Introduction

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Almost four decades after the first IVF (in vitro fertilization) baby, the new complexities of reproduction have galvanized the attention of a broad range of scholars. These scholars have analyzed how developments in the realm of assisted reproductive technologies (ARTs) intersect with existing notions of relatedness to create new understandings of who is kin. These scholars also explore issues related to new kinds of equalities and inequalities created through the intertwining of biomedicine, technology and science, the expansion of the Internet, the commercialization of gametes and surrogacy, and the global involvement of capital. And these scholars raise the profound moral uncertainties produced by these same developments.

This interdisciplinary volume touches on each of these three issues. It is an outgrowth of a special session of the American Sociological Association in San Francisco, August 2014. That session, “Biogenetics, New Reproductive Technologies and the Creation of New Kinship,” included some of the key scholars in different fields whose work is at the cutting edge of the intersections among the polity, the economy, technology, and family. These scholars approach the issues of kinship, inequalities, and moral complexities with some similar lenses and some quite different ones. The excitement generated through the complementary analyses provided the impetus for bringing them together in print.

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Who Is Kin?

Anthropology’s dynamic orientation toward a concept of kinship as “relatives connected to one another without any supposition of what kind of social group or family they make up” (Strathern, 2005, p. 167) works well to open an exploration of how ARTs and their social consequences destabilize our usual understanding of the “facts” of procreation and reproduction and in turn, how new understandings are relevant to the creation of “family.” These are issues insightfully explored by Susan McKinnon in her article as she discusses how the “domain-crossing proclivities of assisted reproductive technologies . . . foregrounded the importance of choice, intention, and work in the creation of kinship relations.”

One of the new reproductive technologies—IVF—in its earliest incarnation was subject to wide-ranging critiques from groups as widely disparate as the Catholic Church and feminist scholars and activists. Originally, however, that procedure did not challenge usual understandings of who could be counted as members of a nuclear family because it most often relied on the manipulation of a couple’s own gametes. Today, as a result of technological advances, IVF no longer necessarily relies on the couple’s own gametes but also includes use of donor sperm, donor eggs, and the creation and implantation of embryos created with both donor eggs and donor sperm. Other procedures, such as reliance on surrogates to carry an embryo and the manipulation of mitochondrial DNA, which creates the possibility of “three parents” (Tingley, 2014), further complicate issues of relatedness.

The range of individuals who have come to rely on donated gametes and surrogacy has broadened. As family diversity has become more accepted, single mothers by choice (Hertz, 2002, 2006) and both lesbian and gay couples are now major consumers of new reproductive technologies (E. Lewin, 2009; Mamo, 2013; Sullivan, 2004; Thompson, 2007). To some extent, access to these technologies has been created through active social movements whereby individuals claim the “right” to reproduce. As Laura Mamo and Eli Alston-Stepnitz note in their article, transindividuals constitute one of the newest set of voices in these claims.

Another significant change involves contact between donors and offspring and between individuals who have used, or been conceived with, gametes from the same donors. Until recently, because the majority of all sperm and egg donors were anonymous, when people purchased donor gametes, they had no reason to expect that they would ever meet anyone associated with those gametes. Since then, the identification number (assigned by sperm and egg banks and used by parents when purchasing gametes) has become the means of locating both the donors themselves and others who share the same donor. This new
ability produced through free-standing registries, such as the Donor Sibling Registry (www.donorsiblingregistry.com), and the registries provided by sperm and egg banks have led many individuals either in person or in virtual space to connect with genetic “relatives.” The emergence of these registries thus set in motion the possibility of creating donor-conceived sibling networks, while innovative social media provides the platform through which the members of these networks can interact with each other, as noted by Naomi Cahn, and Mamo and Alston-Stepnitz. These new networks are without precedent and their members constitute an entirely new category of potential kin (Hertz, 2009). Although genetic half siblings are not new, the connections created in these networks disrupt the more common models through which such kin are produced (e.g., through extramarital affairs, remarriage, and relinquishing of a birth child for adoption into another family). The claim to connection by offspring who share the same donor has no clear social basis and is, originally, purely biological (genetic). In short, no cultural paradigm exists for understanding the relationship between “donor siblings” in which the donor’s number assigned by the bank or clinic serves as a stand-in for a shared genetic relative, the donor.

