

## REPRODUCTIVE TECHNOLOGIES AND KINSHIP

# Whose baby is it? The impact of reproductive technologies on kinship

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### Abstract

Birth is not merely a biological event; it is also a social event in that it creates relationships. As a consequence of reproductive technologies, the boundaries between the biological and social basis of kinship have become blurred. Reproductive technologies challenge previously held cultural constructions of kinship and bring about new kinds of social relations in that kinship boundaries are redefined. This paper discusses the societal effects that reproductive technologies have had in challenging previously held notions of parenthood, kinship and relatedness.

**Keywords:** *Reproductive technology, egg donation, sperm donation, surrogacy, blood ties, kinship, motherhood, fatherhood, relatedness, relations*

### Introduction

Since the birth of the first ‘test tube baby’ in England in 1978, developments in reproductive technology have expanded reproductive choice for men and women by enabling potential parents to have access to the fertility of others. However, birth should not be viewed as merely a biological event; it is a social event in that it creates relationships. Grandparents are formed, as are aunts, uncles, siblings, and, of course, parents. It is these kin relations that form the basis of this paper.

Kinship is defined as “a system of social ties based on acknowledging genealogical relations” (Holly, 1996, p. 29). People therefore view themselves as mutually related because they share a common substance. In different societies this shared substance may be blood, bone or semen, determining ‘nature kinship’; or individuals may share the same food or suckle the same milk, determining ‘nurture kinship’ (Watson, 1983).

In many societies, procreation is emphasised as a defining characteristic of relatedness, with the result that social relations are ordered on the basis of being kin or non-kin. Persons we recognise as kin can be divided into those related by blood (consanguines) and those related by marriage (affines). In Western societies, biological consanguinity is the basis of ordering social relations (Beattie, 1964) and kin

relations are considered to have their basis in nature.

Schneider (1984), from his study of American kinship, argued that this belief that biology is the basis of kinship is erroneous. Examples that support his argument include same-gender unions, often with children, adoption, single-parent households and step relations. Whilst these new types of *family* are inarguably present in Western societies, this paper provides examples which illustrate that *biological relatedness* remains a fundamental force. Domestic residence and marriage alone do not determine kin relations. It is biological connections that determine those who are kin and those who are not.

This paper considers the societal effects of reproductive technologies in challenging previously held notions of kinship and relatedness. Further illustration of the importance afforded to biological relatedness is discussed in the context of ‘blood ties.’ This is followed by a brief overview of the role of reproductive technologies, and discussion of the challenge they pose to perceptions of motherhood, fatherhood, and issues of legitimacy. Concepts of biological and social relatedness are discussed, drawing on ethnographic research and media representation.

Through consideration of the implications and possible outcomes of reproductive technology, it

is intended that that this paper will prompt discussion and debate on issues that may otherwise be overlooked in assisted conception. Some of the implications for those working in the fertility field are therefore proposed.

### Conjugal relatedness: 'Blood ties'

The normative conventions in European and American kinship systems is that conjugal relations unite blood ties with marriage. Thus the 'order of nature' is united with 'the order of law' (Franklin, 1997). Children who share an equal, genetic blood relation to both parents symbolically affirm conjugality and create a dual system of relations; these are known as 'blood relations' and 'in-laws' (Franklin, 1997). People connected through blood ties are afforded a special relationship. The concept of a blood tie symbolises the claim that individuals have on one another by virtue of their biological make-up (Strathern, 1992).

In Western societies, blood ties are a dominant cultural theme (Stanworth, 1987). Commitment to the family and to blood ties is inseparable in many people's minds where social relationships evolve directly from genetic ones. Thus the family is seen through a biological lens. This is illustrated in a variety of ways, including the formation of the Child Support Agency in England which aims to ensure that fathers (assumed to be biological) contribute financially to their child's upbringing. Similarly, the television programmes and publicity devoted to following adopted people who strive to trace their 'real mother' emphasises the idea that genetic connection remains an immutable and over-riding element of identity (Stanworth, 1987).

This was illustrated in a recent television documentary, *'Motherhood: A genetic journey'* (British Broadcasting Corporation, 2003). Over 200 individuals who had four grandparents of African-Caribbean origin were recruited. They were eleven generations removed from the height of the slave trade in 1776. Despite knowing their natural parentage, participants described feeling a sense of dislocation or disconnection with their blood kin; one woman described this as feeling "like a motherless child."

