

## **“There is No Unauthorized Breeding in Jurassic Park”: Gender and the Uses of Genetics**

LAURA BRIGGS and JODI I. KELBER-KAYE

*This article relies on close readings of Jurassic Park (the book and the film) and Gattaca (film) to argue that a great deal of the opposition to new genetic technologies expressed in contemporary popular culture is grounded in a profound anti-feminism. Both of these science fiction stories suggest that genetic manipulation is “unnatural,” and call for a return to a romanticized “natural” motherhood. In Jurassic Park, genetic science is figured as a threat to the white nuclear family, producing “Third World” female dinosaurs whose reproduction cannot be stopped, whose existence threatens white American children. Gattaca aligns the “unnaturalness” of genetically modified offspring with homosexuality and communism, and calls for the return of democracy, individual striving, and motherhood. Together, the article argues, these two texts suggest some of the pitfalls for feminism in contemporary discussions of reproductive technology and genetic determinism.*

As ethicists, newspapers, scientists, and popular culture try to keep up with the tremendous changes wrought by knowledges and manipulations of genes, one thing still seems significantly ignored: these technologies' impact on women and gender. Our culture can and does talk about whether “gayness” or violence can be genetic, or whether such questions themselves smack of eugenics; the social dangers of the arguments for genetic “racial” differences in intelligence; the ethics of patenting the genetic material of indigenous peoples. Other important issues debated in the public arena include the legality of the military and law enforcement databanking of genetic information; the morality of cloning livestock (or humans); questions of valuing people with disabilities; prenatal genetic screening; trade relations; genetically modified foods; genetic technology startup companies and their relation to academe; and any number of other topics under the vast and growing rubric of the laboratory and social life of genes (Duster 1990; Haraway 1997; Hubbard and Wald 1997; Kevles and Hood 1992; Lewontin 1993).

But where are women (*qua* women) in all of this? Women enter the discourse of genes only unevenly and irregularly, in terms of a potential genetic component of breast cancer, for example. Yet questions of genes and genetics are primarily about reproduction, a subject that traditionally has been inescapably imbricated in cultural negotiations of gender, family, and feminism. Where did this cultural baggage of reproduction go? Two decades ago, in the seven-volume “Genes and Gender” monograph

and conference series, what it meant to put these two words together was straightforward. It referred to genetic and evolutionary explanations for differences in men's and women's behavior, that male violence had something to do with Y chromosomes, and female nurturance had something to do with X's, for example. In the past decade, the possible referents of "genes" has grown exponentially, and it requires analytical work to understand what it might mean to pair "genes" with "gender." In popular science fiction, we will argue, genes and gender figure together prominently as markers of a tension between science (genes) and nature (gender). In this article, we look to "blockbuster" science fiction to try to understand how society is making sense of this new world order of genes. The meaning of "nature," we think, is being reconfigured here in reactionary ways. Reproductive technology, by making genes and children manipulable, pushes the weight of the ever-present nature/culture dualism back onto women and "natural" childbirth, where before it had rested on genes.

We rely on close readings of *Jurassic Park* (Crichton 1990; Spielberg 1993) and *Gattaca* (Niccol 1997), two films located in a science fiction tradition stretching back to the *Alien* movies, to tell us about new meanings of the conjunction of "genes" and "gender" because we think it can tell us something about what "works" as a cultural narrative. Donna Haraway (1989, 1991) has suggested that science fiction can be a source of fresh imaginings of possible scientific futures. Less optimistically, we would also suggest that those stories that become consumable by a large popular audience provide a good guide to the more conservative cultural narratives of the present. Bestsellers and Hollywood films "work" because they don't disturb, but offer rather familiar re-workings of stories that the culture as a whole can assent to, consume, and enjoy. Here, however, we are not interested in arguments that render popular accounts of science (like newspaper stories about cloning, for example) as always-inferior "translations" of science (Bucchi 1998). Genes no longer belong exclusively to scientists, if they ever did. Rather, we think of genes as what Bruno Latour calls "hybrids," objects that we as a culture make sense of in equal parts through the laboratory, the technologies we produce with them, and the stories we tell to make sense of the social change they bring (1993). All of these kinds of meanings—scientific, technological, and cultural—are brought to bear in every realm in which genes are important. So, for example, these science fiction narratives are simultaneously arguments about how science should (or shouldn't) be done, what should happen in the realm of business and technology, and at the level of how genes (re)arrange issues of family, feminism, ethics, politics, and social organization.

We suspect that there are important and very conservative, anti-feminist stories at work beneath the apparent cultural silence about women in

the discourse of genes. *Jurassic Park* and *Gattaca* offer fully realized versions of U.S. cultural anxieties about genes. These texts tell stories about how genes and science threaten the "pure" and "natural" family. They engage in a genetic reworking of the Cold War themes of "Third World" overpopulation, communism, and homosexuality as threats—not to the state, in this iteration—but to the white nuclear family. Their narratives rely on a polarization of "natural" and "unnatural" reproduction, where heteronormative nuclear family-making is considered "natural" and cloning and genetic manipulation (falling within the realm of science) are "unnatural." Characters are made to symbolize these polarizations: heroes for the natural, right order of things and monsters, communists, and homosexuals as those that are dangerous to the natural.

Mothers are important to both stories, with certain kinds of maternity—produced through a heterosexuality unmediated by technologies, enclosed within a white nuclear family, unencumbered by feminism or careerism—produced as crucial to "the natural" and "the good." Explicitly a critique of new genetic technologies (although Crichton contends that he is not anti-science), these major popular cultural texts accomplish their work by reinscribing a notion of the natural that locates nature in motherhood. Genetic technology is made to stand for science, which is imagined as something done only by men, and contrasted with "natural" maternity, in which women (who do not do science, and presumably stay home to act as good mothers) bear good children, enclosed within a heterosexual nuclear family. In order to make clear the "deviance" of scientific intervention in reproduction, the stories invoke other alarming forms of deviant reproduction as well: in *Jurassic Park*, the unnatural reproduction of "Third World" monsters (relying on our common-sense knowledge of overpopulating "Third World" mothers, the other monsters), and in *Gattaca*, homosexuality and communism. *Jurassic Park* shows us a white nuclear family threatened from within by feminism—by scientist women, divorce, and little girls who play sports—and from without by the fecundity of "Third World" monsters. *Gattaca*, on the other hand, expresses its concern about gender and reproduction through a moral narrative that warns us about a future in which reproduction as we know it is at stake. When reproductive technology becomes the norm, the film says, "natural" motherhood is sacrificed, with dire consequences for both the social order and sexuality. This warning is played out in the context of the portrayal of male homosexuality rendered as the result of coddling (maternal excess), which occurs when children are identified by genetic testing as vulnerable and weak. The kind of mothering that results from such science, the film says, is far from "natural" and creates societal decay. By positing reproductive technology as "science" and "male," the film successfully pits science/male-ness against the natural and the fe-

male, and tells a story in which the absence of proper maternity results in the weakening of the necessary virtues of heterosexuality, democracy, and individual striving.

