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**RELATIVE VALUES**

Reconfiguring Kinship Studies

*Edited by Sarah Franklin & Susan McKinnon*

## CHAPTER 11

Biologization Revisited: Kinship Theory  
in the Context of the New Biologies

Sarah Franklin

Perhaps it was . . . around 1860 or so, when the cultivation of nature was replaced by its own grounding naturalism, that is, by apprehension of nature as a natural system. Given a concern with reproduction ("inheritance") of organisms, one might suggest that evolutionary thinking also facilitated the equation of procreation and biology. The "natural facts" of life were natural in the sense of belonging to the biology of the species. — Marilyn Strathern, *After Nature*

Amid the many transformations that have reshaped the study of kinship over time, the question of the significance of biological facts has remained a persistent quagmire—as easy to fall into as it is difficult to leave behind. This sticky controversy is historically more profound and seemingly intractable in British and U.S. anthropology than in other, especially continental European, traditions, but it nonetheless continues to be central to the debate about kinship. This controversy has taken on additional dimensions as biology has become more visibly and globally dominant as a science in the second half of the twentieth century—a transformation that has seen the biology of plants, animals, humans, and microorganisms become more technologically mediated and amenable to reconstruction. Superficially, it can be said that the domain of the biological is today more visibly "constructed" than ever before. This has consequences not only for how we think about biology, biotechnology, and our relations to them but also for how we figure what counts as a biological tie. Exploring in more detail some of the issues laid out in the introduction to this volume, this essay revisits the question of what biology is "all about" both within and beyond kinship studies.

In a manner similar to Janet Carsten's piece (this volume) on substance, which revisits that term with an eye to both its breadth of meanings and their

consequent ambiguities, the aim here is to interrogate meanings of biology, biologization, and biological facts, arguing that they have meant quite different things to different commentators, both in relation to kinship and more generally. Unlike the term "substance," however, "biology" refers both to a body of authoritative knowledge (as in the science of reproductive biology) and a set of phenomena (as in the biology of human reproduction). In referring, therefore, to "human reproductive biology" it is arguable that a conflation of a system of knowledge with its objects occurs, whereby the study of biology becomes coterminous with the existence of an ontological reality that exists independently "out there" in the "real world" as a set of actual "facts." This is one of several ways in which the very word biology can become complicated, and in ways that are revealing of the specificity of the relations between knowing, being, and doing characteristic of post-Enlightenment secular culture in the West, or what could also be described as the discursive conditions of modernity.<sup>1</sup>

Paul Rabinow has introduced the term "biosociality" to portray a set of shifts whereby the biological and, in particular, the new genetics are no longer modeled on nature, but have become more visibly "modeled on culture understood as practice," thus becoming more "artificial" (1996, 99). Marilyn Strathern similarly describes "the vanishing of taken-for-granted assumptions about natural process" (1992, 180) and the "enterprising up" of life itself characteristic of the late twentieth century, in which, as Donna Haraway (1992) has claimed, nature and culture have "imploded." This view of nature having become artifice—itsself a hallmark of postmodernism<sup>2</sup>—sets up an interesting ricochet for the analysis of both kinship and gender as well as their relation to "the facts of life." It is as if the long struggle to "denaturalize" kinship and gender, by disembedding them from the biological, has come to be accompanied by a denaturalization of biology itself from within, as it were. Not only within biological science but also within biological bodies, it has become more difficult to determine what it means to speak in "strictly biological" terms. What I am describing here as both the "new biologies" (by which I mean the material-semiotic practices of the contemporary biological sciences) and "new biologicals" (by which I refer to new entities such as cryopreserved human embryos, cloned transgenic animals, genetically modified seeds, and patented gene sequences) can be said to defamiliarize the very nature of what it is to do biology or be biological. This process of defamiliarization casts a historically distinctive kind of uncertainty onto the question of the status of "biological facts." I argue this contemporary uncertainty thus

presents an opportunity to reconsider the question of the role of so-called biological facts, "biological determinism," and "biologization" in relation to kinship theory.

In asserting that biology has, in a sense, itself been denaturalized, I need to make clear at the outset that the opportunities for reanalysis of the role of biological facts in relation to gender and kinship I am describing are not offered to applaud some new, more flexible, recombinant biology that is less constraining than in the past or is to be welcomed as liberatory. The contention here is neither celebratory nor utopian. I am making a more preliminary argument suggesting that biological facts continue to matter very much to how both "kinship" and "gender" are understood, but that they do so in ways that require careful attention, and are not as self-evident as they might appear. Inevitably, I therefore use a comparison with past anthropological models of biological facts, as I also consider the new biologies as an opportunity to reflect on their histories.

Enhancing these openings is the powerful interrogation of the biological that has emerged from feminist scholarship and science studies over the past three decades. Hardly a new area of critical study, but arguably a rapidly widening area of theoretical concern, the impetus to ask what difference biology makes, as both a material and semiotic condition, has gained momentum. Amid the constant remolding of the biological that has become, among other things, a major component of new capital markets and technological innovation worldwide, both the uncertainties and authority of the life sciences have become the subject of increasing public and scholarly attention. In particular, the rapid development of new genetic technologies has placed a premium on familiar anthropological questions, such as the meaning of genealogy, parenthood, or a so-called blood tie. Similarly, within many fields of inquiry, from sociology to science studies, an emergent corpus of work on "cultures of nature" has produced suggestive connections to issues of longstanding anthropological concern.<sup>3</sup> These debates are usefully brought into dialogue with the new kinship studies explored in this volume, as they are not only relevant to ongoing debates about kinship within anthropology but demonstrate how anthropological models of kinship are traveling into other areas of study as well.

