat climbed from just under 50 million tons in 1950 to 280 million tons in 2010, more than a fivefold increase. Meanwhile, consumption per person went from 38 pounds to 88 pounds a year. The growth in consumption during this 60-year span was concentrated in the industrial and newly industrializing countries.... In low-income India—where annual grain consumption totals 380 pounds per person, or roughly 1 pound a day—nearly all grain must be eaten directly to satisfy basic food energy needs. Only 4 percent is converted into animal protein.... The average American, in contrast, consumes roughly 1,400 pounds of grain per year, four fifths of it indirectly in the form of meat, milk, and eggs. Thus the total grain consumption per person in the United States is nearly four times that in India” (Brown 2012, *Full Planet, Empty Plates*, p. 30).

76. “in both the Great Acceleration category and among the Disappeared...” Brown 2012, *Full Planet, Empty Plates*, p. 25: “Between 1950 and 1990, the oceanic fish catch climbed from 17 million to 84 million tons, a nearly fivefold gain. During this period, the seafood catch per person more than doubled, climbing from 15 to 35 pounds.” Mass depletion of ocean fish is an ever-growing global scandal.

76. “nothing mattered more than war...” Yong 2018, “When Humans War, Animals Die,” no page number.

77. “Pet-oriented websites give me my figures...” World Atlas 2017, “Countries with the Most Dogs.” See also a principal website for the industry, <https://www.petfoodindustry.com> 2017.

78. “missing babies, children, and adults are a matter of reproductive justice...” See Casper and Moore 2009, *Missing Bodies*.

78. “what living within the processes of extinction is like...” See van Dooren 2015, *Flight Ways*, for deep-storied accounts of what it is like to live on the thin edge of extinction, a process, not an event, for members of five different bird species and their people.

78–79. “steep decline of wildlife numbers that have been outsourced...” Carrington 2014, “Earth Has Lost Half Its Wildlife”: “The biggest declines in animal numbers have been seen in low-income, developing nations, while conservation efforts in rich nations have seen small improvements overall. But the big declines in wildlife in rich nations had already occurred long before the new report’s baseline year of 1970—the last

wolf in the UK was shot in 1680.... Also, by importing food and other goods produced via habitat destruction in developing nations, rich nations are “outsourcing” wildlife decline to those countries.... For example, a third of all the products of deforestation such as timber, beef and soya were exported to the EU between 1990 and 2008” (no page number).

79. “As both Anna Tsing and Isabelle Stengers argued in very different idioms...” Tsing 2015, *Mushroom at the End of the World*. Stengers argues “learning how to compose with Gaia complicates the reading of the capitalist hold over us.... From the very beginning of this text I have cast my lot with the non-Marxist claim that the capitalist redefinition of our worlds is to be understood as devastation, and that devastation as such breeds nothing else than barbarism” (Stengers 2017, “Autonomy and the Intrusion of Gaia,” p. 400).

80. “reorganization of life on Earth without geological precedent...” Lewis and Maslin 2015, “Defining the Anthropocene,” pp. 174–175.

80. “carrying capacity for salmon in the Pacific Northwest in 2017...” See Swanson 2017, “Why Anthropologists Need Carrying Capacity.”

80. “1650, the numbers were about 6 million...” Simon and Maslin 2015, “Defining the Anthropocene.”

82. “extractivism is how human geological force makes itself present in Latin America...” On extractivism and alliances against it, see de la Cadena 2016, “Uncommoning Nature.” The core struggle is over the

interdependence of earth beings, human and nonhuman; that struggle for interdependence and against resourcing of everything is simultaneously ontological, epistemological, economic, cultural, and political—themselves all categories that are an index of the problem! *Concepts world worlds*.

82. “collective resisters, such as the Black Mesa Water Coalition...” The list is long, but consider Idle No More, Black Mesa Water Coalition, Leave it in the Ground Coalition, and the Indigenous Environmental Network. Websites are in the References. See Demos 2016, *Decolonizing Nature*.

83. “scrutiny of the apparatus for making data sets is crucial...” Duster 2006, “Comparative Perspectives and Competing Explanations.”