In this volume, McKinnon, and Mamo and Alston-Stepnitz, interrogate the disruption of kinship lines of descent, lineage, and ancestry when donor gametes and traditional surrogacy (i.e., when the surrogates acts as both the egg donor and as the actual surrogate for the embryo; Modern Family Surrogacy Center, n.d.) are component parts of family creation; this kind of disruption is all the more complex in situations where mitochondrial DNA is transferred (Tingley, 2014), making for the possibility of three parents. Then the question becomes how we even know what the “facts” of kinship are. Interestingly, as Petra Nordqvist’s article shows, assumptions about those “facts” of relatedness are especially important to grandparents-to-be when those family members might otherwise reject the family form (in her analysis of a lesbian couple becoming parents).

Cahn’s article explores, in depth, the legal consequences that could emerge within networks of donor-conceived individuals and their parents as the members of these networks make sense of their relationships through the “traditional” categories of siblings, parents, and children. The mere existence of regulations banning anonymity and the formal establishment of registries that allow a child to connect with a donor at the age of 18 years, in countries such as the United Kingdom and some provinces in Australia (Hertz & Nelson, in press) constitute a State insistence that these connections are relational and not simply biological. In effect, countries that have already banned anonymity and created national registries for contact between donor and offspring make the claim that even though donors do not need to embrace their genetic offspring as kin, donors do have personhood.
If there are legal ambiguities about the relationships between donor and offspring, and between the families whose members share the same donor, new ambiguities about kinship emerge within the nuclear family created through the use of donor gametes and/or surrogacy. Traditional understandings of kinship—where through marriage, in-laws become connected first to the “other” partner and then to children—are disrupted when members of a family can have different individuals to place on a genealogical chart. That is, once donors and surrogates are involved, parents and children—and even different children within the same family—can all have different “relatives.” Evidence from studies of networks of families whose members share the same donor suggest that when children are young, parents usually make decisions about whether or not to facilitate contact with genetic “relatives”; as children mature, they take matters into their own hands and claim these individuals (a donor, a donor-conceived sibling) as relatives belonging to them alone and not to their parents (Hertz, 2002; Hertz & Mattes, 2011; Hertz, Nelson, & Kramer, 2013).

**Equalities and Inequalities**

The addition of new types of relatives—those who are connected to one or several members of the family but not to others—also creates the possibility for a new balance of power within the family. Parents who previously had the power to define who was—and who was not—a relative may now have to cede that decision (whether enthusiastically or not) to children who may want to meet, communicate, and have independent relationships with their genetic kin. In our research, we found intense statements of these desires; we found as well that some donor-conceived offspring were angry because they believed their parents had “created” them without taking into account the possibility that their children would want or need to know who their genetic relatives were (Hertz et al., 2013). In discussing the potential for “the Law” to regulate interactions between donors and offspring and between the members of networks of individuals who share a donor, Cahn’s article introduces the potential for yet another player to be involved in these complex negotiations.

