Commentary

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ORIGIN STORIES REVISITED: IVF AS AN ANTHROPOLOGICAL PROJECT

With this special issue it is both satisfying and illuminating to see the study of assisted conception come, in a sense, full circle – from having been perceived largely as a recent Euro-American (and therefore somewhat restricted) concern to being recognized as not only a widespread (and non-Western) practice, and one which resonates with many of the classic concerns of anthropology, but also an area which, as Marilyn Strathern has argued consistently since the early 1990s, holds a unique place in the effort to widen the range of comparative practice within anthropology (Strathern 1992a; 1992b). Having begun research on British in vitro fertilization (IVF) in the mid-1980s, I remember well the difficulty of trying to use this topic to introduce "an *additional comparative perspective* [into] the longstanding anthropological practice of elucidating and documenting cultural difference [by] addressing the question of *what kinds of difference these can be*"(Franklin 1997:7, original emphasis). Against the "plus ça change" claims of Riviere (1985; see also Parkin 1997: 125-128; Stone 1997: 278), many feminist scholars viewed IVF as a curious kind of "passing" or simulation that, like all forms of imitation, "doubled" and therefore transformed its object (procreation) – as opposed to merely confirming its certainty or its seamless continuity with previous forms of parenting (Cussins 1996, 1998; Delaney 1986; Franklin 1995; Sandelowski 1993). In addition, it was the ability for IVF to stand in and do service for conception that produced "miracle babies" (Franklin 1990, 1992a, 1992b)! Thus, upsetting the resolute maintenance of an immobile nature-culture polarity throughout the "virgin birth" debates, and in contrast to the later work of David Schneider (1968) on the importance of "biological facts" to kinship study (an emphasis that is often, and wrongly as Carsten points out [2000, 2004] associated with the *de-biologization* of kinship, which is instead the achievement of his successor generations of feminist critics [Yanagisako and Delaney 1995]), IVF could replace the "facts of life" *while these apparently stood still*. This was the same kind of "magical thinking" with which anthropologists were endlessly familiar elsewhere, yet somehow, when it

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occurred in the domain of biology "itself," eluded careful scrutiny (Franklin 2001).

The case to consider the increasing relativity and contingency of biological facts – not to mention their novel transubstantiation into a discourse of hope – seemed especially apt in the context of the emphasis on the "miraculous" nature of IVF conception. As I suggested in several publications throughout the 1990s, but particularly in *Embodied Progress* (1997), the primary question posed by technological assistance to biological reproduction was that of how reproduction could be doubled, supplemented, and relativized in this way? How were we "to make sense of [the] new 'relativities' in the space where certain relations once stood" (1997:7). The pun was deliberate, though not ironic, in pointing to the multiple influences of assistive reproductive technology (ART) not only on kinship, but also on knowledge – and in particular the stability of paradigmatic knowledge, or what we might call iconic biological truths, such as the "facts of life" (Butler 1990; Franklin 1986, 1997; Strathern 1992a, 1992b). Modern scientific (biological) explanations of conception, in this model, have two primary purposes: they explain the causality of conception as a biological mechanism in particular, and they demonstrate (symbolically as well as literally) *the power of such explanations in general*. Assisted conception is traditionally, that is to say typically, imagined to confirm this process still further: it is because we have an accurate, factual, scientific, and objective account of the mechanisms of conception that modern science can successfully intervene to repair them. As we can also see, however, and as Strathern explains so well, the borrowing "travels back" (1992a): the logic of IVF also displaces the very certainty of the processes it affirms (1995).

For example, traditional biological explanations of conception work very well going forward, as it were. That is, if we start with the egg and the sperm and proceed through conception and fertilization, onto implantation and pregnancy, and through gestation to birth, all of the causal mechanisms explained by modern science are confirmed. Couples for whom the expected biological sequence of events does not unfold, however, enter into a less satisfactory relationship with both the biological facts of sexual reproduction, and the explanatory power of modern science in general. There is a gap. Paradoxically, this gap is significantly widened by IVF, the technique designed to mitigate it: most couples, who came to IVF in the first place because of reproductive failure, will leave with their failure compounded by *both more and less* explanatory detail (still, approximately 70–80 percent of IVF cases end in failure). Failed IVF is often nonetheless successfully diagnostic of more detailed reasons for failure – for example, uterine lining instead of embryo quality – yet these diagnostic details are in a sense merely

deferred non-explanations, or even, we might say, fake explanations since, in relation to the crucial question, ''Why can't we get pregnant?,'' even the most scientifically detailed explanations are chronically partial (Thompson 2001; Throsby 2004).