83. “things I learned in biology and history of science...” Hutchinson 1978, *An Introduction to Population Ecology*; Kingsland 1985, *Modeling Nature*.

84. “other-than-colonizing-patriarchal-racist-capitalist apparatuses and categories...” Haraway 1979, “The Biological Enterprise.”

84. “foreground relationalities and not individual or massed countables...” Chapters 2 and 3 in Haraway 2016, *Staying with the Trouble*, develop this point extensively. See also Gilbert 2017, “Developmental Biology.”

85. “reproductive politics and sciences from feminists...” Clarke and Montini 1993, “The Many Faces of RU486.”

85. “died at much higher rates than the urban wealthy...” Coleman 1982, *Death Is a Social Disease*.

85–86. “What is not known as a public fact does not exist for public contestation...” Adele Clarke pointed out to me that Troy Duster argued a very similar point. Duster 2006, “Comparative Perspectives and Competing Explanations.”

86. “make comparative justice claims harder...” Haraway 1997, *Modest_Witness*, pp. 202–11. Scheper-Hughes 1993, *Death without Weeping*.

86. “model of population counting and feminist justice work in the idiom of statistics...” Rutherford 1992, “Reproductive Freedom and African American Women”; Haraway 1997, *Modest_Witness*, pp. 197–202.

88. “write some of this into the Camille Stories...” *Staying with the Trouble* ends with a speculative fabulation called “The Camille Stories,” in which reduction of human numbers is a key element. In an otherwise positive review in the *London Review of Books*, Jenny Turner 2017, “Life with Ms Cayenne Pepper,” joined with another reviewer, Sophie Lewis 2017, “Cthulhu Plays No Role for Me,” who had similarly loved my cyborg work, but decided I was now “trafficking irresponsibly in racist narratives” for raising the issue of radically reducing human numbers over a long period of time. Lewis went so far as to mourn the unborn billions of my SF future, seeing my position as close to genocide of the unborn, writing, “One would be justified in expecting to get some elaboration on how the removal of eight billion heads... could be non-coercive

—indeed, non-genocidal.” Turner cited Lewis in seeming agreement that I had sadly lapsed from robust feminist cyborg days to “hippy-dippy multi-species feminism,” a fall from really caring about human beings. I replied formally in the *LRB* (Haraway 2017, “Letter”), but more importantly Turner, Lewis, and I joined in a passionate, openhearted email conversation that changed the nature of the discussion. I don’t think we changed each other’s minds, but we opened questions for each other and ended part of the booming silence on the topic. Feminists staying with the trouble rock!

89. “Inuit ways of knowing are crucial...” Kunuk and Mauro 2010, *Inuit Knowledge and Climate Change*. On the ontological turn crucial to this discussion of environmental-justice contact zones, see Harding forthcoming, “Religion: It’s Not What It Used to Be.” Rooted in their participation in Bush School in Pangnirtung, Nunavut, in 2015, Susan Harding and Marco Harding led me into conversations, references, art, and thinking about diverse Inuit worlds and people, especially about Sila, hunting, and relational human and nonhuman personhood through living on the land. Susan invited me into discussions with her, Paulette Metuq, Kevin O’Connor, and Marisol de la Cadena around Metuq’s powerful drawing “Wear Qisi/Become Seal.” See O’Connor, Drum and Metuq 2017, “Wear Qisi-Become Seal.” See also Watt-Coultier 2015, *The Right To Be Cold*.

89–90. “‘selva’ (forest) and ‘nature’ in Latin American environmental struggles...” Lyons 2016, “Decomposition as Life Politics.”

90. “US-Navajo colonial relations, up to today...” Weisiger 2011, *Dreaming of Sheep in Navajo Country*.

90. “Zoe Todd makes this case powerfully...” See Todd 2016, “Relationships.” I develop the problem of contact zones between sila/climate change, selva/nature, and especially hózhó/carrying capacity further in Haraway 2016, *Staying with the Trouble*, Chapter 3.

