

# An attempt to reconstruct children's donor concept: a comparison between children's and lesbian parents' attitudes towards donor anonymity

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**BACKGROUND:** This study investigated the donor concept of children who were born by means of donor insemination (DI), and their lesbian parents. **METHODS:** A total of 41 children aged between 7 and 17 years, and 45 parents, took part in the follow-up study. In-depth topic interviews were used to reconstruct how DI children and their mothers perceived the donor. Data were collected about the birth story, about children's conversations with their mothers concerning donor characteristics and about children's and parents' attitudes towards the status of the donor. **RESULTS:** 54% of these children preferred donor anonymity at this point in their life, whereas 46% wanted to know more about the donor. The majority of the latter group would have liked to know the donor's identity, with boys outnumbering girls. The remaining children of this group were content with non-identifying information. Children wanted to know more about the donors whereas the majority of the mothers preferred the donor to remain anonymous. **CONCLUSIONS:** Our results suggest that among DI children in general and among members of the same family, unit opinions differ on the status of the donor. A flexible system offering different types of donors seems to be necessary in order to meet the needs of each family.

*Key words:* donor anonymity/donor insemination/donor offspring/lesbian parenthood

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## Introduction

Donor insemination (DI) is a reproductive technology in which a third party is involved. Unlike the 'normal' reproductive process, the act of sexual intercourse no longer precedes conception. This technique is predominantly used in case of male infertility or when the male partner risks passing on a hereditary disease (Cramond, 1998).

DI was introduced in Belgium at the start of the 1960s. Since 1990, DI treatment has been offered by a considerable number of academic, public and private hospitals. However, the Centre for Reproductive Medicine of the Free University of Brussels was one of the first institutions to offer this treatment to lesbian couples. The absence of a male parent in the lesbian family structure leaves these couples no choice but to be open with their children about the use of a donor. The fact that this male person is not missing in a heterosexual DI family gives these parents the opportunity to decide whether or not to keep the artificial means of conception secret from their child. Several studies show that most heterosexual couples have no intention of revealing the use of a donor to their children (Brewaey *et al.*, 1993, 1997; Cook *et al.*, 1995; Leiblum and Aviv, 1997; Gottlieb *et al.*, 2000). According to these studies, the following aspects appear to deter heterosexual DI parents from telling the truth: the taboo surrounding male infertility, negative attitudes towards childlessness and

reproductive technology, fear of harming the child and the relationship between the father and the child, uncertainty about how and when to tell the child, and lack of information to give the child.

Because of the secretive attitude of heterosexual DI couples, only children born into lesbian DI families can be questioned about their experience as donor offspring. This study is one of the first that asks children, who were informed of their donor origin at an early age by both parents and under the right circumstances, how they feel about being donor children. In order to address the recurring ethical question on whether or not DI children should be informed, studies concerning children who have been told of their donor origins need to be carried out. As empirical information about the effects of known donation on the children involved is very sparse, we believe our study can make an innovative and valuable contribution to the DI debate. However, we must be aware of the fact that lesbian DI families and heterosexual DI families are very different with respect to their family structure, i.e. the absence/presence of a father figure. Nevertheless, we must examine the effects of disclosure and privacy on the welfare of the child and the family in order to make clinical recommendations regarding disclosure (Klock, 1997; Shenfield, 1997). DI parents are currently encouraged to tell their children about their donor origin. This trend is due partly to a similar

shift in attitudes towards adoption (Golombok, 1997; Shenfield and Steele, 1997). Parents are now encouraged to inform the child at an early age in the case of adoption. In adoptive as well as DI families, a biological connection between the child and one or both parents is missing. In the case of artificial insemination, however, the child is biologically linked to one of the parents, he or she has not been abandoned by his or her biological parents and conception occurred in the context of the recipient's relationship (Golombok, 1998). Because DI families and adoption families differ in several ways, it can be argued that recommendations regarding disclosure in the case of adoption do not completely apply to DI (Cook *et al.*, 1995; Klock, 1997).