In looking to science fiction as a place that figures and refigures cultural narratives, we are building on a body of feminist literary criticism of the field's importance for working out meanings of women and reproduction. As Robin Roberts suggests, "more than other genres, science fiction is obsessed with the figure of Woman: not only as potential sexual partner but, more interestingly, as alien, as ruler, and as mother" (1993). *Which* aliens obsess the genre is telling. A number of scholars have looked to the *Alien* movies, arguing that they are narratives about feminism and reproduction. On the one hand, these movies feature Ripley (Sigourney Weaver), a feminist hero whose strength, cleverness, and overwhelming firepower enables her to save men, women, children, and civilization as we know it, repeatedly. On the other hand, however, the films offer up a monster that is, by turns, phallic and maternal, one whose fecundity is at the heart of the films' horror: she lays her eggs in human bodies, whose flesh is torn apart by the birth of her hatchlings (Dery 1992; Miller 1988).

These stories work out familiar cultural problems. Scott Bukatman (1993) suggests that both feminism and race are prominently troubling in *Alien* (Scott, Ridley 1979). "While the film presents the viewer with a seeming rarity in this genre, namely a strong and competent female protagonist, it is clear that anxiety about feminism is displaced onto the figure of the alien Other (furthermore, in *Alien*, as in much science fiction, anxiety about race is equally predominant and equally inscribed in the design of the monster)" (266). Barbara Creed suggests in a psychoanalytic vein that "the monstrous-feminine [represented as the alien mother] figures as a fear of difference, a fear of the feminine" (1990).

The second film, *Aliens* (Cameron 1986), is inescapably and explicitly about mothers, "the uncanny bug mother," in Lynda Zwinger's (1992) memorable phrase, versus a maternalized Ripley, whose job through most of the film is saving the child Newt (Carric Henn). The final scene—the resolution the film is working toward—is of a sentimentalized white nuclear family: an exhausted Ripley lying down maternally beside Newt and a wounded soldier (Michael Biehn). Interestingly, the fourth film, *Alien Resurrection* (Jeunet 1997), turns this maternal figure on its head through an encounter with cloning. Ripley has been cloned as an alien/human hybrid, as has her monstrous embryo. *Resurrection* ends with her cradling her half-bug, half-human monster-offspring in her arms as she kills it (saving humanity again). Cloning also renders her a monstrous, Medea-like mother. Further, the most horrifying moment of the film is Ripley's discovery of the failed clones of herself, doppelgangers with a difference, monstrously mis-formed. One pleads with her to kill it, and

she does; the split between the “monstrous-feminine” (alien) and the strong feminist (Ripley) is undone; we have the fully realized monstrous feminist, who kills her children and the weaker versions of herself.

There is, nevertheless, a level of ambivalence and complexity about feminism, motherhood, and cloning—the clone-Ripley is still heroic in *Alien Resurrection*—that is completely absent from *Jurassic Park*, which renders cloning and strong females as a straightforwardly bad thing. Cloning, the best-selling book and blockbuster movie profess, is a dangerous breach of the nature/technology boundary, and produces monstrous mothers who breed without benefit of males. The plot involves a rich entrepreneur who tries to create the ultimate theme park by cloning dinosaurs. The dinosaurs, however, escape their bonds and begin to breed, despite the fact that scientists made all the dinosaurs female. Scholar Marina Warner argues that the female dinosaurs, in finding a way to reproduce, prove to be “uncontrollably fertile, resistant to all the constraints of the men in power” (1994, 5). She calls the film a confrontation between “nature-coded female with culture-coded male,” and concludes that the film plays out the long-held myth that women are out of control and, since the dawn of feminism, have been making delinquent, violent children and destroying the nuclear family (5).

We would push that argument further and notice that the dinosaurs in *Jurassic Park* are not just “coded female,” they are also coded non-white; as Bukatman suggests for *Aliens*, the monsters are also standing in for anxieties about race. Set in a fictional Isla Nublar in Latin America, off the coast of Costa Rica, *Jurassic Park* is a familiar story of Third World “overpopulation”: excess reproduction, increasing, dangerous. This concern is far more explicit in the obsessively anti-feminist Michael Crichton book than in the liberal Stephen Spielberg film. The book tells two kinds of stories about families. One is about white nuclear families, the other, about the unnatural reproduction of Third World females. Stories about gender, race, nation, and family are nested within each other and counterpoised to each other. The book relies heavily on tropes of family, assembling groupings of man-woman-child in virtually every scene. These families and mock families, however, are troubled, and are punished and/or problematic to the extent that they fail to conform to white middle-class ideals: woman sheltered and protected by strong and brave man, girls protected from the rough-and-tumble and boys assuming virile, man-in-training jobs. The work of Crichton’s narrative is to place white people within nuclear families (or kill them; many people are eaten by dinosaurs in this story), and to signal the irremediable difference of non-white people through the incapacity of their families to produce this ideal. Crichton marks narrative problems to be solved though the improper gendering of women and girls, who take up masculine (read: professional) roles or are tomboys, dominating relationships with males. Families

themselves can also be race or species-mixed, with "children" of the wrong species standing for the problem of race-mixture. By the end of the book, there are only two families: a white family of Ellie Sattler, Alan Grant, and the two children, Alexis and Tim, with men and boys dominating, and the dinosaur "families," headed by females, terrifying, incessantly breeding, and uncontrollable despite military efforts to destroy them.

*Jurassic Park* is explicitly, even tendentiously, about the dangers of manipulating genes. The introduction argues as polemic what the rest of the book demonstrates as narrative: genetic engineering and manipulation have considerable potential for social and environmental harm, the "capture" of biology by business pushes scientists to engage in ill-considered research, and the manipulation of genes contains the possibility of considerable changes in the social fabric to which the curiosity and hubris of scientists blinds them. In this form, Crichton's point is not something to which feminists would necessarily take exception; in fact, it bears a certain resemblance to many feminist scholar's accounts of changes in genetics (Haraway 1997; Hubbard 1997; Nelkin and Lindee 1995; Rothman 1986). What is interesting—and anti-feminist—in Crichton's account is the story of reproduction he links it to, one in which "good" reproduction takes place in white nuclear families where gender roles are properly adhered to, and "bad" reproduction takes place in Third World families. In an interview in *Playboy*, Crichton owns the anti-feminism of his beliefs about families:

There are . . . victims of feminism. A lot of children are victims of an era when women declared their independence from men, saying they no longer needed them: "A woman without a man is like a fish without a bicycle." Women could do it by themselves. Well, the idea dovetailed rather nicely for a lot of young men who didn't want to be needed in the first place. They didn't want to be committed to a family just because they got a girl pregnant, for instance. . . . But the kids who were left behind were victims of that fashion. There are many children raised without fathers and they have suffered. (Crichton 1999)

In *Jurassic Park*, females learn to be mothers, and men learn to be manly and responsible, and all the female-headed households are monstrous.