90. “feminist Indigenous scholars changing the conditions of knowing and acting...” For example, see Zahara 2016, “Boundaries of the Human in the Age of the Life Sciences”; Mitchell and Todd 2016, “Earth Violence: Indigeneity and the Anthropocene”; Todd 2016, “Relationships”; Whyte 2017, “Our Ancestors’ Dystopia Now: Indigenous Conservation and the Anthropocene”; Whyte forthcoming, “What Do Indigenous Knowledges Do for Indigenous Peoples?”; Voyles 2015, *Wastelanding*; and Barker 2017, *Critically Sovereign*.

91. “Uncommoning the supposed commons is critical to building decolonial worlds...” See de la Cadena 2016, “Uncommoning Nature.”

91. “Marilyn Strathern and her ethnographer kin...” Strathern 1988, *The Gender of the Gift*. For a summary of the history and critique of the dividual/individual distinction, see Smith 2012, “From Dividual and Individual Selves to Porous Subjects.”

91. “state of indecisive agitation...” See Robinson 2012, 2312.

92. “only became ‘family members’ in the seventeenth century...” Strathern 2013, “Shifting Relations.” Making kin is a surging popular practice, and new names proliferate. These are not just words; they are clues and prods to earthquakes in kin making that is not limited to Western family apparatuses, heteronormative or not. For an approach informed by a thinker in the Anishinaabe language, see Kimmerer 2015, “Nature Needs a New Pronoun”: “Inspired by the grammar of animacy and with full recognition of its Anishinaabe roots, might we hear the new pronoun at the end of Bemaadiziiaki, nestled in the part of the word that means land? ‘Ki’ to signify a being of the living Earth. Not ‘he’ or ‘she,’ but ‘ki.’”

92. “wealth in (human) persons in Equatorial Africa before European colonization...” Guyer and Eno Belinga 1995, “Wealth in People as Wealth in Knowledge.”

93. “paper by Ed Yong reporting on a study among the Agta...” Yong 2017, “The Desirability of Storytellers.” The conventional reproductionist bias of Yong’s report is an example of using hunter-gatherers to think about evolution in exclusively biocapitalist/biopolitical, materialist terms of goods and people increasing the stock of value by increasing in number and/or substance. In the study Yong wrote about, stories had to be translated back into the currency of reproduction and adaptive advantage to be legible to the researcher. But wealth in people as wealth in stories suggests something quite different, just as wealth in people as wealth in knowledge did.

94. “not in abstract masses in deracinated space...” I resist naming a pseudo-precise goal for human numbers—three billion? more? fewer?—because such things depend on natural-social world-ecological transformations that cannot be known in advance. Technology matters, but environmentally and reproductively *just* imagination and action are more crucial. We already live on a massively damaged planet in the grip of climate change and many other insults to human and nonhuman wellbeing. These things can and probably are changing the capacity of the earth to sustain its living human and nonhuman beings in coming generations. Historically used to do immense racist and colonialist damage, “carrying capacity” is a heavily suspect category; but like population it is also a critical natural-social term that cannot be thrown out. Reduced carrying capacities follow systemic damage. Focusing on salmon, waters, lands and peoples of the US Pacific Northwest, Swanson 2017, “Why Anthropologists Need carrying Capacity,” wrote a brave, smart paper showing the decolonial importance of thinking anew about carrying capacities. Continued injustice destroys conditions for partial healing and flourishing. Repaired carrying capacities can result from robust practices of care. Carrying capacities are not fixed; they are world-ecological matters.

96. “There are many examples of people making a difference...” Staying in North America, for sustained kin making with resettling refugees, see “Support Circles” in North Carolina (Inter-faith Council for Social Service 2017, “Support Circles”) and Mennonite refugee sponsorship in Canada (Mennonite Central Committee 2017, “Refugee Response”). Why precisely do secularists leave so much of taking care of

each other in practical terms to faith-based communities (or the state)? I, for one, am ashamed, even as I ally with faith-based communities and also make demands on the state for its egregious failures. For former foster youth in Santa Cruz, California, taking things into their own hands in alliance with artists, see the exhibit in Santa Cruz at the Museum of Art and History 2017, “Lost Childhoods.” For a lesbian couple adopting a foster baby, a very difficult undertaking that has little to do with homophobia but a lot to do with deeply traumatized babies and children before and after they are taken into foster care, see the PBS video series *The F Word: A Foster-to-Adopt Story* (2017). Google “Fostadopt” and learn. Making non-natal kin should not be so hard and under-supported by surrounding communities!