Keeping the child's donor origin secret is linked closely to the use of an anonymous donor. Most medical practitioners request complete anonymity. In order to protect the family unit and its members, the social environment of the donor and the social environment of the receiving couple and the offspring need to remain strictly separate. This system also shields the donor from parenthood. In Sweden, on the other hand, an 'open' model is being applied (Daniels, 1998). Swedish law imposes the use of identifiable donors. Those who favour this point of view argue that the registration of a donor's identity endorses the value of truthfulness. The donor origin and the identity of the donor must be disclosed to the children involved. They argue that violating the child's right to be given information about his/her descent is simply unethical (Cohen, 1996). The UK appears to be adopting a middle position by registering non-identifying information about all donors. This information is stored at a national centre and can be made available to the child (Meirow and Schenker, 1997; Abdalla *et al.*, 1998).

Although these conflicting attitudes present different opinions on what is best for the child, they all seem to focus on its welfare. However, this 'welfare of the child' concept is an extremely vague one. For example, the criteria against which the well-being of the child should be evaluated are unclear (Mumford *et al.*, 1998; Pennings, 1999). There appears to be universal consensus on the welfare principle, but the practical interpretation of the concept is rather contentious (Brewaey, 1998). The debate on the child's best interest will probably continue as long as objective knowledge remains scarce.

The aim of this study is to investigate the child's concept of the donor. The fact that all these children know about their DI origin allows us to gather information about how these children perceive their donor. Is the donor just an anonymous sperm cell or is he a person about whom they want to know more? Because mothers and children are both used as informants, their attitudes towards the status of the donor are compared.

**Materials and methods**

This study is part of a longitudinal investigation (Brewaey *et al.*, 1997). The data presented in this article are part of a follow-up study carried out among 41 children who were born into a lesbian household by means of artificial insemination by donor (AID). All the children

**Table I.** Demographic features

Feature	Frequency
Gender of child ( <i>n</i> = 41)	
Girl	19
Boy	22
Educational level of both mothers ( <i>n</i> = 45)	
Higher education	29
Secondary education	14
No secondary education	2
Family structure ( <i>n</i> = 24)	
Complete	18
Divorced	6

Mean age of children (*N* = 41) 9 years 9 months (range 7 years 4 months to 17 years 4 months).

are between 7 and 17 years of age, with a mean age of 9 years and 9 months. An invitation to participate in the study was sent to 28 families. They were asked to consent to an interview at home and to complete a form about their current family structure. Four letters came back undelivered. These families had moved and we were unable to trace them. There remained 24 families who were all willing to participate.

For the descriptive part of the follow-up study, in-depth topic interviews were used both for the parents and for the children. The content of the interview with the child on the donor concept was as follows: birth story, attitudes towards the status of the donor and conversations with their mothers about donor characteristics and related topics. The interview with the parents included questions about the birth story and the donor status. In order to give a structured summary of the children's and mothers' answers, a categorization procedure was used.

**Results**

*Demographic features*

A summary of the demographic features is presented in Table I. Forty-one children (22 boys and 19 girls) and 45 parents (23 biological mothers and 22 social mothers) participated in the interview. Six of the 24 couples were separated at the time of the interview. In all but one family, the parents had established a form of co-parenthood or had arranged contact between the children and both mothers on a regular basis. All the mothers except two were employed at the time of the interview. On 21 occasions both mothers took part in the interview. Two mothers had a child from a previous marriage or a lesbian relationship.