#### BIOLOGY AS A CULTURAL SYSTEM

As noted in the introduction, the kinship concept in anthropology has been criticized as ethnocentric on numerous grounds and has been depicted as a paradigmatic example of how anthropologists have conflated their own conceptual apparatus with the underlying "realities" of social life elsewhere—as if everyone "has" kinship in the same sense that everyone "is" biological. Indeed, these two claims have had a closely related history, and kinship has often been defended by traditionalists as a universal attribute of human societies precisely because it is seen to be "based on" the biological facts of human sexual dimorphism and heterosexual reproduction. In contrast to this claim, and as discussed in the introduction, other more reflexive accounts of kinship have alleged it is a projection of Eurocentric assumptions about certain universal features of the human condition, which rests on a tautological biologism that presumes as self-evident the very aspects of social life that need to be explained. As David Schneider famously maintained in his short correspondence in *Man* as part of the "virgin birth" debates in the mid-twentieth century, not everyone assumes people reproduce like animals (1968; and see further 1984). To the contrary, he argued, the importance of modern biological science in shaping understandings of kin relatedness is culturally specific, of recent origin, and uniquely dominant in the Anglo-American context.<sup>4</sup>

Schneider was primarily concerned with the question of how biological models operate as a cultural "system" shaping American kinship beliefs. He described two main effects of biology as a cultural system. First, he contended that biological facts have *symbolic qualities*. He saw these qualities as "additional" to their scientific meaning. Biological facts, he wrote in *American Kinship*, "have as one of their aspects a symbolic quality, which means that they represent something other than what they are, over and above and *in addition* to their existence as biological facts" (1980, 116; emphasis added). Schneider clearly believed that this additional symbolic dimension did nothing to diminish the scientific truth of biological facts. As he put it unequivocally, "The biological requirements of human existence . . . exist and remain. The child . . . does not come into being except by the fertilized egg. . . . These are the biological facts. They are the facts of life and the facts of nature" (116). Schneider was not concerned, as later generations of anthropologists have been, with the cultural dimensions of scientific facts as scientific facts.<sup>5</sup> He did not address the question, so central to feminist anthropology and the critique of the concept of race, of how the biological sciences construct truth claims in rela-

tion to supposedly natural facts. Schneider said nothing about how biology is used as a means of naturalizing inequalities, nor indeed about the distinctive power of ideas about the natural in U.S., or British, culture — topics that have both received more elaborate treatment elsewhere (see Haraway 1989, 1991, 1992; Yanagisako and Delaney 1995).

These absences become more significant in relation to the other key effect of biological facts on the definition of American kinship described by Schneider, which is his claim that because of their symbolic importance, biological facts also had constitutive power to create kinship *in and of themselves*. As Schneider claimed, "In American cultural conception, kinship is defined as biogenetic. This definition says that kinship is whatever the biogenetic relationship is. If science discovers new facts about biogenetic relationship, then that is what kinship is and was all along" (1980, 23). Schneider's observation — that biological facts are seen to constitute kinship in and of themselves — points directly to the conflation discussed earlier in relation to "biology," whereby the process of naming, studying, or classifying something is conflated with that entity itself. "Kinship" has similarly been criticized for being used to portray a preexisting reality, presumed to be universally and biologically present, whether anyone was aware of it or not. According to this definition of kinship, for example, a kinship tie not known to exist can be discovered. The acquisition of certain kinds of knowledge can produce a kinship tie where none existed before, *because knowledge itself can make kinship appear*. This is the second effect of biology "as a cultural system" articulated by Schneider: biology is both symbolic and constitutive of what kinship is seen to be in U.S. culture.

In relation to Schneider's claim that science not only symbolizes but in a sense can create kinship by discovery, as it were, Marilyn Strathern has cogently asked what this also says about Euro-American models of knowledge, property, and identity. Noting that "the quest for facts about the way the world works is also part of the Euro-American quest for self-hood," Strathern suggests that biological knowledge has constitutive consequences for identity because it can reveal facts, such as genetic information, about ancestry (1998, 3). People can acquire an identity by discovery because, according to Strathern, "knowledge creates relationships: relationships come into being when the knowledge does" (4). Paradoxically, then, it is because scientific knowledge is seen to be objective and universal that it can have such intimate and personal effects. Strathern's argument thus foregrounds Euro-American assumptions about knowing as being: she is intrigued by the fact that what sci-

ence says exists "out there" can tell us who and what we are "in here." We are seen to embody scientific knowledges. They describe the very nature of our being.