For an astute ethnographic and structural analysis of the affective and economic dimensions of disaster capitalism, illuminating the role of charitably motivated people in responding to perversely packaged and marketed needy people and in providing services for these needy people in neoliberal capitalist America, see Adams 2012, “The Other Road to Serfdom.” On p. 211 Adams argues, “The reproduction of need fuels the engines of charity-based aid and renders all but invisible the profit-making going on at the other end, where one can almost hear the siphoning of federal and human resources upward into the pockets of those who know how to capitalize on a good social movement when they see it, even while depriving those who need support the most.”

97. “white-normative reproductive, nuclear family mode...” As reported by Christine Emba 2017, “Paul Ryan’s Recipe for a Robust Economy? Have More

Babies,” Ryan, after achieving a massive tax cut bill for corporations and the wealthy: “This is going to be the new economic challenge for America: People.... I did my part, but we need to have higher birth rates in this country,” he said as part of a riff on how Republicans planned to tackle entitlement reform in 2018. “We have something like a 90 percent increase in the retirement population of America but only a 19 percent increase in the working population in America. So what do we have to do? Be smarter, more efficient, more technology... still going to need more people.”

As another reminder that racial purity fantasies and refusal to accept immigrants and refugees as full citizens actually drive policy now in the “progressive” “developed” world, see Hakim 2015, “Sex Education in Europe Turns to Urging More Births.”

98. “population control apparatuses, like those reported by Kalpana Wilson...” See Wilson 2015, “The ‘New’ Global Population Control Policies.”

Chapter 3

Against Population, Towards Alterlife

Michelle Murphy

101. “In media venues like *The Guardian*...” *The Guardian* 2015, “Overpopulation, Overconsumption—in Pictures.”

103. “I have tried to show this...” See Murphy 2017, *The Economization of Life*; Bashford 2014, *Global Population*; Hartmann 1995, 2016, *Reproductive Rights and Wrongs*; and Akhter 1992, *Depopulating Bangladesh*.

107. “Charts demonstrating the ‘Great Acceleration’...” International Geosphere-Biosphere Program. 2015. “Great Acceleration - IGBP.”

107. “This earth systems optics of Anthropocene...” Masco 2010, “Bad Weather.”

109. “Radical reproductive justice takes...” Academic and activist work has together forged this extended sense of reproductive justice into environmental justice. See e.g., Bhattacharjee and Silliman 2002, *Policing the National Body*; Di Chiro 2008, “Living Environmentalisms”; Rojas-Cheatham et al. 2009, “Looking Both Ways: Women’s Lives at the Crossroads of Reproductive Justice and Climate Justice”; Zimmerman and Miao 2009, “Fertile Ground”; Hoover et al. 2012, “Indigenous Peoples of North America”; Feminist Northern Network 2015,

“Sexual and Reproductive Justice”; Cho 2015, “Nuclear Diffusion”; Pickens 2016, “#FlintWaterCrisis Is a Reproductive Justice Issue”; McClain 2014, “The Murder of Black Youth Is a Reproductive Justice Issue”; Bouse 2014, “Water, Water Everywhere”; Silliman et al. 2004, *Undivided Rights*; Murphy 2011, “Distributed Reproduction.”

109. “Webs of relations and distributions of violence...” This understanding of enablement as an achievement, rather than a condition, draws from work in crip technoscience that argues bodily enablement requires many kinds of often socially invisibilized forms of assistance. Thus, disablements, like enablements, are achievements of built worlds that make smooth passages for some people and modes of living, and not others. See, for example, Fritsch 2015, “Gradations of Debility and Capacity”; and Hamraie 2017, *Building Access*. Similarly, we can think through how many kinds of enabled life—whether enabled by the built relations that support whiteness, wealth, or settler colonialism—are also achievements of infrastructures, laws, architecture, supply chains, labor stratigraphies, patriarchal family forms and so on. Thus conditions of enablement, as much as conditions of environmental damage, are made and maintained by investments into particular distributions of life support. Uneven distributions of enablement are hence an outcome of what I am thinking of here as distributed reproduction.