*Children's donor concept*

*Birth story*

In order to be sure that all the children were well aware of the use of a donor, they were asked how their mother had given birth to them. All the children (*n* = 41; 100%) told a story in line with their age that made clear that they were well informed. They all mentioned the intervention of a hospital or a sperm bank and the fact that seeds were brought into the biological mother's belly. With respect to their donor concept, the majority of the children (*n* = 26; 63%) only talked about 'seeds'. Eight children (20%) used the term 'unknown father' in their account. Of the latter group, the majority explained

**Table II.** Children's attitudes towards donor status

Attitude		Boys ( <i>n</i> = 22)	Girls ( <i>n</i> = 19)	Total ( <i>n</i> = 41)
No information at all	Anonymity	11 (50)	11 (58)	22 (54)
More information	Non-identifying information	2 (9)	6 (32)	8 (19)
	Identity registration	9 (41)	2 (10)	11 (27)
	Total	11 (50)	8 (42)	19 (46)

Values in parentheses are percentages.

that he was only their father in a biological sense since he had never taken care of them. The remaining seven children (17%) talked about 'a donor' or 'an unknown man'. When we asked these children some questions about the structure of their family unit, all the children (*n* = 41; 100%) said they had two mothers. None of the children mentioned the donor as a family member. Many children also reported that their social mother and not the donor had taken care of them since birth. The donor had only fulfilled a biological task, not a nurturing one.

*Donor status*

After they had told their birth story, we asked them whether or not they wanted to know more about the donor. Because we wanted to ensure the children were well-aware of the fact that in Belgium no information about the donors is available, we explained to them that Belgian clinics only work with anonymous donors. Summarizing their answers yielded three points of view concerning the status of the donor: those who were in favour of identity registration, those who wanted non-identifying information to be available and those for whom the donor could remain anonymous. Anonymity is used to indicate that these children want no information at all. About half of these children (*n* = 22; 54%) preferred donor anonymity at this point in their life. The remaining 19 children (46%) wanted to know more about the donor. The majority of the latter group (*n* = 11; 27%) were interested in the donor's identity. The remaining eight children (19%) of this group were happy with non-identifying information (Table II).

The children who said they wanted to have non-identifying information about the donor (*n* = 8; 19%) were often curious about his physical appearance (*n* = 6). Most of these children wanted to know if the donor looked like them. Five of these children were also interested in his personality. They wondered what he was like. Two children were interested in the donation of the spermatozoa. Some aspects were mentioned only once: the donor's age, birthday, hobbies, occupation and whether he was still alive (Table III).

*Gender differences*

Boys and girls did not differ significantly (*P* = 0.756; Fisher's exact test, two-tailed) with respect to their need for more information. However, a significant difference (*P* = 0.039; Fisher's exact test, two-tailed) was found between children who did and children who did not want to meet the donor: of the 11 children who wanted to meet the donor, nine were boys (Table II).

*Family differences*

In 14 families (58%), two or more siblings participated in the study. In half of these families (*n* = 7) siblings held different

**Table III.** Type of non-identifying information wanted concerning the donor

Type of information	Number of times this aspect was mentioned
Physical appearance	6
Personality	5
Motivation for donation	2
Age, birthday, hobbies, occupation, alive	1

views about the status of the donor. Differences were found between sisters, brothers and between siblings of the opposite sex. These results reveal that the needs of one child may be very different from those of another, even if they live in the same household. Some children have their own opinion about these issues, independent of their siblings' attitudes.

*Conversations about donor characteristics*

We asked these children if they ever talked about the donor with their mothers. Twenty-six children (63%) said they never discussed these things with their mothers. Most of these children noted that they had no need for such conversations. Two children pointed out that conversations about the donor were useless since their mothers had no information to give them.

The remaining 15 children (37%) reported that they had talked about the donor with their mothers on several occasions. Eleven children had conversations with their mothers about certain characteristics of the donor (physical appearance, personality, etc.). Several of these children speculated and made jokes about the donor's physical appearance or asked their mothers if the donor looked like them. Five children had had conversations about the use of an anonymous donor. Three boys had asked their mothers for the donor's identity. (Table IV).