Access to ARTs by gays and lesbians also represents a shifting terrain of equality and inequality. People who were excluded from the use of these technologies and from the ability to openly create families—that is, without hiding their sexual orientation or gender identity (E. Lewin, 1993)—now can do both. Mamo and Alston-Stepnitz’s article represents these developments of inclusion well, even with all the complications these developments entail. They argue that scholars need be attentive to ever-changing
“interpersonal and structural dynamics,” as they evaluate new inclusions with an eye toward reproductive justice. Moreover, they introduce a new complexity when they note that the inclusion of queer users of fertility biomedicine rests on “a sentimentalism of belonging achieved through family formation.” Indeed, Nordqvist’s article suggests just how important that new “belonging” is to lesbian couples. We would add, following from Mamo and Alston-Stepnitz, that as the nuclear family is romanticized, what was once “compulsory motherhood” (Stein, 1997) may now be “compulsory parenthood” for gays and lesbians. Whether or not transindividuals can gain inclusion as parental citizens (and thus also be subject to compulsory parenthood) remains an open question. Another open question is that how “other” participants in family creation—the surrogate, the donor(s)—will be recognized legally and socially by those who turn to these third party others to help create their families. In her talk at the American Sociological Association special session, Thompson (2014) suggested that instead of talking about “parents,” we begin to talk about “significant adults” as a way of acknowledging the many individuals who may participate in the creation of a single child.

Now that legal equality has been gained for same-sex marriage in numerous states and countries, another open question is whether the couples formed through these arrangements will be able to gain reproductive equality. For instance, when surrogacy is banned—as is the case in some states and some countries—not all gay couples have access to reproduction (T. Lewin, 2014b). Whether you believe that reproductive rights should follow from marriage rights, as long as heteronormativity remains the yardstick for what constitutes a family, this new inequality is problematic.

The language of scholarship and of personal testimony often treats donor eggs and donor sperm as if they are comparable contributions (Almeling, 2007) and doing so may deny the very real biological differences involved in these productions and their procurement by the fertility industry. Women who donate eggs not only subject their bodies to the influence of powerful hormones but they may be compromising their own fertility in the future (Elton, 2009). Hyperstimulation and other medical complications can also result from egg donation (Norsigian, 2014). Women who act as surrogates subject their bodies to all the risks of pregnancy and birth. Sperm donation, by way of contrast, carries no recognized risks. In short, as Mamo and Alston-Stepnitz argue, the personal costs associated with donating gametes are deeply gendered. Moreover, customers for egg purchases are offered photographs of these donors, thus (at some level) keeping embodiment intact. Customers for sperm vials are not offered adult photographs (though they may be offered baby pictures of the donor); the sperm is thus disembodied at the moment of selection.
These different market systems act to reaffirm the quite different value placed on women’s and men’s bodies and their appearance.

Commodification creates additional inequalities. Women are paid more for donating eggs than men are for donating sperm. Yet women often describe donation primarily as an act of altruism while men describe it as being motivated both by financial incentives and a desire to help people (Almeling, 2007; Kramer, Schneider, & Schultz, 2009). Nevertheless, our own ongoing research suggests that these gendered narratives tell only part of the story and that gamete donation plays very different roles in the financial histories of men and women as they move through late adolescence into adulthood. Donation aside, the costs associated with purchasing (and storing) eggs, sperm, and embryos, like those associated with hiring a surrogate, are far beyond the capacity of many people in North America, not to mention most people in most of the world.

In their articles, McKinnon, and Mamo and Alston-Stepnitz, all introduce us to the idea that a global market for sperm, eggs, and surrogates leads to local and global inequalities of different forms. Although predictably it is often women in the global south (e.g., India and Thailand) who provide eggs and wombs for clients in the global north, unexpected patterns have also emerged. Some of these unexpected patterns result from state regulation. Egg donation is illegal in a number of countries including Germany, Austria, and Italy. As a result, many couples from those countries will seek help in places where the procedure is allowed such as the United States and Spain. Wealthy Chinese couples now come to the United States to hire surrogates because they are not allowed this arrangement in their home country; not only do they thereby circumvent China’s one-child policy but they also purchase citizenship in the United States. It is not only the Chinese who come to the United States for surrogates. So too have gay couples from Portugal come to the United States, again because they can circumvent regulation in their home country (T. Lewin, 2014a).