The first 30 pages of the book introduce no fewer than six family tableaux. The opening scene describes an improperly gendered, racially mixed "family." A woman doctor with the masculine name of "Bobbie" and her Costa Rican male assistant attempt to come to the aid of a character in his teens or twenties referred to as a "boy," a worker from Jurassic Park mauled by a dinosaur. The "boy" dies, and the physician tries and fails to find out what killed him. The effort introduces the next "family": a woman in labor and a midwife. Here, and consistently throughout the book, non-"white" reproduction takes place in all-female configura-

rations. The response to Bobbie's queries reminds the reader of both babies and non-white difference: Bobbie is told that the "raptor" the "boy" was screaming about in Spanish refers to a local superstition about a man who steals babies (Crichton 1990, 1–7). The next scene introduces another kind of family: a wealthy American couple visiting Costa Rica with their adventurous, tomboy daughter. The girl, too, is mauled, though this time it is a small dinosaur; she is treated by a male physician, and survives (11–6). The next scene takes place at Columbia University, and involves a male scientist, a female lab tech, and their discussion of this child's drawing (23–4). Next, in another all-female scene of reproduction, a Costa Rican midwife sees a dinosaur bite a newborn (25–6). Then, at Columbia again, another female lab tech discusses the child's drawing with the male scientist. She has children who draw similar pictures, and insists that it is a dinosaur (27–8).

All of these characters are incidental, and their primary purpose for the plot is to gradually unveil the existence of dinosaurs, and to suggest what the reader only learns for certain at the end: the dinosaurs have escaped the island and are breeding. However, the specific way the story unfolds is through these constant iterations of tropes of family. The closer the grouping comes to approximating a middle-class, racially/species homogeneous, white American nuclear family with mom at home and girls in dresses, the better their chances for survival. The first grouping—woman dominant, racially mixed—meets disastrous consequences: the physician assistant runs away in fear, the woman doctor can do nothing, the "boy" dies. The next couple is rich, aesthete, pathetic; the woman is "too thin" (13), vain, and constantly worried about the daughter's safety when out of sight. We are invited to have more sympathy for her husband, though he is also the rich American on vacation, who believes that Costa Rica can safely be his daughter's playground. The tomboy daughter is too fearless, not running away from a threatening lizard, and gets hurt. However, this group is closer to the ideal family of Crichton's fiction; the daughter survives. Through this tale of two maulings, Crichton sets the stage for his description of the white family. In the two non-nuclear family scenes with a Costa Rican midwife and an infant, he hints at the story's other story about families: non-white (non-human) females can reproduce without males. Their reproduction, however, is monstrous; the infant is killed and eaten by dinosaurs. This is echoed by the overarching story of unnatural reproduction: even though the scientists believe that they have made it impossible for the dinosaurs to breed by making all of them female, the dinosaurs find a way.

The overdetermined plot about white families in the novel involves turning its two main adult characters—paleontologist Alan Grant and paleobiologist Ellie Sattler—and two human children, Tim and Alexa, into a properly gendered, middle-class nuclear family. When the novel

introduces them, Grant and Sattler are arrayed in a family scene: the two of them are digging up baby dinosaurs (31–3), and supervising “kids” (32), students. Sattler, a graduate student, is twenty-four and cute in a traditionally feminine way: she’s wearing cut-off shorts and her midriff is bare (though she chugs her beer). Grant is a good father figure, bearded, barrel-chested, and fond of children (115). Indeed, his expertise about dinosaurs mirrors children’s desire to master the knowledge of them, and he reflects that “children liked dinosaurs because these giant creatures personified the uncontrollable force of looming authority. They were symbolic parents” (115). Like Sattler chugging a beer, he briefly exhibits a flaw in his parenting, which can thus be perfected by the end of the novel: when he first encounters a baby dinosaur at Jurassic Park, he examines it rather than cuddles it, endangering the little animal’s well-being (110).

The children, however, have bigger problems. Both are improperly gendered; Tim is “a bespectacled boy of about eleven,” Lexy “a girl a few years younger, perhaps seven or eight, her blond hair pushed up under a Mets baseball cap, and a baseball glove slung over shoulder” (92). As the tomboy Lexy says, the family is concerned that the bookish Tim is a sissy; their father “says Tim should get out in the air and play more sports” (93). Lexy’s gender, too, is problematic; the available model of masculinity in their family involves sports, and it is Lexy who carries a baseball mitt. This association is underscored when Tim relates the story of how an outing to see dinosaurs at the Museum of Natural History was disrupted because their “father said he wanted to catch the last half of the Mets game on TV, and Lex said she did, too” (95). In addition to improper gendering, the children are caught in a family crisis: their parents are getting a divorce (92). Grant takes a friendly interest in Tim immediately on meeting him, and begins to mentor him on how to be scholarly and manly at the same time (95–6).

By the end of the book, these four characters are among the only ones left alive and have been made into a family, at least temporarily, through their forced residence in Costa Rica. The work of making them into the right kind of nuclear family is the narrative of the book. By the end, Grant and Sattler must give up their fascination with wrong-species babies, learning that dinosaurs are in fact terrifying. Tim must learn the virile but scholarly role of scientist. He is tried in this ordeal, and shows himself to be brave and clever in a crisis. He leads a frightened and whimpering Lex—sans baseball glove—to safety. Ellie comforts her; Grant exhibits physical courage to save them all. Early in the novel, Lex’s toughness is demonstrated when she is throwing a baseball around with Gennaro. “She threw it back to him so hard it stung. ‘Take it easy! I don’t have a glove!’” he shouts. “You wimp,” she responds (158). This is a very butch little girl. The turning point for Tim and Lexy’s transformation into properly gendered children happens after the *Land Cruiser* they were in has been attacked by

a tyrannosaurus, a ferocious predator. Tim frees himself from the vehicle, which has been tossed into a tree and is slowly falling out of it. "The car shifted. Tim forced himself to move, to climb down. He used to like to climb trees. He was a good tree-climber" (206). Although he has a broken nose, he escapes the tree, the falling truck, then scares off another dinosaur by throwing a rock. Bolstered by these successes, he rescues Lex, who has fallen apart. First he finds her abandoned baseball, then sees her. "She had her baseball glove in her mouth and she was rocking back and forth" (210). She's reverted to baby-talk, she expects her parents to be there, and "she was badly frightened" (211). She is looking for grown-ups, and Grant arrives to eventually lead them both to safety. (Just out of the frame, their grandfather's lawyer, Ed Regis, hides from the tyrannosaurus and fails to protect the children.) "He told himself it was hopeless, anyway. If the kids were still up there on the road they could never survive, and certainly there was nothing Ed Regis could do for them" (213). Earlier, he had complained about being made into "a damned babysitter" (96). In punishment for his lack of interest in or sympathy for children, Regis is eaten by the tyrannosaurus.