*Mother's donor concept*

*Birth story*

At the start of the interview, we asked all the mothers if they had told their children about the method by which they were conceived. They all answered in the affirmative (*n* = 45; 100%). According to the mothers, everything happened rather spontaneously. They had not decided on a certain moment to break the news to their children, as they had not wanted to imply that this information was of vital importance. They had informed their children gradually. Their story was always adapted to their children's age and capacity for understanding. As their children grew older, more and more specific informa-

**Table IV.** Conversations about donor characteristics

Conversations	Frequency
Occurrence	Number of children
No	26 (63%)
Yes	15 (37%)
Aspect	Number of times this aspect was mentioned
Donor characteristics	11
Physical appearance and personality	5
Use of an anonymous donor	3
Donor's identity	

**Table V.** Mothers' thoughts and/or remarks concerning the donor

Thoughts or remarks concerning the donor	Frequency
Occurrence	Number of families
Never	13 (54%)
From time to time	11 (46%)
Content of thoughts and/or remarks	Number of times this aspect was mentioned
Personality	11
Physical appearance	10
Medical history	6
Gratitude	2

tion was given. The first story was told when the children were still toddlers. All the parents had linked the use of a donor to their specific family structure: the presence of two mothers and the absence of a father. According to the mothers, none of the children had become upset when they were first informed of the method by which they were conceived (the use of an anonymous donor). The explanation given by the mothers at that time seemed to be satisfactory.

To find out how these mothers perceived the donor, we asked them if the story about 'the seeds' they initially told their children reflected their own perception of the donor. We also asked them whether thoughts about the donor crossed their minds and whether they talked about this family issue with their partner (Table V). In 54% of the families ( $n = 13$ ), the parents hardly talked or thought about the donor. It was something they had come to terms with a long time ago. Some of the mothers felt there was no difference between a donation of spermatazoa and a donation of blood. Only a little piece of a human being was involved. In the remaining 11 families (46%), this subject had arisen occasionally. As a result of certain characteristics of their children, in almost all of these families remarks were made about the donor's physical appearance (height, etc.) or personality. Several mothers made jokes about it. They sometimes said to each other that their children had inherited all their annoying characteristics from the donor. In ~50% of these families, especially those in which one of the children appeared to have some health problems, mothers wondered about the donor's medical history. One mother wondered if the clinic would be able to trace the donor in case of a life-threatening disease like leukaemia. Two mothers regretted not being able to thank the donor for his help.

*Donor status*

We first gave the mothers a rough outline of the three existing attitudes towards the status of the donor: anonymity, non-

identifying information and identity registration (Table VI). We then asked both mothers which donor status they preferred and why. Seventeen of the 23 birth mothers (74%) and 17 of the 22 social mothers (77%) wanted the donor to remain anonymous. Four biological mothers (17%) and four social mothers (18%) chose identity registration. Two biological mothers were undecided (9%). They did not know what would be best for their children: identity registration or anonymity. One social mother (5%) was interested in the registration of non-identifying information. In only two families (8%) the opinions of the mothers differed.

All points of view were motivated by the assumption that this would be in the child's best interest. Some of the mothers opting for anonymity also thought this decision was in the donor's best interest. Those choosing identity registration felt their children had the right to decide for themselves whether or not they wanted to meet the donor. Only one mother felt the need to know more about the donor. The majority of all the mothers (biological and social) ( $n = 34$ ; 76%) preferred the donor to stay anonymous. Only a minority ( $n = 8$ ; 18%) wanted the identity of the donor to be registered. Few mothers ( $n = 1$ ; 2%) were in favour of the registration of non-identifying information. Some mothers also made the remark that though they did not regret using an anonymous donor, the choice should be left to the couple and not to the clinic or another authority.

*A comparison between parents and children*

*Donor status*

A comparison of the attitudes of the mothers, as shown in Table VII ( $n = 43$ ; two mothers were left out because of their indecisiveness) and the children ( $n = 41$ ) towards the status of the donor reveals that their opinions differed significantly ( $P = 0.0352$ ; Fisher's exact test, two-tailed). Children more

**Table VI.** Donor status (mothers)

	Anonymity	Identity registration	Non-identifying information	Undecided
Biological mother ( $n = 23$ )	17 (74)	4 (17)	0 (0)	2 (9)
Social mother ( $n = 22$ )	17 (77)	4 (18)	1 (5)	0 (0)
Total ( $N = 45$ )	34 (76)	8 (18)	1 (2)	2 (4)

Values in parentheses are percentages.