This paradox of IVF leads to others, such as the idea that the technique is simply giving a ''helping hand'' to ''nature'' when in fact IVF involves a wholesale takeover of the entire business of a single cycle, and, as mentioned earlier, is not so much ''assisting'' as replacing it. Indeed, from the very outset of IVF treatment, a woman's own cycling mechanism, in the form of her regular hormonal cycle, is eliminated and replaced by a bespoke artificial cycle that offers more precise biological control. The point is not the extremity of such a procedure, as opposed, for example, to working more closely in tandem with a woman's own reproductive physiology. There is no evidence to suggest that such an approach, for example using lower levels of ovulation stimulation, produces better IVF results, which is the end result that matters most in IVF. The point, rather, is the function of the euphemism ''helping hand,'' which *substitutes aid for replacement*. IVF is not ''helping'' in the dictionary sense of ''making a secondary contribution'' or ''acting as a subordinate,'' but rather it is standing in the stead of what it replaces: it is taking up the position of becoming a conceptive process *through its function if not its ontology*. Furthermore, the euphemism that disguises this gesture, like all polite deceptions, is at once protective (IVF is not unnatural) and revealing (IVF is not ''the real thing'').

All of these paradoxical aspects of IVF remind us that, however thoroughly scientific and technical its origins, its pursuit is never strictly instrumental. Of course IVF is always imbued, at every stage, and even in the process of its innovation, with profound moral values and beliefs, including those that are essentially, if not explicitly, spiritual. In referring to IVF as a ''hope technology'' (1997) I sought to point this out, and to argue that, like reproduction elsewhere, IVF is a process of embodied investments in specific cultural values, such as scientific progress; that these are paradoxical; and that they require an over-arching belief-system (hope, progress, technological-enablement) to produce an ambivalent coherence (see further in Franklin and Roberts 2006; Thompson 2005).

Thus it is not true, as some assert, that anthropologists and other social scientists investigating reproductive biomedicine and the life sciences have been inattentive to the role of both religious and moral values in the formation of technoscientific rationalities, for the reverse is indeed the case. As Aditya Bharadwaj notes in his introduction to this volume, the pioneering work of Donna Haraway offers many excellent examples of how deeply intertwined are ideas of scientific knowledge and scientific practice with

religious idioms of witnessing, testimony, sacrifice, modesty, and salvation (1989, 1991, 1997). Similarly, in his path-breaking ethnographic work within the complexity community in Santa Fe, Stefan Helmreich, following the theological arguments of Carol Delaney, demonstrated a profoundly biblical understanding of the links between paternity, creation, and lineage in the work of high-tech artificial life scientists (1998). Indeed, and as the human genome project and its constitutive language of second creation and divine inspiration have repeatedly confirmed, the secular literalism and post-Enlightenment realism of modern science are rarely, if ever, unaccompanied by the verdant mythical, symbolic, and figurative apparatus that infuses and revitalises them, like moss in a terrarium (Nelkin and Lindee 1995).

Thus, the point of much social scientific analysis of IVF, which is often misinterpreted – or simply missed altogether – is not that it offers yet further proof of the inherent irrationality of either people or scientific thought, but rather that *its rationalities are fully compatible with others that may contradict them*. This is the point Jeanette Edwards and Marilyn Strathern, among others, have made in the context of kinship (2000), forcibly demonstrating that in the same way that it is possible for technology to "adjust" the facts of life, so too is this "adjustment" process a ubiquitous feature of social life, and in particular, of social relationships and ties. One of the most sensational demonstrations of the "adjustment" paradigm in relation to both biological knowledge and biological relatives came in the writings of Helena Ragone, who showed in her brilliant study of surrogacy how conception could occur "in the heart" (1994). The implications of these findings have been variously, and widely, taken up, perhaps most prodigiously in the work of Charis Thompson, who, in her definitive account, *Making Parents* (2005), lays out a properly conceptualized, documented, and theorized account of the complex "ontological choreography" involved in being an IVF patient – or, indeed, in reproducing, or not reproducing, at all – a process which, she argues, is inextricable from ideas of the sacred and the profane.