In another attack by a dinosaur, Grant wrestles a dinosaur to the ground to save Lex, and she loses her baseball glove. In the final scenes, where the velociraptors are hunting all the humans and the children have been left alone, Tim is repeatedly successful at rescuing Lex from them and fending them off, even as adults all around are getting killed by them (332–3, 351–2). Finally, it is Tim alone who figures out how to get the computers back on line and saves them all; all the other adults are either dead or helpless.

In making the creation of a properly gendered, racially homogeneous nuclear family the central narrative of the novel, Crichton reiterates tropes from his earlier fiction. All of Crichton's work is about family, race, and gender. *Andromeda Strain*, for example, is not only a Cold War story of government scientists saving the planet from a fast-moving virus from outer space, but also the tale of an all-male scientific team and a baby. It is important to the plot that the government officials who assemble the team believe that an unmarried man, unencumbered by the sentimental attachments of family, is better at the tormented logic of the Cold War, more in possession of the sangfroid necessary to drop an atomic bomb. In Crichton's narrative universe, precisely the opposite proves to be the case: the lone single man saves the planet because he better understands the infant, and stops the planned nuclear detonation. *Congo*, in some ways the closest in terms of narrative to *Jurassic Park*, tells the story of an ambitious young woman, a young male ethologist, and a sign-language-using adolescent female gorilla. They go to the African Congo (which the book terms "darkest Africa") on a dangerous military field expedition led by the young woman. The mission fails when they are nearly all killed in the forest by white gorillas who have probably been cross-bred with

humans. All the black people in the book—the porters—are killed. By the end, duly warned about crossing natural-human and racial boundaries, this tripartite cross-species family has been reassembled and scattered to their proper countries. The young woman acknowledges that she is not cut out for military field work, and marries and stays in the United States. The gorilla goes to Zaire, returns to the wild, mates, and has an infant, and the young man returns to academic pursuits. In both *Congo* and *Jurassic Park* there is a subplot about Japanese investors being at the root of these ethically questionable ventures; this comes to fruition in *Jurassic Park* (not to mention *Rising Sun*), where the Japanese are at the root of immoral money-making schemes (in an Orientalist reiteration of an anti-Semitic plot). The persistent thematics for Crichton, then, are a hysteria about race-mixing, belief that non-white "races" are endangering the (white) "us" his novels imagine, and a very conservative version of the nuclear family, in which characters who do not pay attention to their prescribed "natural" roles in the family must be punished or redeemed by eventually taking on those roles.

There are other family configurations explored throughout *Jurassic Park*. John Hammond, the island's creator, is simultaneously child, father, and grandfather. In a scene where he is talking to the lawyer, Donald Gennaro (who has had to absent himself from his daughter's birthday party to be at the park that fateful weekend, lest the reader misses the point that this is about births and families), Hammond is described as so short that when seated, his feet don't touch the ground: "he swung his legs as he talked. There was a childlike quality to the man." At the end, as he is lulled to his death by the poison of his own dinosaurs, "Hammond lay very still, as still as a child in its crib, and felt wonderfully peaceful" (392). Hammond is also, albeit unsuccessfully, father to the whole enterprise. He is especially the father of John Wu, whom he regarded in a "patient, paternal way. Wu, thirty-three years old, was acutely aware that he had worked for Hammond all his professional life. Hammond had hired him right out of graduate school." (120–1) Hammond is also Tim and Lexy's grandfather, and he is sharply criticized by Gennaro for endangering their safety by bringing them to the island. At the end, Hammond confesses to himself, "He should never have brought those kids. They had been nothing but trouble from the beginning. Nobody wanted them around. Hammond had only brought them because he thought it would stop Gennaro from destroying the resort" (381). With this confession, Hammond demonstrates his own failures as a paternal figure, because he has used the children instrumentally; he mutters "those damned kids" several more times before he dies (382, 391). In so doing, he reveals what is wrong with the entire enterprise: as the "father" of the dinosaurs and the park, he has failed to be adequately concerned or responsible, failed also to appreciate how truly monstrous his "children" are.

The most prominent "other" families, however, are composed by the dinosaurs. The dinosaurs are frequently pictured as "babies" or as adults with juveniles. These babies, however, are terrifying. Hammond's creation of them is irresponsible; their own breeding threatens the future of human life on the planet. What differentiates this tale of male creation and birth from the earlier forms of Frankenstein stories is that the monsters are female. The dinosaurs, like the gorillas in *Congo*, mark the breaching of the nature/culture boundary and stand in for non-white reproduction in general. The novel is set in Latin America, long a poster child for the problem of "overpopulation." Were we unaware of that, Crichton reminds us, claiming that "Costa Rica has better population control than other countries in Central America. But even so, the land is badly deforested." Intentionally or no, Crichton retells a favorite horror story of the 1960s and 1970s, one that is currently seeing a resurgence: overpopulation. The dinosaurs enact excessive female reproduction in the "Third World" that cannot be controlled by scientists. They are "matriarchal" like Moynihan's black family (Office of Policy Planning and Research 1965). The structure of the argument—uncontrolled female breeding in matriarchal families in the Third World threatens the future of human life on the planet—precisely echoes the overpopulation argument. The dinosaurs incarnate a racialized problem of gender, suffering simultaneously from an excess of femaleness and a lack of femininity. If the problem for the central white "family" is how to make the "daughter," Alexa, sufficiently feminine, the corresponding issue for the "non-white" (dinosaur) "families" is the problem of their femaleness as monstrous, dangerous, frightening.

The dinosaurs' ability to reproduce is attributed to their possessing the DNA of West African frogs (375). For Crichton, Africa ("darkest Africa"), like all things foreign (especially Japan), represents a threat, a symbol of danger easily deployed. The dinosaurs in the book are persistently identified with the formerly colonized world, as like African (57) or Indian game animals. The person in charge of their control is Robert Muldoon, "the famous white hunter from Nairobi" (98), who was "raised in Kenya, [and] had spent most of his life as a guide for African big-game hunters" (145). It is Muldoon, the African colonial, who is unpersuaded by the conceit that the dinosaurs can be controlled; he "had developed an unblinking view of animals. . . . In Muldoon's opinion, cloning dinosaurs in a laboratory was one thing. Maintaining them in the wild was quite another (146). The dinosaurs' "race" is marked in part by their association with things colonial. Furthermore, dinosaurs, although determined to reproduce, are also terrible parents; the velociraptors eat their own young (352). Indeed, those that menace Grant, Sattler, and the children are finally killed off when Grant injects poison into eggs and the raptors eat them. The dinosaurs' sex is also not terribly stable. Wu tells Grant that it is impossible for

the animals to breed in the wild because "All the animals in Jurassic Park are female" (108). Wu tells the embryological story of female development that Anne Fausto-Sterling has identified as "female as lack" ([1985] 1992). "All vertebrate embryos are inherently female," explains Wu. "We all start life as females. It takes some kind of added effect—such as a hormone at the right moment during development—to transform the growing embryo into a male. But left to its own devices, the embryo will naturally become female" (109). However, their femaleness readily becomes masculinity. Like West African frogs, they could change sex. "Frogs that had been observed to lay eggs were able to change, over a period of months, into complete males. They first adopted the fighting stance of males, they developed the mating whistle of males, they stimulated the hormones and grew the gonads of males, and eventually they successfully mated with females . . . the change is stimulated by an environment in which all the animals are of the same sex. In that situation, some of the amphibians will spontaneously begin to change sex from female to male" (375). Although it requires work to make Lexy and Tim into properly gendered children, it is also "natural" in the sense that their "right" gender emerges in response to stress; Lex whimpers, Tim takes charge. Under conditions of stress, the underlying "truth" about the dinosaurs' sex emerges in the opposite way: that it is basically easily transformed into maleness, and it is that easy transformation that makes the dinosaurs "unnatural" and monstrous.