**Table VII.** Comparison of donor status (children and mothers)

		Parents ( $N = 43$ )	Children ( $N = 41$ )
No information	Anonymity	34 (79)	22 (54)
More information	Non-identifying information	1 (2)	8 (20)
	Identity registration	8 (19)	11 (26)
	Total	9 (21)	19 (46)

Values in parentheses are percentages.

often wanted information to be available than mothers. They preferred non-identifying (20%) as well as identifying information (26%) to be registered more often than their mothers (2 and 19% respectively).

## Discussion

The aim of this study was to reconstruct how DI children and their lesbian mothers perceived the donor. Because these mothers had informed their children from childhood about the method by which they were conceived, we were able to interview all the family members about this issue. In their initial birth story, the mothers had translated the use of a donor into 'buying or getting some seeds'. Nevertheless, nearly half of these children were interested in the 'man' or 'unknown father' behind these seeds. However, the kind of information they wanted to be available to them differs. Whereas some of these children were curious about non-identifying aspects like the donor's physical appearance or personality, others seemed to wonder who he is and where he lives. Siblings growing up in the same family unit often held different views on this issue. These results indicate that the need for genealogical information differs from one child to another. According to this study, the current situation of donor anonymity only satisfies half of these children. Moreover, loyalty towards the mothers and especially towards the social mother may have prevented some of these children from admitting that they were interested in the donor. During the interview, most of the children who said they did not want to have any information about the donor or who did not want to meet him emphasized the presence of the social mother who had taken care of them since birth whereas the donor had not. However, it is also possible that some children do not feel the need to know more about the donor whilst others do. The majority of the children who did want to know more about the donor were interested in his identity. Boys especially wanted to know who he is. This may be due to one specific characteristic of the lesbian

family structure, i.e. the absence of a father. Several developmental theories stress the importance of a father to the developing male child. According to Freud's psychodynamic approach, boys need a father to identify with in order to resolve the Oedipal conflict during the phallic stage. Also, social learning theories emphasize the presence of a male adult who acts as a role model for appropriate behaviour (Bernstein *et al.*, 1997). As such a father figure is present in heterosexual DI couples, other results may be found in these families. Nevertheless, the current Belgian 'closed' model cannot provide these DI children with the information they desire. Because the majority of the children in the families studied were not mature or grown-up, however, determining whether this information is of vital importance to their welfare is difficult. Perhaps they will outgrow this need or, as some mothers said, they will learn to deal with it. However, we cannot take this positive outcome for granted. The possibility that the biological connection with the donor may be of major importance to the child cannot be overlooked. According to Cohen, the loss of this connection may influence one's sense of selfhood since hereditary links are used to establish one's self-image and identity (Cohen, 1996). Because DI children do not have this information at their disposal, they lack something of significance to define themselves. From this point of view, providing DI children with some kind of hereditary information can make a positive contribution to their welfare. However, those who favour the use of anonymous donors rightly emphasize another aspect that is important to the child's well-being i.e. the privacy of the family. The family unit needs to be protected from interference by a third party. The majority of the mothers subscribe to this point of view. According to them, any interference by a third party would be detrimental to all family members, especially the child. Indeed, growing up in a stable family structure and being reared by the same people is of major importance to the developing child (Goldstein *et al.*, 1979).

The thoughts and/or questions about the donor that the

mothers had at various times illustrate that their donor concept is susceptible to change. By attributing physical characteristics, medical aspects or traits to the donor or by seeing him as a helpful person, he ceases to be a non-person (an anonymous sperm cell) and becomes a person. Reducing the donor to an anonymous sperm cell becomes more difficult for some mothers as their children mature. Unlike babies, these children have a unique physical appearance and personality. Also, the analysis of the conversations between parents and children about donor characteristics and the analysis of these mother's birth story reveals that several mothers' donor concepts are far from clear-cut. They try to minimize the intervention of the donor by picturing him as an anonymous sperm cell with no parental responsibilities whilst also representing him as the bearer of some of their children's features. These results also illustrate that calling upon heredity to explain the presence of certain good and bad traits in a person is a process that takes place unnoticed. In addition, the fact that all these mothers wanted the same donor for all their children seems to suggest that the presence of a biological connection is more important to them than they are aware.