As Strathern points out, the model of knowledge necessary for the discovery of scientific facts to tell us who we really are also depends on specific, codependent concepts of individuality, property, and possession. The isomorphism between the way we are seen to possess identities and knowledge of them can be generalized to reveal the way possession of knowledge about the world is so deeply ingrained in Western assumptions about individual agency, identity, and subjectivity. These rely on a very specific model of knowledge: as possessive, constitutive, and irrevocable. Put the other way around, it is arguably by examining how knowledge is conceived that one can see more clearly how modern Western subjects imagine selves, identities, and actions in the world. What is significant in Strathern's account is how kinship connects these domains.

The sequential perspectives of Strathern and Schneider on the question of how biological facts matter to kinship reckoning thus provide two divergent models of their relation. Schneider divides biology as a cultural system into its symbolic and constitutive dimensions, and offers a model of culture as a form of practice, which he separates from questions about biology as a science. Strathern reconfigures the question of biological facts as one that indexes the specificity of Euro-American knowledge systems: her recontextualization reveals the ways in which bodies, identities, connections, and knowledges are linked through forms of possessive individualism. In contrast to Schneider, it is implicit in Strathern's argument that all Euro-American knowledge claims are contingent, including biological ones. It is the consequences of how Western knowledge practices figure possession as a feature of knowledge itself that are explored in Strathern's more recent work on intellectual property disputes (1999) — a set of linkages that bring kinship issues to the heart of science studies, as I discuss further in relation to the work of Haraway below.

#### THE GENDER OF BIOLOGY

Before turning to science studies, however, it is also useful to consider briefly the connections linking the new kinship studies to recent developments in gender theory — a suggestion first explored by Sylvia Yanagisako and Jane Collier (1987), but as yet lacking a more detailed exegesis, which this chapter can only gesture toward. Whereas the strategy proposed by Yanagisako and Col-

lier emphasized the unity of gender and kinship as fields of anthropological inquiry, as both "start from what are construed as the same biological facts of sexual reproduction" (34), these linkages have remained largely unexamined in recent works addressing gender and kinship (Maynes et al. 1996; Stone 1997; compare Weston 1996).

Writing in 1974, Sherry Ortner famously reiterated the claim of Simone de Beauvoir that "it is simply a fact that proportionately more of a woman's body space is taken up with the natural processes surrounding the reproduction of the species" (74-75). By the end of that decade, however, such assertions had become almost taboo among feminists. Far from self-evident, biological explanations of sex and gender came increasingly to be viewed within feminist anthropology as culturally and historically specific, ideologically reactionary, and male defined. Through publications such as Carol MacCormack and Marilyn Strathern's *Nature, Culture, and Gender* (1980), attention began to shift away from the notion of biological facts and toward an examination of the knowledge practices through which such claims acquired legitimacy, authority, and "obviousness." Moving away from a notion of "biological differences," the focus of feminist thought shifted to address ideas of the natural and their relation to gender categories more broadly.

Addressing the historical processes through which pregnancy became the object of an intense clinical surveillance and fascination in the eighteenth century, for example, Ludmilla Jordanova (1980) described a gendered epistemology of the maternal body in which the penetrating gaze of the physician/anatomist recapitulated a form of sexual conquest and masculine heroism. Jordanova's work, alongside that of other feminist historians such as Carolyn Merchant (1982), began to revise the historical question of how gender has been shaped by the emergence of modern science into one that asked precisely the reverse—that is, how the emergence of modern science has been shaped by gender. Addressed as much to the "making of the modern body" as to the emergence of modern anatomy, biology, and medicine, studies by social historians Catherine Gallagher and Thomas Laqueur (1987; see also Laqueur 1990), Londa Schiebinger (1989), and Barbara Duden (1991) have argued that the so-called biological facts of sexual reproduction are produced to confirm the rigid binarism of sex categories by encoding them as pre-existing "natural" differences.

Since the 1980s, feminist scholarship on science and sexuality has become one of the most significant forces shaping theories of gender, and tying questions of embodiment, identity, and power to those of knowledge formation,

or what Michel Foucault describes as "power-knowledge" (1970). The critique of biological facts has been central to this effort for numerous reasons, from the direct consequences of how biology is used to restrict women's roles in society, to the difficulties faced by women scientists (see Hubbard 1990; Schiebinger 1989), to the gendered assumptions that shape cell biology (see Fausto-Sterling 1985) and the new genetics (see Keller 1992). Holding together a wide range of feminist approaches to scientific discourse has been a concern with what Haraway calls its "world-building consequences" (1991)—what Schneider might have labeled as the constitutive effects of biology as a cultural system or what Strathern identified as the cultural effects built into certain forms of knowledge production. In sum, the feminist critique of biology, and science more generally, corresponds to what Evelyn Fox Keller has dubbed a "double shift in perception" characterizing contemporary feminist theory: "First, from sex to gender, and second, from the force of gender in shaping the development of men and women to its force in delineating the cultural maps of the social and natural worlds these adults inhabit" (1992, 17).

#### "FEMALE" TROUBLE

This "double shift" is strongly evident in the work of numerous feminist biologists—including Ruth Hubbard (1990), Lynda Birke (1986), and Anne Fausto-Sterling (1985)—who have recast the question of the biology of gender into one that addresses the gender of biology. Their efforts are aided by wider shifts in gender theory, whereby a radical critique of the category "woman" has been succeeded by an equally thorough deconstruction of the biological category "female." This shift in gender theory derives from a reconceptualization of gender as a technology for producing meaning and, in particular, organizing the production of difference, which has its roots in poststructuralism and psychoanalysis (see De Lauretis 1984, 1987).