DNA testing re-united one of these slave descendants with a living Bubi woman of Boka (an island off equatorial Guinea). The woman from England said, "I felt like a daughter returning. We were family . . . blood." Unable to converse except through an interpreter, the Bubi woman said, "we feel like she is really one of us. I felt it in my blood. As soon as I saw her my blood shook."

This programme demonstrates the strong drive to find biological kin as a vital element of identity.

Blood embodies kin relatedness and any perceived gap in the complete web of kinship can result in this feeling of disconnection. Blood ties also symbolise permanence in human relationships (Stanworth, 1987). Recognition of this need to connect with blood relations is formalised by laws that give adopted people the right to access information about their natural parents.

The examples above demonstrate the social, legal and symbolic significance of blood relations, both at societal and individual levels. The importance of this connection through blood will be considered further in the context of reproductive technologies.

### The role of reproductive technologies

Reproductive technologies may be described as 'assisting nature' by assisting the natural process of reproduction, yet they interfere with the 'naturalness' of the reproductive process. Reproductive technologies have introduced into regular parlance a distinction between social and biological parenthood (Strathern, 1992). Robertson (1994) uses the term 'collaborative reproduction' to describe situations in which someone other than a partner provides the gametes or gestation necessary for reproduction. This includes egg, sperm or embryo donation, as well as surrogate motherhood. Collaborative reproduction, therefore, introduces a third person into the usual situation of two-party parenthood. This third person may or may not be known to the recipient couple.

For ease of reading, the term NRTs (new reproductive technologies) is used throughout this paper to denote those technologies that assist conception by introducing a third person into the usual two-party parenthood. NRTs are not, of course, the first development to challenge traditional family life in the UK. The traditional notion of the family in Western societies has changed as a consequence of the legalisation of adoption and the formation of single-parent families and step-families. In addition, the migration and settlement of people from other countries, with their own cultural norms and values, has resulted in a much more diverse recognition of what constitutes a family. Whilst the construction of the family in the UK has evolved and changed in response to different social pressures, this paper concerns itself with the impact of NRTs on notions of kinship and relatedness.

The concern with NRTs is that they contain the possibility of rendering biological or blood ties immaterial (Smart, 1987), for biological relatedness does not necessarily determine social relatedness. Prior to the development of NRTs, gestation and birth were not separated. Reproductive technologies

have therefore separated conception from birth, resulting in the previously unified elements of reproduction being distinguishable as three separate elements, namely the genetic, gestational and social aspects.

Snowden, Mitchell, and Snowden (1983) identify 10 different terms for mother and father that have arisen as a result of NRTs (Figure 1). In differentiating between the genetic mother, the carrying mother and the nurturing (social) mother, they suggest that the ‘complete mother’ fulfils all three roles. For example, a woman could be the carrying and nurturing mother, but unrelated genetically (in the case of IVF by donor egg), or the genetic and nurturing mother, but not carrying (in the case of surrogacy).

From Figure 1 it is evident that a child could have three biological parents, the genetic father, the genetic mother and the gestational (carrying) mother. NRTs have brought into question who the child’s ‘real’ father and ‘real’ mother are (Warnock, 1985). Because of this debate over who shall be regarded as the parents, the Warnock Committee was established in the UK to advise on these issues of parenthood.

Based on the recommendations of the Warnock Committee, the Human Fertilisation and Embryology Act (1990) does not view being a donor of

reproductive resources as sufficient connectedness to be a kin relationship (Strathern, 1992). The earlier use of natural parenthood is displaced as legal definition confirms or denies one’s status of parenthood. This is highlighted in Figure 2.

**Motherhood and fatherhood**

Motherhood, van Baal (1975) asserts, is the ‘basis of all kinship’. The ‘mother and child couple’ are seen as the “unique and irreducible source of all existence” (Fortes, 1978, p. 21). The mother–child tie is described as inevitable and given (Stone, 1997) and the basic unit of all kinship systems (Fox, 1967). Whilst this assertion might be debated in some cultural contexts, in many societies, including the UK, kinship is predicated on reproductive ties. Children’s *kin* are determined solely through their parents.

NRTs have created a division in the previously assumed unitary ‘natural’ motherhood (Stone, 1997). Thus NRTs have deconstructed ‘motherhood’ as a unified biological process, resulting in uncertainty about what motherhood itself means, as it is no longer inevitable and given. The mother’s nurturing role shifts from being seen as part of a total biological process to being the principal attribute of a social one (Strathern, 1992).