In several families, mothers and children held different views concerning the status of the donor. More children than mothers were in favour of the registration of non-identifying as well as identifying information. This difference may be due to the fact that the mothers and the children do not approach the donor issue from the same angle. As all the children were  $\geq 7$  years old, they understood that the donor is the man from whom they descend. Their answers reflected the awareness that he is the man from whom they have inherited certain characteristics (Solomon *et al.*, 1996). Children in their middle childhood years become increasingly aware of biology as an underlying characteristic of family relations (Newman *et al.*, 1993). School-age children also begin to express greater curiosity about their origins (Brodzinsky *et al.*, 1995). The mothers, on the other hand, emphasized the fact that they, as a couple, had chosen to become parents; the child is the result of this shared wish. Only their family structure made the biological assistance of the donor inevitable. To the mothers, the donor is only a means to an end. As mentioned above, conversations about donor characteristics did occur in several families. Talking about the donor had probably made this man more real because aspects such as physical appearance and personality were mentioned frequently. The more real and personal the donor becomes, the more of a threat he represents for the completeness and naturalness of the DI family (Pennings, 1997). However, an open, non-defensive style of communication may be important to these children's well-being, since this communication style has proven to be more conducive to healthy identity development in case of adoption (Brodzinsky *et al.*, 1995). Communication problems may arise in families where mothers prefer donor anonymity whilst their children want to know more about the donor. These children may refrain from discussing donor issues openly with their parents once they become fully aware of their mothers' attitudes towards the donor. For some of these children, this may already be the case since the majority of

the children said they never talked about donor characteristics with their mothers.

In the lively debate on the status of the donor, the well-being and the needs of the child have always been emphasized. However, given the position of the child, its welfare cannot be separated from the well-being of the parents (Pennings, 1997); the child's psychological well-being is connected with that of the parents (Cook *et al.*, 1995; Golombok, 1997). Allowing parents to choose what seems best for themselves and for the child will probably lead to a good outcome for all family members (Shenfield and Steele, 1997). Our results suggest that among DI children in general and among members of the same family unit, opinions differ on the status of the donor. This suggests that the legal requirement of either anonymity or identification will never work for all the people involved. A flexible system seems to be necessary in order to meet the needs of each family (Pennings, 1997). Each individual family should have the opportunity to choose the donor type that fits their particular family concept (Brewaeyns, 1998). As several mothers stated, patients should not be forced into one choice by a central authority. The choice prospective parents make should fulfil their own needs and the needs of the child-to-be. As we mentioned earlier, the results of this study suggest that some children feel the need to know more about the donor. This possibility cannot be ignored when choosing a certain donor type at the time of insemination.

Because this article is part of a follow-up study that also explores the quality of family relations, we will be able to investigate whether the demand for information is in some way linked to this variable. These results will be presented elsewhere.

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### References

- Abdalla, H., Shenfield, F. and Latache, E. (1998) Statutory information for the children born of oocyte donation in the UK: what will they be told in 2008? *Hum. Reprod.*, **13**, 1106–1109.
- Bernstein, D.A., Clarke-Stewart, A., Roy, E.J. *et al.* (1997) Chapter 7 'Learning' and Chapter 14 'Personality'. In Bernstein, D.A. *et al.* (eds) *Psychology*. Fourth Edition. Houghton Mifflin Company, Boston, New York, pp. 190–226 and pp. 457–488.
- Brewaeyns, A., Ponjaert, I., Van Steirteghem, A.C. *et al.* (1993) Children from anonymous donors: an inquiry into homosexual and heterosexual parents' attitudes. *J. Psychosom. Obstet. Gynecol.*, **14**, 23–25.
- Brewaeyns, A., Golombok, S., Naaktgeboren, N. *et al.* (1997) Donor insemination: child development and family relationships in heterosexual families with 4 to 8 year old children. In Brewaeyns, A. (ed.) *Donor Insemination. Family relationships and child development in lesbian and heterosexual families*. 'All In' BV-Katwijk, pp. 129–151.
- Brewaeyns, A. (1998) How to care for the children? The need for large scale follow-up studies. *Hum. Reprod.*, **13**, 2347–2349.
- Brodzinsky, D.M., Lang, R. and Smith, D.W. (1995) Parenting adopted children. In Bornstein, M.H. (ed.) *Handbook of Parenting. Volume 3 Status and Social Conditions of Parenting*. Mahwah, New Jersey, pp. 209–232.