111. “As Winona LaDuke asserts...” LaDuke 2017, “Cultivating Resistance.”

111. “So, to be against the problem of population...” On thinking about “becoming with the many,” I am

drawing from the work of Donna Haraway. See Haraway 2010, “When Species Meet”; Haraway 2016, *Staying with the Trouble*.

112. “Making futurities in the aftermaths...” On thinking a politics within and against, I am drawing on Harney and Moten 2013, *The Undercommons*.

113. “The concept of *alterlife*...” UNEP 2009, “Global Monitoring Report.”

113. “In Canada, lead and mercury...” See Sellers 2015, “Human and Ecological Health”; and EcoJustice 2007, *Exposing Canada’s Chemical Valley*.

114. “Alterlife has become a political concern for me...” US EPA 2015, “Great Lakes Facts and Figures.”

115. “Some scientists are now tracking low dose epigenetic...” See e.g., World Health Organization 2012, “State of the Science”; Vandenberg et al. 2012, “Hormones and Endocrine-Disrupting Chemicals”; Skinner et al. 2015, “Ancestral (DDT)”; Anway and Skinner 2006, “Epigenetic Transgenerational”; and Heard and Martienssen 2014, “Transgenerational Epigenetic Inheritance.”

115. “What it means to be a human...” For life science discussions rethinking the “individual” as a unit of analysis, see Gilbert, Bosch, and Ledón-Rettig 2015, “Eco-Evo-Devo”; and Gilbert, Sapp, and Tauber 2012, “A Symbiotic View of Life.”

115. “The nascent field of ‘exposomics’...” On the exposome, see the emergent work represented in

Vrijheid et al. 2014, “The Human Early-Life Exposome”; Vrijheid 2014, “The Exposome”; and Smith, de la Rosa, and Daniels 2015, “Using Exposomics to Assess.”

115. “To these emerging fields...” Skinner et al. 2013, “Ancestral (DDT)”; Kabasenche and Skinner 2014, “DDT, Epigenetic Harm.”

116. “Learning from and making kin...” Fanon 1963, *The Wretched of the Earth*; Fanon 1967, *Black Skin, White Masks*; Wynter 2003, “Unsettling the Coloniality”; McKittrick 2015, *Sylvia Wynter*; and Native Youth Sexual Health Network and Women’s Earth Alliance 2016, “Violence on the Land.”

116. “Alterlife resides in...” Fanon 1967, *Black Skin, White Masks*.

117. “As Kyle Whyte argues,....” Whyte 2017a, “Indigenous Climate Change”; Whyte 2017b, “Is It Colonial Deja Vu?”

117. “Kathrine McKittrick asks...” McKittrick 2013, “Plantation Futures.”

118. “Refusing narratives of purity...” Vizenor 2000, *Fugitive Poses*.

118. “This vision of decolonializing...” Alterlife was developed with the help of the graduate students of the four campus “Alterlife, Conditions, Aftermaths Seminar,” and in conversation with the other seminar instructors, Joseph Dumit, Tim Choy, and Jake Kosek. Conversation, work and creation by Indigenous feminist

and Indigenous resurgent scholars, artists, and activists Karyn Recollet, Eve Tuck, Christi Belcourt, Onaman Collective, Elizabeth LaPensee, Erin Marie Konsmo, and Kim Tallbear have also been crucial. In coming to alterlife, I have also learned from Black studies and Black activist thinking about possibility in the wake of anti-blackness, especially the work of BLMTO, Fred Moten, Vanessa Agard Jones, Kathrine McKittrick, Rinaldo Walcott, Christina Sharpe, Alondra Nelson, and Ruha Benjamin.

119. “What happens to the land, happens to the people’...” This saying circulates widely in Indigenous land protection struggles across Turtle Island and Hawaii. See, for example, Native Youth Sexual Health Network N.d., “Environmental Justice”; and Native Youth Sexual Health Network and Women’s Earth Alliance 2016, “Violence on the Land.”

119. “The first step, then...” Native Youth Sexual Health Network and Women’s Earth Alliance 2016, “Violence on the Land.”