There are a number of other things wrong with the dinosaurs from the point of view of the book. In various ways, the circumstances of their creation ensure that they will be bad. First, they are produced through multinational capitalism. "In the past," Crichton writes piously in the introduction, "pure scientists took a snobbish view of business. They saw the pursuit of money as intellectually uninteresting . . . that is no longer true. . . . Genetic research continues, at a more furious pace than ever. But it is done in secret, in haste, and for profit" (xi). Second, as indicated in his other work, Crichton also takes a dim view of Japanese investors, who fund the entire Jurassic Park venture. Finally, the reader is reminded on virtually every page through the pompous and pretend-scientific language of chaos theory of a deeply familiar tale: when humans mess with "nature," they pay. This narrative is what Haraway calls the problem of the cyborg (Haraway 1991). The dinosaurs are cyborgs: born of equal parts technology and nature. As Ian Malcolm, the chaos theory proponent in the book, repeatedly insists, "theory tells me that the island will quickly proceed to behave in unpredictable fashion" (76). Nature is, well, nature, and cannot be made continuous with the technological, or all hell will break loose. Malcolm tells a "man the hunter" story to underscore the point. "When the hunter goes out in the rain forest to seek food for his family, does he expect to control nature? No. He imagines that nature is beyond him. . . . But you [associated with a genetic engineering project]

decide you won't be at the mercy of nature. You decide you'll control nature, and from that moment on you're in deep trouble. . . . Your powers are much less than your dreams of reason would have you believe" (351). Malcolm's job in the novel is to remind us of that at every turn. The cyborg, the monster dinosaur, will escape its human creator and wreak havoc.

But science is not always a bad thing in *Jurassic Park*. Scientific knowledge and masculine tool-using are heroic activities in the novel. Grant saves them with a hypodermic and his scientific knowledge of raptors; Timmy rescues them through his knowledge of computers. When at the end, Gennaro proposes turning the whole mess over to the military to destroy, Grant accuses him of shirking responsibility, insisting that they have a responsibility to find out how many animals were born on the island before destroying it, in order to determine whether they have escaped. Grant is made to stand for responsible, heroic science, over and against (bad) business. He names Gennaro's failings as raising money (from the Japanese) for a business that he did not supervise, taking the word of Hammond, whom he knew to be a liar, and then allowing Hammond "to screw around with the most dangerous technology in human history" (372). He insists that just as business, irresponsible science, and faith in the ability of man to control nature got them into this mess, good, responsible science will get them out. "That means finding the nests on the island. Especially the raptor nests. . . . We have to find them, and inspect them, and count the eggs. We have to account for every animal born on this island. Then we can burn it down" (373). (One suspects that Gennaro was also spared so that he could be lectured to.) Tim, throughout, is being turned into a scientist; his use of computers is defensive, virile, and appropriate. The explicit contrast—the bad kind of scientist—can be found in Wu, and another incidental character, Lewis Dodgson, expelled from academe as a grad student for attempting genetic engineering on humans, subsequently employed by a genetic technology firm (65). Dodgson and Wu both gave up the long, hard, pure road of apprenticeship in academic science in favor of quick and lucrative results in genetic engineering through alliance with business. (This is a favorite, if ironic, theme for Crichton, who abandoned his medical training after a post-doc in order to write bestsellers). In *Jurassic Park*, as elsewhere, business is corrupt, gender and racial hierarchies endangered and dangerous, but the masculine scientist is hero.

The film version of *Jurassic Park* is in many ways less interesting. Where the novel relies on tropes of gender, race, and family to create danger and narrative tension, the film engages simpler thematics and settles for stunning visuals and special effects. The things that leap out from behind rocks are just big monsters, not racial, national, and gendered dangers. The family problem in the film is different. Lexy (Ariana Richards)

isn't a tomboy, but a computer nerd. Grant (Sam Neill) and Sattler (Laura Dern) are explicitly a couple, but Sattler wants children and Grant hates them. The work of the film's narrative becomes getting Grant to care for children. Both Sattler and Lexy are allowed to butch it up a little in the movie; Sattler even calls Hammond (Richard Attenborough) a sexist. Indeed, in director Steven Spielberg's version, the ideal nuclear family bends traditional sex roles a bit; women are supposed to be strong when necessary and men, gentle. That being said, however, the movie is as intent as the book in making nuclear families; where the first scene highlights Grant's lack of fondness for children, the final one has Lexy and Tim (Joseph Mazzello) nestled in his arms while Sattler beams at him. (It actually seems to be a reliable feature of the movie versions of Crichton's work that Hollywood softens his misogyny. *Andromeda Strain*, for example, adds a female scientist. The baby raptor is cuddled not by Tim, but by Grant; he winds up caring for the children in the park because he sees their vulnerability. The "Third World" overpopulation/dinosaur story is present, but muted. For example, Wu (B. D. Wong) is made to demonstrate his lack of understanding of the dinosaurs when he insists that, "There is no unauthorized breeding in Jurassic Park." When Grant finds evidence of their breeding, it is part of his ongoing revelation about the significance of families, "life will find a way," he mutters in awe. In the film, Malcolm (Jeff Goldblum) is a father, and it is he who survives, while the brutal Muldoon is done in by a dinosaur. The plot of (natural) family versus (bad) creatures persists, but the film settles for much simpler thematics.

This same problem of "natural" versus "unnatural" reproduction is figured in *Gattaca* as a tension between sex-act and genetically manipulated reproduction. Non-technological reproduction is considered "natural" in the film, though not the norm in the futuristic society depicted. Calling resulting children "faithbirths," *Gattaca's* narrative aligns the sex act (nature) with God. In the past that the film romanticizes, mothers had a special role, where their nurturance actually mattered and had effects on their children. In the "not-too-distant future," mothers are merely vessels; what matters is their genetic contributions and their mothering cannot change the genetic prescription of the child. *Gattaca's* moral tale is significantly different from *Jurassic Park* in that there is no depiction of "good" nuclear families to emulate and, in fact the only nuclear family in the film is broken by the interference of technology.