Not all the inequalities are those of access and exploitation. Some countries (such as the United States) allow intended parents to choose their donors; parents thus have the freedom to select donors through clinics, banks, and Internet sites for particular personal and physical characteristics. In other countries, such as Spain, parents are not offered these choices and it is a member of the clinic staff who assigns particular donors to particular intended parents. A second form of inequality is created by these practices. When parents have access to a donor number, they and their offspring can decide for themselves whether they wish to sign up on a registry to try to locate genetic relatives; without such a number this not possible. A regulatory continuum emerges from uneven access to choice and expectations of donor anonymity.
Profound Moral Uncertainties

Commodification raises the obvious moral question of whether or not those who provide eggs, sperm, and wombs are being exploited by intended parents who purchase those goods and services necessary to fulfil their own reproductive desires. There is no clear answer here. Indeed, while some observers and activists emphasize exploitation, especially when it involves border crossing for purposes of reproduction (Ehrenreich & Hochschild, 2004; Pande, 2014; Rudrappa, 2012), others emphasize the benefits to those supplying these services. These benefits include the immaterial feeling that one has made an important contribution to the happiness of others as well as the material benefit of income, which, in turn, often results in power within one’s own family (see, e.g., Jacobson, in press). Still others, including Mamo and Alston-Stepnitz, and Thompson, acknowledge that these issues can never be represented as a simple either/or dichotomy. Meanwhile, some scholars focus on the moral “right” of those who have been excluded from reproduction to share in its joys. Mamo and Alston-Stepnitz’s article makes reference to Joshua Gamson’s (2013) personal narrative, which raises these complexities. He suggests that he and his spouse, also a man, could circumvent the commodification of surrogacy by creating intimacy between the couple and the surrogate; at the same time, he acknowledges that it is only commodification and his personal capacity to afford these services that allowed him access to a reproductive scenario that was of immense importance to both his partner and himself.

While intimacy might be possible in situations that involve “only” one set of parents, one egg donor, one surrogate, and one child, intimacy is less likely when there are large numbers of offspring. Some donors agree to release their identity to offspring when the offspring turn 18 years. Although the donor might be interested in “intimacy” when the first of their offspring becomes eligible for contact, subsequent offspring might find a less interested or forthcoming donor. Identity-release at age 18 years might also produce two additional problems. First, if there is the kind of network of donor-conceived offspring who share the same donor, as discussed by Cahn, there may be pressure on the oldest child to make contact with the donor whether or not she or he is interested in doing so. Second, children who are considerably younger, but part of the same offspring network, might learn about the donor far before they are ready to handle that information and far before the donor (or the parents of that child) intended.

The procedures that undergird the commerce of eggs, sperm, embryo creation, and surrogacy are driven by a profit motive. As a result, in all likelihood, they will ignore basic needs of suppliers and recipients. On the supply
side, for example, the number of eggs a woman can produce determines her worth on the market, regardless of the emotional and physical consequences of that production. As another example, the interest men have in knowing about, and making contact with offspring resulting from their sperm donation, is often ignored by clinics that have no obligation to tell them whether any such offspring exist. On the demand side, in the absence of records, the recipients who purchase sperm and eggs are denied knowledge of how many children have been produced (or will be produced) by the egg or sperm donor they use. Interestingly, even in countries like Spain, which legally regulate the number of offspring that can be produced from any donor’s sperm or eggs, there is only voluntary implementation at individual clinics at best. Furthermore, a donor who reached his or her “maximum” might simply move on to a different clinic.

We have noted that the production of large numbers of offspring might well make it impossible for any individual donor to achieve intimacy with all the children with whom he or she has a genetic bond; donors might also find it impossible to act in other ways they would view as being responsible. That is, the financial incentive that results in the production of large quantities of eggs and sperm may itself preclude moral behavior. Moreover, those who are “produced” in these transactions (and their parents) might well have moral concerns about incest because they do not know how many people—or which people—are their genetic relatives (i.e., genetic half siblings).