Genetic mother	Genetic & nurturing mother
Carrying mother	Carrying & nurturing mother
Nurturing mother	Genetic father
Complete mother	Nurturing father
Genetic & carrying mother	Complete father

Figure 1. Different types of ‘mother’ and ‘father’ (Snowden, Mitchell, & ‘Snowden, 1983).

- The law should be changed to permit the husband to be registered as the legal father (p. 85)
- The woman giving birth should be regarded as the mother of the child (p. 85)
- Neither sperm nor egg donors should have any rights or responsibilities towards the child (p. 85)
- Anyone donating gametes should be unknown to the couple before, during & after the treatment (p. 82)
- Similar provisions should apply to embryo donation (p. 86)
- The child born as a result of AID (artificial insemination by donor) should be treated in law as the legitimate child of its mother and her husband, where both have consented to treatment (p. 85)

Figure 2. Recommendations from the Warnock Report (Warnock, 1985).

This could imply that unless a totally natural process, from conception to birth, that this “represents the degradation of motherhood itself” (Stanworth, 1987, p. 17). Some might argue that this will eventually lead to the total deconstruction of motherhood, destroying the claim to reproduction that is fundamental to women’s identity. If the birth experience is given primacy in defining motherhood (Warnock, 1985), then surrogacy undermines motherhood (Haimes, 1990). This, in turn, Haimes (1990) argues, subverts the family.

Further subversion of this concept of family arises as a consequence of NRT, where ‘double motherhood’ becomes possible. For example, both women in a lesbian couple could be impregnated by the same father through artificial insemination. Or if the sperm of one woman’s brother were used, both women would have a genetic relationship as well as a kinship relationship to the child. Or, as Hayden (1995) suggests, the obvious and perfect option for lesbian families: one woman could contribute the genetic material, and her partner could become the gestational/birth mother. In this case, the child would have a biological relationship with both mothers. This concept of double motherhood challenges the belief that gay relationships are inherently non-procreative (Hayden, 1995), for through NRTs, a woman can give birth to the genetic child of her female partner.

As a consequence of NRTs, therefore, societal perceptions of motherhood and fatherhood are being challenged and are changing. The resultant changes occur both conceptually and legally (Stone, 1997).

### Issues of paternity and legitimacy

In patrilineal societies where the child takes the father’s name, the inheritance of property and descent traditionally goes through the male line. In English common law, the illegitimate child, born outside marriage, was termed ‘*filii nullius*’, meaning the child of no one (Smart, 1987). Such a child had no legal relationship with its father, indicating that, in the case of children born outside marriage, biological links were immaterial.

The social issue of greatest concern in relation to NRTs has been that of legitimacy, in particular concerns about fatherhood. As Pfeffer (1987) explains, children conceived through donor insemination represent a conscious effort to bring forth an illegitimate child within marriage. In this way, artificial insemination by donor sperm constitutes a subversive act and a direct challenge to the family (Pfeffer, 1987). The family’s integrity is maintained by the social pretence that the off-spring ‘belongs’ to the social parents.

The Human Fertilisation and Embryology Act is unambiguous about paternity. As long as the

husband of a woman who has conceived through donor insemination has agreed to the donation, then he will be treated in law ‘as the father of the child’ (Strathern, 1992, p. 163). However, the very fact that a person is treated *as* the father illustrates that this is a social construction. Fatherhood itself is being reconstructed to include this legitimised bastardy.

When there is a biological father and a social (step) father (as in the case of divorce and re-marriage) the law preserves the rights of the biological father in the ‘best interest of the children’ (Smart, 1987). In contrast, where there is both a biological and a social father (through artificial insemination by donor sperm) the tendency is to ignore the biological father and to invest all of the rights of paternity in the social father who will be the head of a two-parent family (Smart, 1987).

Paternity is the legal status of men who are deemed to have fathered a child. It does not carry automatic rights and responsibilities unless the man is married to the mother of the child (Smart, 1987). This is demonstrated in a recent high-profile case, where two sperm samples were accidentally swapped in a fertility clinic in Leeds (Leeds Teaching Hospitals NHS Trust v (1) Mr A (2) Mrs A & 5 ORS (2003)). As a result of the exchange, a mother’s egg was fertilised with the incorrect sperm. This only came to light when she gave birth to mixed race twins.