In *Gender Trouble* (1990), Judith Butler took direct inspiration from feminist anthropology to recast the relation of sex to gender, or biology to embodiment, in what remains one of the most influential "denaturalizations" of biological facts to emerge from within feminist scholarship in the 1990s. Disputing the seemingly commonsense view that "being female constitute[s] a 'natural fact,'" and arguing instead that such "foundational categories of identity . . . can be shown as productions that create the effect of the natural, the original and the inevitable" (x), Butler proposes a model that radically repositions allegedly natural facts as an effect of gender categories, rather than

the reverse. She describes the purpose of *Gender Trouble* as an effort "to trace the way in which gender fables establish and circulate the misnomer of natural facts" (xiii), and as a project designed to expose the circularity of "that felicitous self-naturalization" (33). For Butler, sex categories (male and female) comprise "a discursive formation that acts as a naturalized foundation" (37), and gender is defined as "the repeated stylization of the body . . . within a highly rigid regulatory frame that congeal[s] over time to produce the appearance of substance, of a natural sort of being" (33).

In emphasizing that gender is an effect—an embodied performance or stylized repetition of enactments—Butler seeks to disrupt the assumption that a binary difference between male and female simply exists as a presocial fact. In this effort, Butler follows a similar path to that set out by Collier and Yanagisako in their assertion that "the next phase in the feminist reanalysis of gender and kinship should be to question the assumption that 'male' and 'female' are two natural categories of human beings whose relations are everywhere structured by their biological difference" (1987, 7). Arguing for an approach that locates the production of difference within a broader social whole, Collier and Yanagisako suggest that "instead of asking how the categories of 'male' and 'female' are endowed with culturally specific characters, thus taking the difference between them for granted, we need to ask how particular societies define difference" (35).

Butler's contention, though pointing in a different direction toward contemporary identity politics, likewise interrogates the presumption that "there is a natural or biological female who is subsequently transformed into a socially subordinate 'woman,' with the consequence that 'sex' is to nature or 'the raw' as gender is to culture or 'the cooked'" (1990, 37). In a direct reprise of MacCormack and Strathern's arguments in *Nature, Culture, and Gender* (1980), Butler claims that "the analysis that assumes nature to be singular and prediscursive cannot ask, what qualifies as 'nature' within a given cultural context, and for what purposes?" (1990, 37). In addition, Butler presses forward Yanagisako's prediction that "having recognized our model of biological difference as a particular cultural mode of thinking about relations between people, we should be able to question the 'biological facts' of sex themselves" (1987, 42). In a revealing analysis of scientific claims to have discovered the "master switch" of sex determination, Butler demonstrates the ways in which a presumption of binary sex is imposed even within studies based on "ambiguously" sexed persons, whose chromosomal and morphological sex diverge. The repeated imposition of a binary order on these "incoherent" sexes, even

when they clearly demonstrate its nonbinary existence "in nature," proves, according to Butler, "that cultural assumptions regarding the relative status of men and women and the binary relation of gender itself frame and focus the research into sex determination" (1990, 109). In other words, it is the assumption of gender binarism that produces the mandate for the discovery of biologically binary sex categories, not the reverse. In a critique of this circularity that directly parallels Schneider's impatience with kinship theorists who have a genealogical grid in mind even when they say they don't, Butler concludes, "The task of distinguishing sex from gender becomes all the more difficult once we understand that gendered meanings frame the hypothesis and the reasoning of those biomedical inquiries that seek to establish 'sex' for us as prior to the cultural meanings that it acquires" (109). It is, in fact, the discursive expectation of sex binarism that is revealed as prior in this scientific "explanation" demonstrating the extent to which biomedicine not only contributes to but mandates "the repeated stylization of the body . . . within a highly rigid regulatory frame that congeal[s] over time to produce the appearance of substance, of a natural sort of being" (33). Thus echoing Collier and Yanagisako's complaint that "the standard units of our genealogies, after all, are circles and triangles about which we assume a number of things" (1987, 32), Butler maintains that it is "only from a self-consciously denaturalized position [that] we can see how the appearance of naturalness is itself constituted" (1990, 110).

The implications of Butler's argument for kinship theory have begun to be sketched not only in terms of her critique of biology but also in terms of the new ways in which kinship idioms are being used in the context of lesbian and gay "cultures of relatedness," such as those discussed by Kath Weston (1991, 1998), Ellen Lewin (1993), Corinne Hayden (1995), and Jacquelyne Luce (1998). In such ethnographic accounts of lesbian and gay kinship, the meanings of the biological are interwoven within the language of kin formation in complex ways that both aspire to and also self-consciously mimic the authenticity and enduring permanence symbolized by so-called biological ties. Although not explicitly parodic or deliberately subversive, as in Butler's accounts of gender performativity, such means of "blending" kinship closely resemble Butler's notions of "bending" gender. The same can equally be said of kinship in the context of new reproductive technologies, as Charis Thompson (in this volume, Cussins 1998), as well as others have shown (see also Franklin 1997, 1998, 1999a, 1999b; Franklin and Ragoné 1998; Ragoné 1994; Edwards et al. 1999). The result is both categorical reinforcement (for example, of kin-

ship as a distinct category of relationships) and destabilization (for instance, of who counts as kin and how). In turning back to science studies and, in particular, the recent work of Haraway, the question of biological facts takes yet another turn.