Some of the oft-repeated criticisms of the social science literature on IVF, new reproductive technologies (NRTs), and assistive reproductive technology (ART) – despite, or perhaps rather because of, the extent to which such criticisms have become increasingly cliché – include the following: Are they really new? Are they not a Western preoccupation? Are their analysts not themselves caught up in (and complicit with) the hype surrounding these "high tech" interventions? Does IVF really affect that many people? Aren't other health issues more important? It is in part the "scientism" and alleged elitism of IVF (and its association with "desperate" white middle-class Western women and the commodification of in/fertility) that have made IVF–ART seem like an unattractive, superficial, passing, or distracting

topic. What is truly important about the essays compiled in this special issue is how far they go to challenge this legacy of doubt, as well as definitively setting to rest so many of its precepts.

After all, IVF has been practiced in India, and has been the subject of an intense public debate there, for as long as it has existed in the U.K., the U.S., or Australia. Israel has long been one of the most radical contexts of innovation in reproductive biomedicine, whereas Cyprus has had a unique national relationship to IVF and Preimplantation Genetic Diagnosis (PGD). IVF is an enormous world-wide practice, with over 5 million children born of this technique since Louise Brown was born in Oldham, near Manchester, in the summer of 1978. Quantity, however, is not the point either. When we examine IVF through an explicit lens of spirituality, and allow its indigenous languages of hope, faith, sacrifice, devotion, and fulfilment to "speak for themselves," the features of IVF and ART that seem to have taken quite a long time to emerge as significant are suddenly revealed in the bright light of what is obvious – which is that the "quest for a miracle baby" is by no means either a strictly biological, or technological, journey for anyone who is involved. As such, this practice sheds a revealing light on the increasing proximity between conceptive technology and what Pope John Paul II described in his *Evangelum Vitae* (1995) as "the genealogy of the person inscribed in the very biology of generation" (88). With IVF, technology is not only beginning to "play god" but *to become divine inspiration*. In the West, as elsewhere, IVF is a transubstantiation of reproductive hope into a promise of technological salvation requiring a devoted faith and a great deal of sacrifice.

With the exception of Greece, this volume is based on non-European and non-Western studies, which, while a welcome antidote to the association of IVF with the U.S., the U.K. and other "wealthy, Western nations with high infertility," is also somewhat regrettable for its (undoubtedly unintended) implication that IVF is somehow more religious or spiritual the further away it is from the secular humanist heart of the post-Enlightenment project of scientific progress. As the current mixture of awe and debate surrounding the prospect of stem cell therapy demonstrates, however, "the West" is no place to look for a strict separation between God and science – especially at the point of procreation. Even in famously-secular Britain, where the all-but-officially Catholic Prime Minister Tony Blair is one of the world's leading proponents of human embryonic stem cell research, the life sciences are profoundly imbued with religious purpose in the sense of saving lives and creating hope (which is why the British P.M., like other devout Christians, such as Francis Collins, supports them). Like the sense of a duty to improve the land, to till the soil, and to husband its tangle of life into

orderly fruitfulness, the sense of a moral duty to improve human health through stem cell propagation combines the language of agriculture and cultivation with that of the Old Testament to produce what Richard Drayton describes as the "agrarian" ethos of British colonial expansion, a legacy rooted in the spirit of improvement (2000). The depiction of national identities born and made out of the fruit of such labours, in the tilling of the soil and the exploration of new frontiers, is a paternalistic legacy that remains embedded in the history of IVF, indebted, as it is, to pastoralisms of both the economic and the theological variety (Franklin in press).