As the sperm donor, Mr B had no legal rights of paternity under the Human Fertilisation and Embryology Act. However, as Mr B had not consented to his sperm being used in this way, he appealed to the courts and Dame Elizabeth Butler-Sloss ruled in favour of the biological father (Mr B) as the legal father (Verkaik, 2003).

Although the courts granted paternity to Mr B, they ruled that the twins should remain with Mr and Mrs A, who they had been living with. Laurence Oates, the Official Solicitor acting on behalf of the children, described the ruling, “the family of these twins is Mr and Mrs A” (Channel 4 News, 2003). This clearly illustrates the distinction between biological and social parenthood; the biological father being granted paternity, yet the social father being recognised as ‘family’ or kin. Mr A plans to apply to adopt the twins in order to become their legal father (Verkaik, 2003).

Notwithstanding this unfortunate case, where legitimacy previously had been a presumption within marriage, NRTs allow men to be certain that they are the genetic fathers of their future children (Smart, 1987). The desire for biological fatherhood was described to the author by a couple undergoing artificial insemination by donor sperm. They planned to mix the husband’s sperm with donor sperm (by having intercourse after donor insemination), hence leaving some ambiguity about genetic parenthood

and therefore the possibility that the husband would be more than just the social father. This provides clear indication that social fatherhood by itself is, for many, insufficient. Genetic parenthood carries significant value, not only as proof of being a 'proper man,' but also in terms of kinship.

To summarise, NRTs have introduced several new categories of parenthood. Motherhood, which was once a unitary role, can now be seen as three distinct roles, genetic, gestatory and social. Similarly, fatherhood is now defined as two distinct roles, genetic and social. NRTs therefore present a challenge to the notion of maternity (Smart, 1987), whilst at the same time, can act to clarify notions of paternity. Where once motherhood and fatherhood were inevitable and given, they now require definition by law.

Although the inter-play of these roles is prescribed to a certain extent by law, issues of kinship are less clear. Some are concerned that, whilst the initial motivation towards NRT is pro-family, NRT itself might be anti-family because it will dilute or blur traditional bonds between mother, father and offspring (Grobstein & Flower, 1985). Through the reconstruction of motherhood and fatherhood, kinship itself becomes reconstructed because the means of achieving relatedness has altered.

### Concepts of biological and social relatedness

Ethnographic research with residents of 'Bacup' (Edwards, 2000) and 'Alltown' (Edwards, 1993), two towns (pseudonyms) in the north-west of England, consisted of interviews with people who had no vested interest in NRTs, yet were actively involved in kinship networks. For these individuals, 'keeping it in the family' was seen to be of particular importance. They perceived direct benefits if the child were as near the genetic make-up of its parents as possible (Edwards, 1993). If gamete donors were siblings to the nurturing parents, for example, then the nurturing parents would have a genetic relationship with the child.

This genetic or biological link was viewed in the context of social relationships, however, as concerns were expressed that related donors might have additional claims on the children born. For example, considering mother to daughter or sister to sister donation, concerns were voiced that mothers or sisters might have additional claims on the children born (Edwards, 1993). As Stanworth (1987) explains, a woman who donates an egg to aid her sister's attempts to become pregnant may be the genetic mother, but is no longer the 'real' mother. Yet because the donor (as the biological mother) would have a greater attachment or 'special relationship' with the child, people were concerned that the aunt or grandmother (the donor) might "upstage the

parents and threaten the existing relationship between mother and daughter or sister and sister" (Edwards, 1993, p. 71). One woman articulated this discomfort, "it's like messing with generations" (Edwards, 1993, p. 72).

NRTs therefore have the potential of introducing a different kind of relationship with kin that goes beyond that of any donating relative, but also involves wider kin relations. Laura, a resident of Bacup, perceived problems should an egg be donated between sisters. The parents of the donating sister would still be grandparents to the child, so would be able to claim their connectedness. However, considering the donating sister's husband's parents (her in-laws), she said. "They will be bothered. They'll think the baby is theirs. And even though it's not connected to them [through blood], they'll want it" (Edwards, 2000, p. 223). As Edwards (2000) explains, they would be both connected and not connected to the child. Whilst there would be no genetic, consanguineous connection, a connection would, nonetheless, be present through affines. Families will want to claim children to whom they can trace connection (Edwards, 2000).

These examples demonstrate the symbolic significance of shared bodily substance where gametes are not seen to be divorced from social and sexual relationships (Hirsch, 1993). As a result of NRTs, the kinship links that a child is able to claim through its mother or its father are no longer clearly defined.