120. “Vanessa Agard-Jones calls this...” Agard-Jones 2013, “Bodies in the System”; and Agard-Jones 2014, “Spray.”

120. “Attention to alterlife asks...” Harney and Moten 2013, *The Undercommons*, p. 10.

122. “Second, alterlife thinks with and against...” Tuck and Yang 2013, “R-Words: Refusing Research.”

Chapter 4

New Feminist Biopolitics in Ultra-low-fertility East Asia

Yu-Ling Huang and Chia-Ling Wu

126. “This is far below the ‘replacement rate’...” Jones, Straughan and Chan 2009, *Ultra-low Fertility in Pacific Asia*.
128. “Raymo and colleagues argue...” Raymo et al. 2015, “Marriages and Family in East Asia.”
128. “Ochiai coined the concept...” Ochiai 2014, “Leaving the West, Rejoining the East?”
128. “Feminist STS scholars...” See e.g., Homei and Huang 2016, “Introduction: Population Control in Cold War Asia”; and Greenalgh 2009, “The Chinese Biopolitical.”
129. “Second, feminists seek to ‘seize the means of reproduction,’...” Murphy 2012, *Seizing the Means*.
130. “Scholars have called for remaking population science...” See McCann 2016, *Figuring the Population Bomb*; and Murphy 2017, *The Economization of Life*.
130. “For example, in the late 20th century,...” A “population dividend” denotes a demographic bonus period when the working population outnumbers the

dependents in a country. This commonly happens during the first demographic transition when the fertility rate falls and there are fewer young mouths to feed. Resources of both households and government are freed up for investment in economic development, welfare and human capital, hence per capita income increases as well. See Lee and Manson 2006, “Back to Basics.”

130. “Growing environmental degradation...” See e.g., Economy 2010, *The River Runs Black*; and Rahman 2017, “Do Population Density.”

130. “And today, China, Taiwan, and South Korea...” Bradshaw et al. 2010, “Evaluating the Relative Environmental Impact”; Hsu et al. 2016, *2016 Environmental Performance Index*.

131. “However, recent scholarship...” See e.g., O’Neil et al. 2012, “Demographic Change”; and Lutz et al. 2014, *World Population & Human Capital*.

131. “Concepts like ‘planetary health’...” Whitmee et al. 2015, “Safeguarding Human Health in the Anthropocene.”

131. “Some scholars apply the Intergovernmental...” See e.g., Lutz et al. 2014, *World Population & Human Capital*.

131. “Since the 1990s, economists...” Population composition indicates the combined characteristics of individuals within a geographic area. The most common demographic compositional variables used to understand the attributes of a population include age,

sex, race/ethnicity, marital status, income, education, occupation, etc.

131. “dependency ratios...” The dependency ratio refers to a measure showing the number of dependents (aged zero to 14 and over the age of 65) to the working population (aged 15 to 64). According to conventional demography, the higher a nation’s dependency ratio is, the more severe the nation’s economic hardship will be.

132. “high investment in human capital...” Unlike tangible monetized capital, such as bank savings, stock shares, and real estate, “human capital,” a term popularized by Chicago economist Gary Becker, refers to a collection of resources—knowledge, skills, training, social and personality attributes, and health—that can advance a person’s work performance and productivity. A family’s and a government’s expenditures on education, training, and medical care are regarded as investments to increase the human capital of their children and people. See Becker 2007, “Human Capital.”

132. “investment in social welfare policies...” Bloom and Williamson 1998, “Demographic Transitions and Economic Miracles in Emerging Asia.”

132. “For example, according to the traditional...” For Taiwan data, see Taiwan National Development Council 2018, “Business Indicators, November 2017.” For the Republic of Korea data, see Statistics Korea 2007, “Population Trends of the World and Korea.”

132. “For example, instead of treating 65 years...” Lutz et al. 2014, *World Population & Human Capital*.

132. “Using data from the National Transfer Accounts...” The National Transfer Accounts Project consists of research teams in more than 40 countries based in universities, research institutions, and government agencies. For more information about this project, see National Transfer Accounts Project N.d., “National Transfer Accounts.”

133. “Considering the macroeconomic implications...” Lee et al. 2014, “Is Low Fertility Really a Problem?”