#### ALL OUR KIN

From a somewhat different direction from those discussed so far, Haraway explains the power of biological knowledge in *Modest\_Witness@Second\_Millennium.FemaleMan@\_Meets\_OncoMouse™*. As Haraway states,

Biology discursively establishes and performs what will count as human in powerful domains of knowledge and technique. . . .

Biology is not the body itself but a discourse on the body. . . . Biology is not everyone's discourse about human, animal, and vegetable flesh, life, and nature; indeed, *flesh, life, and nature* are no less rooted in specific histories, practices, languages and peoples than *biology* itself. . . . It is, rather, a complex web of semiotic-material practices that emerged over the past 200 years or so, beginning in "the West" and travelling globally. (1997, 217)

According to this list, biology is primarily discursive "in powerful domains of knowledge and technique." It is historically and culturally specific, but has become increasingly powerful and transnational in the past two centuries. Haraway challenges the idea that biology tells us who we really are at an ontological level, distinguishing between "the body itself" and "a discourse on the body." Haraway's distinction between knowledges and bodies is both philosophical and political. It is also enabling for Haraway as a theorist, in that she is free to rewrite what kinship can be, which is one of the major tropes she uses for her arguments in *Modest\_Witness*.

As "the body" is separate from biology, so too is kinship. Haraway claims that kinship is similar to gender, both of which she has depicted by analogy to the grammatical function of producing kinds and types (of words) (1991). She describes kinship "in short" as "the question of taxonomy, category, and the natural status of artificial entities," adding that "kinship is a technology for producing the material and semiotic effect of natural relationship, of shared kind" (1997, 53). Haraway writes that "establishing identities is kinship work in action" (67), and that kinship is about both "kinds of membership and kinds of liveliness" (284 n. 23).

She uses kinship models to perform a variety of functions in *Modest\_Witness*, to which the concept of kinship is central. On the one hand, kinship is used as an analogy or metaphor for a naturalized system of interconnection, so that Haraway portrays "the kinship exchange system in which gender, race, and species—animal and machine—are all at stake" (217). She also uses kinship to link the three key "figures" or "guides" in the book—*Modest\_Witness*, *FemaleMan*®, and *OncoMouse™*—who she describes as "kin" to one another and to herself as narrator: "I need my sibling species to get me through this life story; our bodies share substance; we are kin" (1997, 120). In a more complex analogy, Haraway compares the ordering of elements in the periodic table to a kinship chart, or what she calls "a potent taxonomic device for what my people understand as nature" (54). She continues:

Uranium is the naturally occurring earthly element with the highest atomic number, 92. Uranium is where the evolution of elements that make up the solar system stopped. In that sense, uranium represents a kind of "natural limit" to the family of terran elements as well. (54)

Pointing out that plutonium, a transuranic synthetic element, has an atomic value of ninety-four (making it an unnatural kind), and that the explosive bomb-grade Pu238 was manufactured in a breeder reactor in 1942 (making it an unnatural offspring), Haraway develops an analogy to transgenic animals, such as *OncoMouse™*, similarly created by humans, after nature, and existing in out-of-evolutionary time. Her collective term for such entities, chemical and zoological, is "trans." As Haraway observes:

The techniques of genetic engineering developed since the early 1970s are like the reactors and particle accelerators of nuclear physics: Their products are "trans." . . . Like the transuranic elements, transgenic creatures, which carry the genes from "unrelated" organisms, simultaneously fit into well-established taxonomic and evolutionary discourses and also blast widely understood senses of natural limit. What was distant and unrelated becomes intimate. By the 1990s, genes are us; and we seem to include some curious new family members. (56)

Haraway is describing here the kind of kinship evident in the context of new reproductive technologies, in which "unnatural kinds" become familiar (Franklin 1997, 1998, 1999a). The sense that a cryopreserved embryo suspended in a liquid nitrogen tank is a biological relative is a commonplace experience for couples undergoing in vitro fertilization (IVF), for example. This

is kinship shorn of a sense of natural limit, but it is surely a sense of relatedness based on shared bodily substance and genetic ties. The uncertainty surrounding this form of "kinship" is most often occasioned by straightforward denial: IVF couples have been repeatedly documented to insist that having a baby via assisted conception is "just like" having a normal, natural pregnancy (see Sandelowski 1993; Franklin 1997). Haraway is not interested in these forms of denial or displacement: she wishes to embrace fully the promise of "unnatural" minglings, while she remains ever astute to their dangers. Kinship also serves an important function in her argument here, for as transgenics share a kinship with transgenics, so too does she position herself as kin to these unnatural kinds: "Like it or not," Haraway says, "I was born kin to Pu239" (1997, 62).