*Gattaca* tells the story of Vincent (Ethan Hawke), a "faithbirth" (non-genetically engineered) who is determined to rise above his denigrated position in society and become an astronaut. Vincent is so determined, in fact, that he buys the identity of Jerome (Jude Law), a former Olympic swimmer who is now paraplegic and in a wheelchair. This purchase of identity forces the two to live together, where the now alcoholic Jerome keeps a running supply of his body fluids and hair and skin samples, which

Vincent uses to pass the genetic identification tests encountered all over *Gattaca* (the NASA-like organization for which Vincent works posing as Jerome). There is a palpable terror in the film when a high-ranking official at *Gattaca* is murdered and the police, upon investigating thoroughly, find genetic evidence that a faithbirth (whom the audience recognizes as Vincent) was at the scene, an impossibility since faithbirths can only attain devalued jobs such as janitorial work. The tension is further underscored when it is discovered that the police chief who is directing the manhunt for this faithbirth, is none other than Vincent's genetically engineered brother, Anton (Loren Dean). The movie concludes with Vincent successfully launching off into space, literally rising above all odds.

The film could be read as feminist, but, we will argue, ought not to be. Like Gena Corea in *The Mother Machine*, the film sees the outcome of current reproductive and genetic technology as state control of reproduction (Corea 1985). It is, further, an anti-genetic determinist film, evoking feminist critiques of biology as destiny (e.g., Hubbard 1990, Fausto-Sterling 2000). Further, Vincent, as hero, is never figured as particularly masculine in the Schwarzenegger mode, but is slightly built, severely nearsighted, and constantly fearful that his identity will be revealed; he appears androgynous or even feminized, indeed, as we will argue, gay. However, it is precisely in its analogizing of Vincent's "genetic" identity as secret with gayness (that other secret identity), that the film's ambiguous politics reveal themselves as anti-feminist. In order to produce genetic technology as creepy (in contrast to the pervasive technophilia of science fiction in general), the film relies on the edgy, anxious conventions of film noir and reinvents the most clichéd tropes of the genre: lack of freedom and individuality as communism, (implicitly military or militarist) worlds without women as homosexual, "the" family as threatened. Ultimately, the film narrates Vincent's "gayness" as the result of maternal "coddling"—another hackneyed Cold War psychologism—and reinscribes a very conventional "natural" versus "unnatural" opposition: heterosexual, non-technological motherhood as "natural," and homosexuality, communism, and (genetic) technology as "unnatural."

*Gattaca* wants the viewer to be very afraid of a technological future that includes genetically engineered children and the abandonment of leaving things to chance, because it means an end to humanistic valuing of the individual. The film bangs this message home in a few distinct ways, all revolving around the bemoaning of the absence of proper roles for women (and mothers). The film depicts "immoral" male homosexual relationships, includes a female character who serves very little purpose beyond "converting" Vincent to heterosexuality, and reinscribes women and their job as childbearers as the natural and necessary solution to the overtaking of reproduction by science. Now the technological enemy is at

society's doorstep, *Gattaca* claims, and this time "our" mothering is at stake. Not surprisingly, then, the film does nothing more than reinscribe a particular kind of maternity.

The opening scenes of the film indicate that bodies are highly significant in this futuristic society, but in a fragmented way. Scenes of nail clippings, hair strands, dead skin, and sections of Vincent's body depict the disarticulation of bodies accomplished by technology. Evoking contemporary anxieties about AIDS, the camera lingers on bodily fluids: bags of blood and urine. Vincent is obsessed about details like nails, hair, and skin because his true identity can be obtained by genetically analyzing such material, and he relies on another man's (exchanged) blood and urine to establish his public (false) identity. These scenes also symbolically underscore the ways genetic engineering fragments bodies, producing offspring from the genetic material of more than two people. Body parts are important here, not the whole body nor the whole person. In fact, it is precisely through this fracturing of bodies that women's bodies in particular are technologically regulated in the film. Anne Balsamo points out that a pregnant womb that is manipulated through reproductive technology becomes the property of science, a process that completely removes the womb from the realm of the "natural" (1996). If, as Balsamo argues, the pregnant womb serves as a metonym for the entire family body, then the scientifically manipulated pregnant womb indicates the ways in which the resulting family is not natural. This fragmenting of Vincent's body, then, as a sloughing off of dead tissue, represents a family beset with unnaturalness.

Vincent's leaving of the family is as necessary as the sloughing in these opening scenes. Declared at his birth as having an inordinately high likelihood of having heart defects and dying young (results from a seemingly routine genetic screening), Vincent is treated by his parents as weak: assuming his son won't last long, Vincent's father (Elias Koteas) does not name him after himself; assuming Vincent to be delicate, Vincent's mother (Jayne Brook) endlessly coddles him. Clearly, then, he must leave the family in order to reach his goal—a goal that his family does not support on the grounds that it is impossible for someone with Vincent's "conditions" to attain. Genetic predictions prescribe how Vincent is parented. If Vincent is indeed to become the hero, then, he must shed (like dead skin) that which holds him to genetic determinism. All the hurdles Vincent must clear are the direct result of the dictates of mothering by genetics in this futuristic society where reproductive technology becomes the norm. The only mother depicted, Vincent's, never finishes a sentence, nor makes a decision by herself. She makes Vincent a "mama's boy" because she assumes him to be sickly. Her actions, though, are figured as reactions to her husband's rejection of Vincent as his son and his whole-

hearted enthusiasm toward Anton, their next child, who is the product of reproductive technology, "a son [his] father considered worthy of his name."

The next scenes move from the body to fluids: a sharing of body fluids here indicates the rampant homosexual behavior, alluded to but never seen in the film, that is the familiar representational trope for the decline of civilization. There are two gay relationships alluded to, both involving Vincent. Scenes of packets of urine and blood lead to the next scene in which Gattaca's physician, Lamar (Xander Berkeley) admires Vincent's penis as he provides a urine sample for identity testing: "Jerome—never shy, pisses on command. Beautiful piece of equipment there, Jerome. Did I ever tell you that?" Vincent: "Only every time I'm in here." Lamar: "Occupational hazard. I see a great many of them in the course of any given day. Yours just happens to be an exceptional example. I don't know why my folks didn't order one like that for me." Later in the conversation, Lamar peels off his rubber gloves, signaling the next exchange is to shift from the clinical to the personal: "So, about to go up. One week left. *Please* tell me you're the least bit excited." Not only does Lamar admire Vincent's penis (while playing with double entendres), but as we later find out, observes it closely enough to know with which hand Vincent holds it to urinate. And it is by way of Lamar that Vincent does get to go to space, although Lamar has to beg Vincent to show him some excitement.