A final component of this volume that deserves to be recognized and appreciated in closing, and which may seem somewhat obvious, is that it is focussed on IVF – albeit under the rubric of techno-scientific conception. Although increasingly large, the social science literature on IVF is in many respects much smaller than it might have been imagined to have become over the past two decades, especially given the enormous volume of feminist literature on this topic in the 1980s and 1990s, the revival of the anthropology of reproduction, and the emergence of a social science of biomedicine, bioscience, and biotechnology in the 21st century. What has arguably happened instead, however, is that the latter area has come to be focussed largely on topics such as genetically modified foods, genetic engineering, cloning, stem cells, and transgenic organisms without making as many connections back to IVF and the very distinctive period of post-war embryology and developmental biology, especially in the U.K., out of which it emerged (Graham 2000). As many people have begun to become more aware, and as many historians of science have pointed out, this post-war flourishing of the life sciences was itself a soul-searching activity, since it came as a direct response to the legacy of nuclear weapons and the study of atomic energy. Moreover, these two fields – the so-called "sciences of life" as opposed to the "sciences of death," or simply the "physical sciences" as opposed to the "life sciences" – have always been much more closely linked historically than such categorical oppositions suggest, and in ways that once again remind us how hard it is, really, ever to get very far away from the broad, and often explicit, theological questions that beset the scientific manipulation of the beginnings and endings of life (Keller 1992). An overarching set of moral and ethical questions now connects the many urgently debated questions about how science is reshaping the beginnings and endings of life to an extent that has only begun to become more visible, not of greater significance (Kauffman and Morgan 2005: Landecker 2003, 2007; Lock 2002; Rapp 2003). IVF was a crucial turning point in this history, when a tacit agreement was made that technology could not only assist, *but replace*, the conceptive process, in the name of achieving relief from the

pain and suffering of infertility, itself a condition heavy with biblical resonance. Rather than needing to look elsewhere to see what is non Euro-American about NRTs, this volume confirms the extent to which NRTs may enable us better to understand that Western reproductive biomedicine is not necessarily as secular, rational, or even "biological-based" as it may seem. Here, as elsewhere, and as this volume so compellingly demonstrates, the modernities reflected in ART are both sacralized and scientific, actual and imaginary, promissory and disappointing. In sum, here, as elsewhere, IVF reveals their hybridity and their importance to an anthropology of what is biological, as well as what is spiritual, modern, technological, or scientific.

REFERENCES

Butler, Judith
1990 Gender Trouble: Feminism and the Subversion of Identity. New York: Routledge.

Carsten, Janet, ed.
2000 Cultures of Relatedness: New Approaches to the Study of Kinship. Cambridge: Cambridge University Press.

Carsten, Janet
2004 After Kinship. Cambridge: Cambridge University Press.

Cussins, Charis
1996 Ontological Choreography: Agency through Objectification in Infertility Clinics. Social Studies of Science 26(3): 575–610.
1998 Producing Reproduction: Techniques of Normalization and Naturalization in Infertility Clinics. *In* Reproducing Reproduction: Kinship, Power, and Technological Innovation. Sarah Franklin and Helena Ragone, eds., pp. 66–101. Philadelphia: University of Pennsylvania Press.

Delaney, Carol
1986 The Meaning of Paternity and the Virgin Birth Debate. Man 21(3): 494–513.

Drayton, Richard
2000 Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World. New Haven: Yale University Press.

Edwards, Jeanette, and Marilyn Strathern
2000 Including Our Own. *In* Cultures of Relatedness: New Approaches to the Study of Kinship. J. Carsten, ed., pp. 149–166. Cambridge: Cambridge University Press.

Franklin, Sarah
1986 The Virgin Birth Debates: Biology and Culture Revisited. MA dissertation submitted to the Anthropology Department, Graduate School of Arts and Science, New York University.
1990 Deconstructing "Desperateness:" The Social Construction of Infertility in Popular Representations of New Reproductive Technologies. *In* The New Reproductive Technologies. Maureen McNeil, Ian Varcoe and Steven Yearley, eds., pp. 200–229. London: MacMillan.
1992a Contested Conceptions: A Cultural Account of Assisted Reproduction. Doctoral Thesis submitted to the Centre for Contemporary Cultural Studies, Faculty of Arts, University of Birmingham.

1992b Making Sense of Missed Conceptions: Anthropological Perspectives on Unexplained Infertility. *In* Changing Human Reproduction: Social Science Perspectives. Meg Stacey, ed., pp. 75–91. London: Sage.
1995 Postmodern Procreation: A Cultural Account of Assisted Reproduction. *In* Conceiving the New World Order: the Global Politics of Reproduction. Faye Ginsburg and Rayna Rapp, eds., pp. 323–245. Berkeley: University of California Press.
1997 Embodied Progress: A Cultural Account of Assisted Conception. London: Routledge.
2001 Biologization Revisited: Kinship Theory in the Context of the New Biologies. *In* Relative Values: Reconfiguring Kinship Studies. S. Franklin and S. McKinnon, eds., pp. 302–328. Durham, NC: Duke University Press.
In press Dolly Mixtures: The remaking of Genealogy. Durham, NC: Duke University Press.