Here, then, is the perfect postmodern parody of Schneider's account of kinship discussed earlier, in a form of "kinship trouble" that mocks the naturalness of genealogy, by showing its artifice. According to Schneider, "Kinship is whatever the biological relationship is. If science discovers new facts about biogenetic relationship, then that is what kinship is and was all along" (1980, 23). But what if "science discovers new facts about biogenetic relationship" that enable a fish to be crossed with a tomato? In Haraway's view, people may be kin to transgenic animals, such as OncoMouse™, who carry human genes, but such relations also "blast widely understood senses of natural limit" (1997, 56). In other words, the ways in which humans are today connected and related through biology *undoes the very fixity that the biological tie used to represent*. To note the irony that this transmogrification of the biological has come from within biology itself is only once again to encounter the expectation that biology perform itself otherwise—that is, that biology authenticate and secure a "nature" in line with expectations, whether or not they are there.

Haraway complicates her account of kinship in the context of the new biologies (and biologicals) still further by introducing a process of contemporary cultural change that she labels as *a shift from kind to brand*. In relation to both kinship and gender, as systems for producing kind and type, she suggests that the commercialization of life itself is epitomized in the moment when "type becomes brand," when the very genome of OncoMouse™ is patented, as a form of intellectual property. Haraway notes that

in the process of materialized refiguration of the kinship between different orders of life, the generative splicing of synthetic DNA and money produces promising genetic fruit. Specifically, natural kind becomes brand

or trademark, a sign protecting intellectual property claims in business transactions. (1997, 65–66)

Haraway makes explicit reference to the similarity she is depicting between branding and gendering by stating in her introduction that she is "riveted by 'brand names' as 'genders'" (7–8). Like genders, brands are "generic marks that are directional signals on maps of power and knowledge" (8). In other words, the kind of type, or typing, once secured by gender or kinship systems is now analogously performed by branding. What was once secured by nature is now supplied by capital accumulation strategies and by genetic signatures on higher mammals reproduced under corporate-owned trademarks as a form of brand equity.

Like kinship, branding produces particular descent lines or "species" of products, linked in multigenerational lineages and by family resemblance. As in the maintenance of kinship or gender systems, the marketing of these lines, species, and families of products involves the constant performance of boundary work, to include certain products or traits and exclude others (see Coombe 1998).

But why is kinship a useful idiom to understand such relations? What kind of connection does kinship enable Haraway to draw, and why call it kinship at all? I interpret the move Haraway is making in her adoption of the kinship concept to examine new forms of capital accumulation as both a local and situated reading, which is also an attempt both to take literally and mock the power still inherent in the ability to naturalize connections—even when they are clearly as artificial as are those linking commodities to their "parent" company or one another. Haraway's reading is local and situated in its understanding of kinship as a means of "naturalizing power"—a meaning of kinship arguably specific to the Euro-American context in which it emerged. Her reading takes literally this power, and she demonstrates how it can be put to use to secure the relation of a product to its parent company, under the sign of its brand name or trademark, without which its reproduction is both illegitimate and nonviable (or "fruitless").<sup>6</sup> At the same time, Haraway's promiscuous claims to relatedness undo the propriety of such orderly lineages, making use of hyperbole to claim she is related to a mouse.

Kinship for Haraway describes the kind of commercial propriety a brand confers, in its function as a form of intellectual property protection. As has frequently been pointed out, the origin of intellectual property law is in copyright, which was established in seventeenth-century British law by analogy



to paternity (see Rose 1993). The kind of propriety conferred to authorship through copyright was explicitly argued on the basis of a father's inherent rights in and to his offspring. This reliance on authorship is also institutionalized in the classification systems of botany and zoology, whereby the type specimen establishing a species is named for its author. Copyright is naturalized by analogy to paternity, through the idiom of authorship, in which discovery and creation are linked to the ability to create new kinds and ordinary types, such as the type specimen of a species. In a manner that is directly reminiscent of Susan McKinnon's discussion of paternity and enterprise in the preceding chapter, the authorial paternity that signifies both direct descent and creation is already defined as propriety. In both Haraway's and McKinnon's analyses, as in much of Strathern's work, "naturalization," like paternity, thus appears less as a sequitor to nature than a product of enterprise.

There is a tension in Haraway's invocation of kinship that is further revealing of her ambivalent position within it. She uses kinship both to signify the perils of a puritanical insistence on continuity of the germplasm and to invite explosive unions that rupture supposedly natural limits. In an irritated postscript, Haraway denounces kinship ties:

I am sick to death of bonding through kinship and "the family," and I long for models of solidarity and human unity and difference rooted in friendship, work, partially shared purposes, intractable collective pain, inescapable mortality, and persistent hope. It is time to theorize an "unfamiliar" unconscious, a different primal scene, where everything does not stem from the dramas of identity and reproduction. Ties through blood—including blood recast in the coin of genes and information—have been bloody enough already. I believe there will be no racial or sexual peace, no livable nature, until we learn to produce humanity through something more and less than kinship. (1997, 265)

In this passage, it is clear that Haraway is referring to kinship-as-it-has-been, to what might be dubbed "bloody kinship" (listening also to the British inflection of this rendering). In proposing she is kin to OncoMouse™, Female Man®, and Modest\_Witness, as well as Pu239 and its transgenic cousins, Haraway foregrounds a hyperbolic, promiscuous, and transgressive kinship—a kinship that is after nature, out of the bounds and bonds of blood, postracial hygiene, presexual binarisms, meta- to species, trans- to elements, and hyper- to organic kinds and types. As in her earlier publications in which hybrid unions figure provocatively, *Modest\_Witness* contains many unsettling primal

scenes, in which Haraway explores kinship through the figures of the monster, vampire, cyborg, simian, and extraterrestrial. Although it is perfectly obvious why she is "sick to death" of "kinship," "the family," and "ties through blood," it is also evident that these are idioms she is reluctant to ignore.