133. “This perspective is especially insightful...” Cheng and Loichinger 2015, “The Future Labor Force of an Aging Taiwan.”

133. “For example, Taiwanese demographer...” Cheng and Loichinger 2015, “The Future Labor Force of an Aging Taiwan.”

134. “The government should provide more pro-family measures...” See the Taiwan Childcare Policy Alliance 2017. “Childcare Policy Alliance Statement of Purpose.”

134. “Recently, more social scientists...” Yip 2017, “Hong Kong should make the best.”

134. “Industry’s technological inventions...” Yoshikawa 2016, *Population and Japanese Economy*.

135. “Governments have seldom enforced...” Sung 2012, “Abortion in South Korea.”

135. “A recent *New York Times* article...” Rich 2018, “Push to End South Korea Abortion Ban.”

135. “However, since 2009...” Paik 2014, “Assisted Reproductive Technologies at Crossroads.”
135. “They formed a new organization...” Sung 2012, “Abortion in South Korea.”
136. “In Taiwan for example...” Chen 2014, “Producing the Right to Abortion.”
136. “But the discussion did carve out...” Cheng 2015, “An Analysis of the Controversy.”
136. “cutting subsidy programs for contraceptives...” For Korea, see Ha 2017, “Solving Low Fertility.” For Japan, see Chambers et al. 2009, “The Economic Impact of Assisted Reproductive Technology.” For Taiwan, see Taiwan Ministry of Health and Welfare N.d., “IVF subsidy program for low-income families.”
136. “Today only the poor and...” See Chiang 2013, “Abortion.”
136. “Some Chinese, especially feminists...” Wee 2017, “After One-Child Policy.”
137. “One city government in Japan...” *Japan Times* 2016, “Chiba Municipality to Offer.”
137. “Although it has been debated...” An interesting development is that in some East Asian societies, such as Singapore, NGOs are taking action to encourage young people to start families earlier and avoid infertility by providing publically available knowledge about male and female infertility. See e.g., Koide 2016, “Singaporeans are Getting Creative.”

137. “The discourse of choice or reproductive autonomy...” Waldby 2015, “‘Banking time’.”
137. “But compared with the benefits...” Wu 2012, “IVF Policy and Global/Local Politics.”
138. “In a more feminist analysis...” See Harwood 2009, “Egg Freezing”; and Baldwin et al. 2014, “Reproductive Technology and the Life Course.”
138. “Overall, with the decline in fertility...” Murphy 2012, *Seizing the Means of Reproduction*.
138. “Instead, feminists in East Asia...” Wu 2017, “From Single Motherhood to Queer Reproduction.”
138. “Queer reproductive justice...” On stratified reproduction, see Colen 1995, “Like a Mother to Them.”
139. “In their current ongoing second demographic transitions...” The first demographic transition of the industrialized countries in Western Europe and North America happened between the nineteenth and early twentieth centuries. In “developing areas” such as Asia, such transitions began much later during the mid-twentieth century. In Asia, the processes were speeded up by various forces. Since the 1960s, due to access to contraceptive technologies and feminist movements, women’s sexual and reproductive behaviors in Western Europe and North America changed, resulting in sub-replacement fertility levels. Fertility rates in East Asian countries dropped below replacement levels later than in the West, from the mid-1980s to the present. For an up-to-date discussion, see Dai 2016, “Demographic Transition.”

139. “The derogatory term ‘leftover women’...” Fincher 2014, *Leftover Women*.

139. “For people in lower socioeconomic strata...” See Raymo et al. 2015, “Marriages and Family in East Asia”; and Yamada 2013, *Why is Japan so Cruel to the Young*.

140. “Yet despite changing family formations...” Ochiai 2014, “Leaving the West, Rejoining the East?”

140. “In 1999, Japanese sociologist...” Yamada 1999, *The Age of Parasite Singles*.

141. “Research that compares married and unmarried...” See e.g., Sarkisian and Gerstel 2016, “Does Singlehood Isolate or Integrate?”

141. “Ueno Chizuko, a prominent feminist...” Ueno 2007, *The Aging Life for a Single Woman*; and Ueno 2009, *Men’s Ways to be Single*.