Second, we learn that Vincent lives with Jerome, whose identity, fluids, and other bodily matter Vincent uses to pass himself off as Jerome. In fact, the broker (Tony Shalhoub) who introduces the two of them for this purpose sees himself as a matchmaker: "Vincent, you could go anywhere with this guy's helix tucked under your arm. You two look so good together, I want to double my fee." These two come to live together, fight, and celebrate like a married couple, and Vincent takes care of Jerome, who is wheelchair-bound. Jerome spends his time as a housewife, yelling at hair dye suppliers who send the wrong shade: "They sent me Summer Wheat instead of Honey Dawn. Any fool knows it's two shades lighter. . . . Now I'll probably have to pay for the five boxes they sent. The idiots I have to deal with, you wouldn't believe." Jerome apologizes when he drinks too much, and Vincent yells at Jerome when he does so. Jerome gives Vincent a hard time when Vincent claims to be going out with "everyone," when Jerome knows that Vincent is really going out on a date with Irene. In a classic seduction scene, Vincent blows smoke into a wine glass (presumably to demonstrate what Jupiter looks like) for Jerome. When Vincent ponders giving up the entire ruse, Jerome responds as if it's a love affair that Vincent is ending: "You can't quit on me now—I've put too much into this." Similar to other "doomed gay relationship" storylines, Jerome kills himself as Vincent lifts off into space, as Vincent gazes at the lock of

hair Jerome gave him. Jerome, at their good-bye scene, says: "I only lent you my body; you lent me your dream."

Clearly, Jerome stands in for the wife. Hence the need for a "real" woman, Irene (Uma Thurman), whose only purpose in the film is to break up the homophilia between Jerome and Vincent. We gather Irene is a faithbirth because she takes medicine for a heart problem, but somehow she is given a rather good position at the space agency. However, clearly her work is not valued as she is asked to assist the murder investigation and drop her work. She seems to be the only woman employed in a high position at Gattaca, and so is singled out as the one who is powerful enough to make Vincent straight, the one who can overcome the worst odds. Yet what she has been able to achieve, all that power, only gives her the right to get a man, one who will leave her for a year to go to Jupiter with his [other] "lover's" lock of hair in his pocket.

Interestingly, Irene's conversion of Vincent plays against the shadow of Vincent's relationship with Jerome, indicating the competition between the two lovers for Vincent. Vincent takes her to the same club where he "seduced" Jerome with the smoky wine glass; only their date ends in running away from the police, going to her home, and having sex. Vincent only gets to undress the drunk and paralyzed Jerome, who presumably passes out.

In fact, Vincent's "lovers" converge in one scene, clearly to vie for the job of his chief paramour. Irene and brother Anton, expecting to see Vincent (who Irene knows as "Jerome") at the apartment, are both shocked to find Jerome there instead. Irene is angered that this person claiming to be Jerome seems to have an advantage over her. After Anton leaves, the truth is revealed to Irene, who is quite distressed to learn that Jerome is living with Vincent, and storms off. Jerome has won the contest (albeit temporarily) because he knows everything and because Vincent continues to live with him. However, Vincent's conversion to Irene and to heterosexuality is the ultimate outcome; the desirability of this resolution is underscored repeatedly throughout the film, as the shot sequence moves from Lamar's admiration of Vincent's penis to Irene and Vincent watching rockets launching together. Irene interrupts the flow of the homophilic narrative.

It is Irene's particular imperfections that enable her to convert Vincent to heterosexuality. Jerome's imperfections are the result of a lack of faith in himself (his paralysis is the result of a botched suicide attempt) while Irene and Vincent's imperfections are "natural" or "God-given." Early in the film, when the Director sees Vincent cleaning his work station, he remarks at this extensive cleanliness. Vincent replies that "it's next to godliness." The conflation of Vincent and godliness indicates that his faithbirth-ness, what makes him an individual is God-given, and that is

why the narrative encourages the viewer to want him to succeed. He will succeed despite his genetic failings, whereas Jerome will fail because he cannot handle perfection (he is genetically engineered). The main message here is that heroic individualism, faith in God, a celebration of a particular kind of difference, and the return of the women to their "natural" role of childbearing are the necessary steps against a future replete with reproductive technology and homosexuality. Vincent and Irene survive because they can overcome their liabilities—Jerome cannot do so because his disability comes from his lack of faith, his botched suicide attempt.

*Gattaca* celebrates the individual in terms of U.S. Cold War rhetoric. Backgrounded against a space program and drawing on the conventions of the Cold War narrative of the former Soviet Union as faithless and robbing individuals of their personal freedom, *Gattaca* celebrates the heroic individual who can rise above a society that condemns that individual. The "not-too-distant" future in *Gattaca* looks like the conservative view of the former Soviet Union: scenes of an automaton-like lineup of men filing into work, as they are pricked by a needle that analyzes identity by blood. Everyone looks the same, and the State is watching. Immediately following this scene, Vincent is seen rising up above the masses on an escalator. The hero is clear here: someone who can rise above a totalitarian state, despite his human-ness.

As anti-heroes, the black characters in the film are configured as complicit with the state. Wahneema Lubiano has suggested that this characterization has become commonplace in recent films: black men become legitimate only through complete identification with the state (1997). In *Gattaca*, all black men are the State: one is the geneticist (Blair Underwood) who engineers Anton ("You have specified hazel eyes, dark hair, fair skin"; the word "fair" is drawn out and after this line, the geneticist smiles as if he understands the importance of fair skin). Another one is a human relations executive who only tests Vincent's identity instead of actually interviewing him for a job; he is invested in the (State's) belief that everything he needs to know about Vincent's abilities can be found in his genes. The third is a police officer.

But the real message of *Gattaca* is about prenatal genetic screening, abortion, and "unnatural" (unmaternal) reproduction. Individuals like Vincent and Irene can overcome their liabilities in this Big-Brother society; the "natural," the "democratic," and the maternal are conjoined. Faith births, heterosexual, maternal reproduction untouched by science, have taken the place of the anti-communist resistance. The slippage in the film between nature, God, love, and utero births is unmistakable and deliberate. Vincent and Irene become the poster children for an anti-abortion, pro-(natural) motherhood agenda. Reproductive technology is not just dangerous in this film, it is represented as what is wrong with

society today, it ruins families, and destroys the "natural order of things." The film offers up a familiar conservative political agenda that articulates the fear that science will impinge on the proper childbearing and rearing role for women.

In fact, *Gattaca* completely articulates Balsamo's point that a womb manipulated by reproductive technology becomes the property of science. Space is often characterized as the closest thing to being in the womb, and Vincent's incessant desire to go to space can be characterized as his need to get back to the "natural." Clearly, Vincent's mother has regret about the scientific intervention of her second pregnancy in her total attachment to Vincent. While Vincent's need to get back to the womb may be seen as a condition of his mama-boy-ness, in the film, this obsession makes a bigger statement about the havoc reproductive technology plays with women's wombs. Vincent's successful passing for genetically superior, as a heroic narrative, indicates that the natural is powerful and therefore makes the claim that women who do not use reproductive technology are the most powerful. By extension, then, this film makes the point that technology has no place in the womb, that the womb should remain sacred, in the realm of the natural, and away from science. *Gattaca* does attempt, then, to make a separation between science and gender, but this separation is clearly troubled due to the film's heavy investment in conflating female-ness, childbearing, and lack of reproductive choice. Ironically, then, while configuring the communist state as the realm of choicelessness, *Gattaca* underscores the conservative agenda that the preferred role for women, in its nostalgic view of the past and its heroization of Vincent, is to have no reproductive choice and no access to technology.