Financial motives—to have one’s sperm, eggs, or wombs used—may also encourage donors and surrogates to lie about their own and their family’s medical histories; commodification thus sometimes gives rise to deeply immoral practices on the part of individual donors. Of course, the banks that sell gametes also have a motive not to subject these “products” to extensive genetic testing and perhaps even to conceal information about possible medical problems that have emerged among their clientele. In some cases, we have learned in our ongoing research, clinics might sell sperm to particular clients who request it to “complete” a family with full genetic siblings, even though the clinics have discovered that the donor has serious genetic issues. We might ask who bears the moral burdens of actions that could affect a child who is as yet unborn.

Where the costs of goods and services are beyond the reach of many who want to purchase them, a black market often emerges. Reproduction is no different in this regard. Both egg and sperm donations now circulate in an underground economy. These donations may be defective and their use is not regulated by any standards. In addition, the drugs associated with egg donation also circulate in an underground economy creating the possibility for potential health hazards to both the user and to offspring. Another
such market allows men who may or may not be suitable donors to offer their services for free or in exchange for sexual relations (Hersher, 2014). In other parts of the world, such as China which bans surrogacy, the growth of a middle class and the lifting of the one-child policy have created a growing underground economy (Johnson & Li, 2014). And yet another legal, though loosely regulated, market in Thailand, has recently decided to tighten its regulations following negative publicity about surrogate babies (Herman, 2014). This market allowed a Japanese man in Hong Kong to create 15 offspring through surrogates\textsuperscript{15} and an Australian man who is a convicted sex offender and his wife to bring home a baby carried by a surrogate.\textsuperscript{16} Of course one might argue that anyone, anywhere, without surveillance, can have a child if they so choose; the moral question here rests on the ability of some to exploit others in the enactment of that choice.\textsuperscript{17} Moreover, as McKinnon points out, using examples from Japan, Egypt, and Israel, “the national and international acceptance—religiously, culturally, and legally—of the various assisted reproductive technologies is highly varied across the globe” and within nations.

In general, reproductive rights advocates have worried over the issue of choice in the decision about whether or not to carry to term a baby identified as having an unanticipated health problem or a condition widely perceived to be a disability. As McKinnon argues, this issue of choice becomes even more difficult to resolve when an intended parent is not the one carrying a baby. Can a parent insist that a surrogate abort a fetus? Can a parent reject a child for whom they have contracted because it has a condition like Down syndrome, as appears to be the case for Baby Gammy who was left behind while his twin, also born to the same surrogate, was adopted by the Australian parents who had contracted for the birth (Engel, 2014)? To be sure, the media love to publish these stories and in doing so may make it seem that these are far more commonplace occurrences than is really true (Markens, 2012). But we consume these stories with gusto because they raise profoundly moral issues in a time of profound change in what is possible. How far would any of us go to achieve the family of our dreams? How far should the medical profession, science, and commercial markets go to help people achieve those dreams? And at what cost to others can people proceed to fulfill their dreams in an environment of the ever-shifting boundaries created by new social relations, scientific/technological advances, and globalizing markets.

In different forms over the decades, reproduction has always been at the heart of social science research. Today, as this essay has suggested, reproduction clearly stands as a key to our understanding of contemporaneous transformations in the polity, the economy, morality, and kinship. The four articles in this volume illustrate well, and help us understand more deeply these crucial intersections.
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Notes

1. Heterosexual couples continue to use ARTs. However, intracytoplasmic sperm injection, a major technological development of the mid-1990s for men with low sperm counts, has led to fewer such couples seeking sperm donors. At the same time, increasing female labor force participation has led many women to postpone first pregnancies, resulting in greater reliance on egg donations to counteract the natural decline in fertility that comes as women age (Centers for Disease Control and Prevention, 2010; Luke et al., 2012).