142. “For example, ‘caregiver cafés’...” To learn more about how caregivers’ cafés work, see Ponte-Toyama n.d. “Café.”

142. “Local government and NGOs in northern Taiwan have initiated a co-living apartment project...” To learn more about the co-living apartment project in Taiwan, see Co-living Apt. n.d., “Co-living Apt. Website.”

143. “This legal reform movement...” To learn more about what the Alliance advocates, see Taiwan Alliance to Promote Civil Partnership Rights n.d., “Introduction to the History.”

143. “Sociologist Yamada Masahiro...” Yamada 1999, *The Age of Parasite Singles*.

143. “Targeting lonely salarymen...” For the advertisement video of this robot, see Gatebox n.d., “Virtual Home Robot.”

Chapter 5

Making Love and Relations Beyond Settler Sex and Family

Kim TallBear

145. “It cut me from the circle...” *Critical Polyamorist* 2018, “The Critical Poly 100s.”

145. “standard of lifelong monogamous marriage took hold in the 19th century...” Cott 2000, *Public Vows*. See also Denial 2013, *Making Marriage: Husbands, Wives and the American State in Dakota and Ojibwe Country*.

146. “marriage and monogamy became secularized in late 19th-century scientific discourse...” Willey 2016, *Undoing Monogamy*.

146. “how ‘marriage was part of the national agenda in Canada...’” Carter 2008, *The Importance of Being Monogamous*.

146. “increase certain human populations and not others during rapid post-World War II colonial and capitalist growth of the US...” Ebron and Tsing 2017, “Feminism and the Anthropocene,” p. 663.

146. “what Ebron and Tsing, after Traci Brynne Voyles, call ‘wastelanding’...” Voyles 2015, *Wastelanding*.

148. “Cree-Métis feminist, Kim Anderson writes...”

Anderson 2010, “Affirmations of an Indigenous Feminist,” p. 83.

148. “mostly failed monogamy, extreme serial monogamy, and disruptions to nuclear family...” I eschew the more usual term “ethical nonmonogamy” in favor of “open nonmonogamy.” African diasporic feminist and critical animal studies scholar, Zakkiah Jackson, pointed out to me that the term “ethical nonmonogamy” implies that monogamy is more naturally ethical. We do not think so. See TallBear 2017, “Moving Beyond Settler (Colonial) Sexualities.”

150. “their children lived and worked in extended kin networks...” Anderson 2010, “Affirmations of an Indigenous Feminist,” p. 83.

153. “unsustainable private property interests and institutions...” Morgensen 2011, *Spaces between Us: Queer Settler Colonialism and Indigenous Decolonization*; Franke 2015, *Wedlocked*.

154. “whether their relationship has a sexual component...” Rambukkana 2015, *Fraught Intimacies: Non/Monogamy in the Public Sphere*, p. 40.

158. “pains of colonization and the scars of internal colonization...” Shorter 2015, “Sexuality,” p. 487.

159. “mutual connectivity, shared responsibility, and interdependent well-being...” Shorter 2016, “Spirituality,” p. 447.

160. “constituted once and unchanging...” Shorter 2015, “Sexuality,” p. 497.

160. “intersubjective dynamism of two or more persons...” Shorter 2015, “Sexuality,” p. 497.

160. “forms of relations including other-than-human persons...” Shorter 2015, “Sexuality,” p. 497.

160. “type of power, particularly one capable of healing...” Shorter 2016, “Spirituality,” pp. 433–57.

162. “Their work is listed in the Bibliography and the online Sourcenotes...” Deloria 1998, *Playing Indian*; Perdue 1980, *Nations Remembered: An Oral History of the Five Civilized Tribes, 1865–1907*; and Dippie 1982, *The Vanishing American*. For the intersectionality of race and Indigeneity, see Sturm 2002, *Blood Politics*; 2011, *Becoming Indian*; 2014, “Race, Sovereignty, and Civil Rights”; Harris 1993, “Whiteness as Property”; Moreton-Robinson 2015, *The White Possessive*; Reardon 2005, *Race to the Finish*; Tuck et al. 2014, “Geotheorizing Black/Land”; and Ben-zvi 2007, “Where Did Red Go?”