Franklin, Sarah, and Celia Roberts
2006 Born and Made: an Ethnography of Preimplantation Genetic Diagnosis. Princeton: Princeton University Press.

Graham, Chris
2000 Mammalian Development in the UK (1950–1995). International Journal of Developmental Biology 44: 51–55.

Haraway, Donna
1989 Primate Visions: Gender, Race, and Nature in the World of Modern Science. New York: Routledge.
1991 Simians, Cyborgs and Women: The Reinvention of Nature. London: Free Association Books.
1997 Modest *Witness@Second*Millennium: FemaleMan Meets Oncomouse. New York: Routledge.

Kauffman, Sharon R., and Lynn Morgan
2005 The Anthropology of the Beginnings and Ends of Life. Annual Review of Anthropology 34: 317–41.

Keller, Evelyn Fox
1991 Secrets of Life, Secrets of Death: Essays on Language, Gender and Science. New York: Routledge.

Helmreich, Stefan
1998 Silicon Second Nature: Culturing Artificial Life in a Digital World. Berkeley: University of California Press.

Landecker, Hannah
2003 On Beginning and Ending With Apoptosis: Cell Death and Biomedicine. *In* Remaking Life and Death: Toward an Anthropology of the Biosciences. Sarah Franklin and Margaret Lock, eds., pp. 23–60. Santa Fe: School of American Research Press.
2007 How Cells Became Technologies. Cambridge: Harvard University Press.

Lock, Margaret
2001 Twice Dead: Organ Transplants and the Reinvention of Death. Berkeley: University of California Press.

Nelkin, Dorothy, and M. Susan Lindee
1995 The DNA Mystique: The Gene as a Cultural Icon. New York: W.H. Freeman.

Parkin, Robert
1997 Kinship: An Introduction to Basic Concepts. Oxford: Blackwell.

Pope John Paul II
1995 The Gospel of Life (Evangelium Vitae), trans. The Vatican, New York: Random House.

Ragone, Helena
1994 Conception in the Heart: Surrogate Motherhood in America. Boulder: Westview.
Rapp, Rayna
2003 Cell Life and Death, Child Life and Death: Genomic Horizons, Genetic Diseases, Family Stories. *In* Remaking Life and Death: Toward an Anthropology of the Biosciences. Sarah Franklin and Margaret Lock, eds., pp. 129–164. Santa Fe: School of American Research Press.
Riviere, Peter
1985 Unscrambling Parenthood: The Warnock Report. Anthropology Today 1(4): 2–6.
Sandelowski, Margarete
1993 With Child in Mind: Studies of the Personal Encounter with Infertility. Princeton: University of Pennsylvania Press.
Schneider, David M.
1968 American Kinship: a Cultural Account. Chicago: University of Chicago.
Stone, Linda
1997 Kinship and Gender: An Introduction. Boulder: Westview Press.
Strathern, Marilyn
1992a After Nature: English Kinship in the Late Twentieth Century. Cambridge: Cambridge University Press.
1992b Reproducing the Future: Essays on Anthropology, Kinship and the New Reproductive Technologies. New York: Routledge.
1995 Displacing Knowledge: Technology and the Consequences for Kinship. *In* Conceiving the New World Order: The Global Politics of Reproduction. Faye Ginsburg and Rayna Rapp, eds., pp. 346–368. Berkeley: University of California Press.
1999 Introduction: A Question of Context. *In* Technologies of Procreation: Kinship in the Age of Assisted Conception. Jeanette Edwards, Sarah Franklin, Eric Hirsch, Frances Price, and Marilyn Strathern, eds., pp. 9–28. London: Routledge.
Thompson, Charis
2001 Strategic Naturalizing: Kinship in an Infertility Clinic. *In* Relative Values: Reconfiguring Kinship Studies. Sarah Franklin and Susan McKinnon, eds., pp. 175–202. Durham: Duke University Press.
2005 Making Parents: The Ontological Choreography of Reproductive Technologies. Cambridge: MIT Press.
Throsby, Karen
2004 When IVF Fails: Feminism, Infertility and the Negotiation of Normality. Houndmills: Palgrave.
Yanagisako, Sylvia, and Carol Delaney, eds.
1995 Naturalizing Power: Essays in Feminist Cultural Analysis. New York: Routledge.

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