Haraway's model of kinship as a means to transform definitions of naturalized kind parallels Strathern's (1998) concern with kinship as a template for knowledge production linked to the establishment of ownership of new forms of biowealth. Both accounts demonstrate not only the emergence of important links between kinship theory and science studies but also the continuing influence of the debate about biological facts for kinship theory, much as that may seem not only outdated but complicit with unhelpful traditions from the past as well.

Clearly, there are significant reasons to be wary of continuing to analyze kinship in relation to biology, much as biology may have shape-shifted into something now more visibly associated with innovation and change than fixity, stability, or continuity. To begin with, it is essential to widen the possibilities of what can count as kinship out from under the long shadow that genealogy and biology still cast over this field of study—an association that is arguably furthered by the assumption that new forms of biological reproduction are places to look for new kinds of kinship. As some have claimed, such an expectation can both obscure the ways in which emergent forms of kinship are not new at all, and appear to be merely contributing to the hype and controversy surrounding such techniques generally. A related danger is the tendency to overestimate not only the novelty but the determinism of new forms of technological innovation, such as cloning, the patenting of transgenic animals, or new reproductive technologies. Without careful contextualization, studies of such developments can easily fall into a pattern of attributing to technology an agency and power that it does not have. A final qualification must be the simple question of for whom biological innovation represents such an important discourse concerning the future of the human, for it is plainly not of interest to everyone, or in the same way, as recent studies of organ transplantation (see Hogle 1999) and sperm donation (see Kahn 2000) amply demonstrate.

At the same time, and as Haraway's use of kinship in spite of her reluctant loathings indicates, it is equally a mistake to overlook the profound ways in which a redefinition of the biological comprises a distinctive site of cultural change. From emerging capital markets to genetic screening to public debate over genetically modified soybeans and cloned sheep, the new biologies and

biologicals have unfolded as a defining feature of turn-of-the-millennium culture, at both the local and global levels, and with far-reaching as well as often intimate consequences.

#### KINSHIP IN THE CONTEXT OF THE NEW BIOLOGIES

Despite the enormity of such changes, anthropology has to date underestimated the significance of work on kinship in the context of the new biologies, and the linkages connecting kinship study to gender theory, science studies, and other fields of critical inquiry. One reason for this has been an overemphasis on the qualifications I raised above, about overvaluing novelty or being overly celebratory about technology. Another is the familiar narrative about postmodernism, poststructuralism, and deconstruction having "gone too far" at the expense of the discipline's core concepts. For example, in his recent volume *Kinship: An Introduction to Basic Concepts*, anthropologist Robert Parkin complains:

In the last ten to fifteen years, anthropology has undergone a definite shift away from traditional approaches to the study of kinship, formerly one of its central concerns. Initially, this was occasioned by statements that there is really no such thing as kinship, at least comparatively speaking, and that only by giving our attention almost exclusively to indigenous categories can anything worthwhile be said on the matter. Later, kinship came to be subsumed more and more under studies into gender, personhood, the body, ritual, etc. — something reflecting this very same anti-formalist tendency. . . . Now, however, a feeling has arisen in some quarters that things have gone a little too far down the road towards this sort of deconstruction, and that to neglect kinship is to disregard a good deal of what any society explicitly recognizes. (1997, ix)

According to Parkin, whose views are not exceptional, no one who is trying to do anything with kinship other than indigenize it, subsume it under other formal categories, or deconstruct it figures in his account of kinship theory, which tenaciously seeks to preserve the biological versus social facts distinction throughout. But neither is the question of kinship and new biomedical technologies absent from Parkin's analysis — indeed, an entire section is devoted to this topic in his chapter 10. Following the rote recital of what current techniques involve, and the dismissive disclaimer that the fragmentation of parenthood occasioned by these techniques is "nothing new," Parkin

incorrectly claims that at present the dilemmas produced by IVF and similar technologies only emerge as "a 'problem' for the essentially Western societies that have developed them rather than for other societies in the world" (126). Since IVF was reportedly developed in Bombay — before the birth of Louise Brown — and is now widely used in India, Singapore, China, Taiwan, Japan, and many parts of Africa, not to mention Israel, Kuwait, Saudi Arabia, and many other parts of the world, it is clear this assertion itself betrays certain unhelpful assumptions. It is unclear why Parkin feels it necessary to insist that anthropology provides many examples of "dilemmas concerning succession and inheritance" demonstrating that it is society, law, and public opinion that determine "which definitions of kinship are acceptable" (127), since to do so is in no way incompatible with also recognizing how the dilemmas associated with such techniques are also dissimilar from those encountered in the past. This vein of plus ça change argument, inaugurated by Peter Rivière in 1985, may well serve as an important counterweight to the overreaction that may occasion developments such as cloning.<sup>7</sup> The oversight of this account, however, is its inability to appreciate the ways in which kinship in the context of new reproductive technologies does not concern merely "new ways of making babies" but a much wider set of issues, such as how knowledge is produced, how capital is accumulated, and how identity categories are transformed. As Hayden writes in her prescient analysis of how the human is refigured in the context of the struggle to secure new forms of biowealth:

These different arenas [of biotechnology] form part of a rich narrative field in which ideas about kinship, nature, and culture are woven together in complex and historically dense ways. That these discursive ricochets continue to be elaborated is not a matter of epistemological self-replication, but a result of concrete instances of cross-pollination through which biologized constructions of "our" reproductive pasts and futures are powerfully articulated and refigured. (1998, 197–98)

The important anthropological work being done at present on kinship in the context of the new biologies is not complacent about some celebrated "implosion" of nature and culture, or transgressively postmodern breach of genealogical time and space, but is instead attentive to the how and why of explaining forms of cultural change and social organization emergent in the context of an altered grid of relationality. Both the elements and structural relations of kinship are continually transformed in terms of how they are imagined and practiced in a cultural context, such as contemporary Britain, where

biology signifies both nature and the ability to transcend natural limits. If culture is nothing if not paradoxical, such a set of phenomena are nothing if not cultural.

In chastising the biologism of Anglo-American kinship theory, Schneider both anticipated and overlooked key components of biologization. To him, as to many, biology was seen as a rigid and constraining gridwork, within which kinship became a matter of natural fact at the expense of expanding an appreciation of what can count as a cultural certainty. He was right to draw attention to biology as a cultural system and describe its unique symbolic authority. Nevertheless, he ignored the extent to which biology, even in its traditional form, is about change. Biotechnology is today the matrix of unprecedented life-forms that have as little to do with the nature biology once depicted as they do with the biology portrayed by Schneider.

Feminist approaches to biology captured a great deal more of this ambiguity within the biological, if for no other reason than the sheer volume of critical studies devoted to biology as a discourse from both outside and within its professional and epistemological parameters. One of the most significant benchmarks set by the work of Haraway has been her ability to understand so profoundly the importance of the ways in which biology can make itself strange as quickly as any of its critics. This is largely because Haraway has never abandoned the delights of the biological:

I still use biology, animated by heterodox organisms burrowing into the nooks and crannies of the New World Order's digestive systems, to persuade my readers and students about ways of life that I believe might be more sustainable and just. I have no intention of stopping and no expectation that this rich resource will or should be abandoned by others. Biology is a political discourse, one in which we should engage at every level of the practice — technically, semiotically, morally, economically, institutionally. And besides all that, biology is a source of intense intellectual, emotional, social and physical pleasure. Nothing like that should be given up lightly — or approached only in a scolding mode. (1997, 104–5)

Like the biblical, the biological is diminished by literalism. This is not to deny the worrisome and disturbing signs of a renewed genetic essentialism in the age of Genes 'R' Us. Nor is it to underestimate the many dangers evident in the global treasure hunt to find, patent, and bank new forms of bio-wealth. Rather, in the interests of producing better accounts of exactly why

such developments matter in ways to do with forms of identity and relatedness seemingly far distant from the corporate biotechnology laboratory, there is a loss involved in inattention to the increasing complexity of the biological as it is dramatically reshaped. In particular, for all of the reasons so much emphasis has been placed on the importance of biological models to U.S. and British kinship systems, as well as the ethnocentric tracings of the biological in how kinship has been recognized elsewhere, there is utility in asking whether the biological facts are doing the same kind of cultural signification today as they were when many of the most well-known arguments describing kinship's cultural functions were articulated to begin with.

## NOTES

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- 1 A similar assertion can be made about the ways in which "biology" is conflated with "nature" and also with technology.
- 2 Fredric Jameson (1998), for example, makes a similar argument that "culture" has replaced "nature" in the context of both late capitalism and postmodernism.
- 3 See, for example, Dickens 1996; Macnaghten and Urry 1998; Robertson et al. 1996; and Wilson 1992.
- 4 Similar assertions have been made by numerous social historians, including Michel Foucault (1970), Thomas Laqueur (1990), Londa Schiebinger (1989), and Ludmilla Jordanova (1980, 1989) — that contemporary models of life, sex, procreation, and species are of recent vintage, and directly linked to the rise of modern biology and, more generally, Western science.
- 5 Analyses of gendered and discursive dimensions of biological facts in the context of conception can be found in the work of Emily Martin (1991) and Sarah Franklin (1995).
- 6 Significantly, violations of brand propriety, whereby a product is marketed under a falsified or inauthentic trademark, such as "bootleg" videos of feature films or "imitation" designer goods, are referred to as "cloned" products.
- 7 Oddly, Parkin claims that new reproductive technologies raise the possibility of "a society in which relationships need no longer be defined at all in ways that make explicit reference to kinship" (1997, 128), which he concludes would indicate that they deserve no further discussion since such a development "would mean leaving the world of kinship behind us completely" (129).

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