- Cohen, B.C. (1996) Parents anonymous. In Cohen, B.C. (ed.) *New ways of making babies. The case of egg donation*. Indiana University Press, pp. 88–105.
- Cook, R., Golombok, S., Bish, A. *et al.* (1995) Disclosure of donor insemination: parental attitudes. *Am. J. Orthopsychiat.*, **65**, 549–559.
- Cramond, J. (1998) Counselling needs of patients receiving treatment with gamete donation. *J. Community Appl. Soc. Psychol.*, **8**, 313–321.
- Daniels, K.R. (1998) The social responsibility of gamete providers. *J. Community Appl. Soc. Psychol.*, **8**, 261–271.
- Goldstein, J., Freud, S. and Solnit, A.J. (eds) (1979). Deel I II De relatie tussen ouder en kind. *De toverformule: in het belang van het kind*. Kluwer, Deventer, pp. 9–22.
- Golombok, S. (1997) Parenting and secrecy issues related to children of assisted reproduction. *J. Assist. Reproduct. Genet.*, **14**, 375–378.
- Golombok, S. (1998) New families, old values: considerations regarding the welfare of the child. *Hum. Reprod.*, **13**, 2342–2347.
- Gottlieb, C., Lalos, O. and Lindblad, Fr. (2000) Disclosure of donor insemination to the child: the impact of Swedish legislation on couples' attitudes. *Hum. Reprod.*, **15**, 2052–2056.
- Klock, S. (1997) The controversy surrounding privacy or disclosure among donor gamete recipients. *J. Assist. Reproduct. Genet.*, **14**, 378–380.
- Leiblum, S.R. and Aviv, A.L. (1997) Disclosure issues and decisions of couples who conceived via donor insemination. *J. Psychosom. Obstet. Gynecol.*, **18**, 292–300.
- Meirow, D. and Schenker, J.G. (1997) The current status of sperm donation in assisted reproduction technology: ethical and legal considerations. *J. Assist. Reproduct. Genet.*, **14**, 133–138.
- Mumford, S.E., Corrigan, E. and Hull, M.G.R. (1998) An emerging issue in the regulation of assisted conception. *Hum. Reprod.*, **13**, 2349–2355.
- Newman, J.L., Roberts, L.R. and Syre, C.R. (1993) Concepts of family among children and adolescents: Effect of cognitive level, gender and family structure. *Dev. Psychol.*, **29**, 951–962.
- Pennings, G. (1997) The 'double track policy' for donor anonymity. *Hum. Reprod.*, **12**, 2839–2844.
- Pennings, G. (1999) Measuring the welfare of the child: in search of the appropriate evaluation principle. *Hum. Reprod.*, **14**, 1146–1150.
- Shenfield, F. (1997) Privacy versus disclosure in gamete donation: A clash of interest, of duties, or an exercise in responsibility? *J. Assist. Reproduct. and Genet.*, **14**, 371–372.
- Shenfield, F. and Steele, S.J. (1997) What are the effects of anonymity and secrecy on the welfare of the child in gamete donation? *Hum. Reprod.*, **12**, 392–395.
- Solomon, G.E., Johnson, S.C., Zaitchik, D. *et al.* (1996) Like Father, Like Son: Young children's understanding of how and why offspring resemble their parents. *Child Dev.*, **67**, 151–171.

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