2. Recent advances in epigenetics have raised complex questions about the contributions of gestational surrogates. These complexities confound further our assumptions about the biological “facts” associated with parentage (see, e.g., Riddihough & Zahn, 2010).

3. Sweden, Norway, the Netherlands, Britain, Switzerland, some provinces in Australia, and New Zealand only allow nonanonymous donations (Donor Registration, n.d.).

4. Age also represents a new frontier of potential equality as older persons seek to reproduce with the assistance of new technologies.

5. Citizenship thus becomes a transaction; it is purchased in the United States for a family’s future and manipulated in China to allow those who are wealthy to obtain a household registration card to be “legal” in their province (Harney, 2013).

6. Recently, the media have reported a growing underground economy in China itself for surrogates (Johnson & Li, 2014).

7. Media attention focuses on the “expected” patterns of exploitation (such as articles on Americans going to India and Australians going to Thailand) far more than these less usual ones where the flow is in the opposite direction than it is with other services (e.g., nannies, sex work) that have captured the attention of social science research (Cheng, 2010; Ehrenreich & Hochschild, 2004; Parrenas, 2001; Sassen, 2012). India, which legalized surrogacy, recently circulated a new government regulation that it will no longer provide surrogates to everyone wanting to purchase these services. Couples from countries where surrogacy is illegal will be prohibited from using commercial surrogates (as will be gay couples and single men and women; Bhowmick, 2013). A citizenship at home requirement will decrease the number of “state-less” children who do not have citizenship in the country in which their parents (and they) live (Brunet et al., 2013; Kindregan & White, 2013).
8. In some countries, because the parent went abroad to seek services to make a child, the child may not be granted citizenship in the parent’s own country (Kindregan & White, 2013).

9. There is no guarantee that the identity release donor will be found 18 years later. This is a tacit agreement, not a guarantee.

10. Furthermore, donors vary enormously in how they come to interpret releasing their identity to their donor offspring. For instance, one identity release donor might decide that each child can write only one letter that the donor will answer, while another might decide to have further contact. We do not know how the number of offspring an identity release donor has affects his or her willingness to offer limited contact.

11. Until 2008, Spain left regulation to individual clinics when a law-regulating donor gamete use to six of his offspring was passed. This law was aimed at controlling the increase in “fertility tourism”; its passage also coincided with broader EU discussions about the export of human cells. We use Spain as an example here. However, no countries with regulations (whether these are governmental regulations or clinic regulations) concerning the maximum number of offspring that can be used have regulatory bodies that actually enforce the number of births per donor.

12. There is also a difference between how clinics operate with respect to eggs and sperm. When potential parent(s) select an egg donor they are often responsible for paying the cost of genetic testing (Zoll, 2013). Sperm banks routinely conduct certain standard testing. However, if an individual client wants further genetic testing they must pay for it.

13. Sperm donors often are offering services in private groups through Facebook. Some people in the group have small businesses and will freeze and ship sperm. Others will meet up and have sex or give you their sperm. They operate outside the fertility industry and they are not licensed. Finding egg donors without an agency is mostly through classified advertisements. See, for example, http://www.fertilitynation.com/fertility-nation-classifieds/classifieds/1/egg-donation/ or http://www.optim.org/cgi-bin/forum/YaBB.pl?board=general6%


15. The media have suggested that his motive is hardly the benign one he represents as simply wanting a large family, but may be an interest in producing children for human trafficking and child exploitation (“DNA Shows Japanese Man Fathered 15 Surrogate Babies,” 2014).

16. The man and his wife left behind one of the twins carried by the surrogate, Baby Gammy who was born with Down syndrome; we discuss this case further below (Engel, 2014).

17. Moreover some of the more problematic choices involve legitimate clinics and doctors; in the extreme case of the woman who became known as “octomom”
the medical profession agreed to implant numerous embryos in a woman who could not afford to raise the eight children she subsequently delivered (“Nadya Suleman,” 2014).

References