A woman who conceived through IVF (prior to the banning of related gametes by the Human Fertilisation and Embryology Act) illustrated the importance of these kinship links. She perceived 'keeping it in the family' to have clear advantages. "With my sister's eggs we are continuing the family's bloodline—at least there's still that connection with my parents and grandparents" (Steven, 1987, p. 13).

More recently, a case of contested parenthood was brought to the High Court following artificial insemination. Diane Blood's two children were conceived using stored sperm from her husband, who died of meningitis in 1995. Because the children were born after their father's death, his name could not be entered on their birth certificates. Mrs Blood sought legal and social recognition of her children's biological kin, asking, "that it should acknowledge their father and all their paternal relations" (Dyer, 2003). Her success in this appeal, and the subsequent amendment to the law (Human Fertilisation and Embryology (Deceased Fathers) Act, 2003), confirms the idea that kinship is constructed through prior relationships. NRTs have even made it possible for dead people to reproduce.

This shared genetic connection is not without its problems, however, not only in terms of inter-generational expectations, but also in terms of

crossing boundaries into incestuous relationships. This notion of incestuous relationships was a concern frequently expressed by residents of Bacup and Alltown (Edwards, 1993, 2000). Residents were concerned that those born through assisted conception would unwittingly meet up and marry (Edwards, 1993). Some relationships were perceived as being too close to permit the donation of gametes. For example, incest could arise if a brother provided sperm for his sister, or a father provided for his daughter.

In some relationships, such as a sister donating an egg to her sister, the transfer of gametes is seen as *substitution*; which is deemed acceptable. If, however, the transfer involves *combining* gametes, this is seen as problematic (incest in a petri dish). Incest is therefore perceived not only through intercourse, but also through the mixing of shared substance (Edwards, 2000).

### Conclusion

This paper has considered the impact of new reproductive technologies on kinship. Prior to NRTs, the biological basis of kinship was held as universal and unchangeable. Kinship was founded on biological relatedness where social relationships were between either consanguines or affines. The symbolic significance of shared bodily substance is illustrated by the popular adage 'blood is thicker than water'. In this way, the blood tie is awarded ideological primacy over social relatedness. Marriage has conventionally been the means by which social relationships generate blood ties.

The major change that NRTs have brought about is that kinship can no longer be viewed as purely biological and marital relatedness. The means of achieving relatedness is no longer solely dependent on biology, for NRTs contain the possibility of rendering biological or blood ties immaterial.

NRTs emphasise the social nature of birth by introducing conception and gestation into the social domain. The previously held 'natural facts' of conception, gestation and birth have been altered by NRTs, resulting in the re-definition of cultural meanings and social facts. NRTs create new categories of kin and the fact of birth is no longer proof of genetic connection or biological relatedness. As a result of NRTs, the kinship links that a child has been able to claim through its biological mother or father are no longer clearly defined and the boundaries between the biological and social basis of kinship have become blurred. NRTs challenge previously held cultural constructions of kinship and bring about new kinds of social relations in that kinship boundaries are redefined (Carsten, 2000).

Practitioners need to be aware of the new constructions of kinship that have been introduced by NRTs and the significance of 'blood' in people's perception of relatedness. The very fact that many couples do not tell others that their child has been conceived through donor gametes serves to illustrate the significance of blood relations.

The significance of biological relatedness is recognised in changes in UK law that will allow (from April 2005) those conceived through gamete donation to access information about their biological parents. The removal of anonymity from donors re-establishes the connection between the donor and the resultant offspring. This may not only affect donor recruitment, but may also threaten the bonds between grandparents, siblings, aunts and uncles; for blood ties symbolise the claim that individuals have on one another. This has implications for the recipient couple as well as the wider families of both recipient and donor.

NRTs are viewed in the context of prevailing sets of values and beliefs. As a cultural construct, therefore, notions of kinship will change further over time. Debate about NRTs is likely to intensify as the increase in Chlamydia and its sequelae cause increased infertility and hence greater reliance on NRTs. Similarly, as more people who are conceived through donation of gametes seek information about their donor parent. Each change in the law introduces a different kind of relationship with kin.

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### Notes

#### Statutes

Human Fertilisation and Embryology Act (1990).  
Human Fertilisation and Embryology (Deceased Fathers) Act (2003).

#### Cases

Leeds Teaching Hospitals NHS Trust v (1) Mr A (2) Mrs A & 5 ORS (2003).

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