Taken together, *Jurassic Park* and *Gattaca* can be said to be using a critique of genetic technologies to reinscribe some very conservative gender meanings. In the 1990s, a combination of factors meant that the meanings of both genes and gender were very much up for grabs in the United States: the intensification of the flow of news about genes from the Human Genome Project, the explosion of small genetic start-up companies, the increasing availability of the new reproductive technologies to the middle classes, the intensification of anti-abortion activism, and the growing visibility of lesbian and gay families. These bestseller/blockbusters work to reduce these complex cultural changes to singular and simple icons. The only kind of authorized breeding, the kind the books and films want to re-essentialize as proper women's work, is the kind that involves little or no technology. These popular cultural texts have made the gene a sign of male science and counterpoised it against a natural, not-scientific motherhood. This narrative is an argument for regulating reproduction, one that uses the rhetoric of the science/nature split to pit genetic technologies against the "right" kind of reproduction. *Jurassic Park* and

*Gattaca* insist that genetic technologies are wrong by conflating them with homosexuality, communism, and Third World overpopulation, an amalgam of bad things that are lined up against "natural" motherhood and a none-too-assertive femininity. The "natural" family, with father at the head and mother raising her brood, is asserted as a bulwark against frightening possible futures.

**Laura Briggs**, *University of Arizona*, works on gender, race, reproduction, and American colonialism. Correspondence should be sent to Briggs at Department of Women's Studies, Communication 108, University of Arizona, Tucson, AZ 85721, lbriggs@u.arizona.edu

**Jodi I. Kelber-Kaye** is a Ph.D. candidate in comparative cultural and literary studies at the University of Arizona. Her current research is on the representations of reproductive technologies in television and film. Correspondence should be sent to Kelber-Kaye at Department of Women's Studies, Communication 114F, University of Arizona, Tucson, AZ 85721; jodik@u.arizona.edu

## References

- Balsamo, Anne. 1996. *Technologies of the Gendered Body. Reading Cyborg Women*. Durham, NC: Duke University Press
- Bucchi, Massimiano. 1998. *Science and the Media: Alternative Routes in Scientific Communication*. New York: Routledge.
- Bukatman, Scott. 1993. *Terminal Identities: The Virtual Subject in Post-Modern Science Fiction*. Durham, NC: Duke University Press.
- Cameron, James. 1986. *Aliens*. Beverly Hills, CA: 20<sup>th</sup> Century Fox Motion picture
- Corea, Gena. 1985. *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs*. New York: Harper and Row.
- Creed, Barbara. 1990. "Alien and the Monstrous-Feminine" In *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*, ed. Annette Kuhn, 128-41. New York: Verso.
- Crichton, Michael. 1969. *Andromeda Strain*. New York: Random House.
- . 1980. *Congo*. New York: Random House.
- . 1990. *Jurassic Park*. New York: Random House.
- . 1999. Unsigned interview. *Playboy*. 46(January), 69-80.
- Dery, Mark. 1992. "Cyborging the Body Politic" *MONDO* 2000 7: 101-5.
- Duster, Troy. 1990. *Backdoor to Eugenics*. New York: Routledge.
- Fausto-Sterling, Anne. (1985) 1992. *Myths of Gender: Biological Theories About Women and Men* 2nd ed. New York: HarperCollins.
- . 2000. *Sexing the Body. Gender Politics and the Construction of Sexuality*. New York: Basic Books
- Haraway, Donna. 1989. *Primate Visions. Gender, Race, and Nature in the World of Modern Science*. New York: Routledge.

- . 1991. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." In her *Simians, Cyborgs, and Women. The Reinvention of Nature*, 149–81. New York: Routledge.
- . 1997. *Modest Witness@Second\_Millennium Female Man© Meets Onco-Mouse: Feminism and Technoscience*. New York: Routledge.
- Hubbard, Ruth. 1990. *The Politics of Women's Biology*. New Brunswick, NJ: Rutgers.
- . 1997. *Exploding the Gene Myth: How Genetic Information is Produced and Manipulated by Scientists, Physicians, Employers, Insurance Companies, Educators, and Law Enforcement*. 2nd ed. Boston: Beacon.
- Hubbard, Ruth, and Elijah Wold. 1997. *Exploding the Gene Myth*. Boston: Beacon.
- Jeunet, Jean-Pierre. 1997. *Alien Resurrection*. Beverly Hills, CA: 20<sup>th</sup> Century Fox. Motion picture
- Kevles, Daniel, and Leroy Hood. 1992. *The Code of Codes: Scientific and Social Issues in the Human Genome Project*. Cambridge, MA: Harvard University Press
- Latour, Bruno. 1993. *We Have Never Been Modern*. Trans. Catherine Porter. Cambridge, MA: Harvard University Press.
- Lewontin, Richard. 1993. *The Doctrine of DNA: The Biology of Ideology*. New York: Penguin.
- Lubiano, Wahneema. 1997. "Black Nationalism and Black Common Sense: Policing Ourselves and Others " In *The House That Race Built: Black Americans, U.S. Terrain*, ed. Wahneema Lubiano, 232–52. New York: Pantheon.
- Miller, Mark Crispin. 1988. *Boxed In: The Culture of TV*. Evanston, IL: Northwestern University Press.
- Nelkin, Dorothy, and M. Susan Lindee. 1995. *The DNA Mystique. The Gene as a Cultural Icon*. New York: W.H. Freeman.
- Newton, Judith. 1990. "Feminism and Anxiety in *Alien* " In *Alien Zone: Cultural Theory and Contemporary Science Fiction Cinema*, ed. Annette Kuhn, 82–7. New York: Verso.
- Niccol, Andrew. 1997. *Gattaca*. U.S.: Columbia Pictures. Motion picture.
- Office of Policy Planning and Research, United States Department of Labor (Daniel P. Moynihan). 1965. *The Negro Family: The Case for National Action*. Washington, DC: Government Printing Office.
- Roberts, Robin. 1993. *A New Species: Gender and Science in Science Fiction*. Urbana: University of Illinois Press
- Rothman, Barbara Katz. 1986. *The Tentative Pregnancy: Prenatal Diagnosis and the Future of Motherhood*. New York: Viking
- Scott, Ridley. 1979. *Alien*. Beverly Hills, CA: 20<sup>th</sup> Century Fox. Motion picture.
- Warner, Marina. 1994. "Monstrous Mothers: Women Over the Top." In *Six Myths of Our Time. Little Angels, Little Monsters, Beautiful Beasts, and More*, ed. Marina Warner, 3–23. New York: Vintage.
- Zwinger, Lynda. 1992. "Blood Relations: Feminist Theory Meets the Uncanny Alien Bug Mother." *Hypatia* 7(2):74–90.