DNA paternity testing without the knowledge or consent of the mother

New technology, new choices, new debates

New technologies are creating new choices and dilemmas in contemporary families. DNA parentage testing exemplifies this process. This article examines the contentious issue of DNA paternity testing without the knowledge or consent of the mother, and suggests a possible way forward in the regulation of such tests.

he invention of DNA identity testing in 1984 transformed the attribution of fatherhood. In earlier times attribution of fatherhood depended upon social markers, notably marriage and registration on a birth certificate. In English law, for example, there was a "marital presumption": "If a husband, not physically incapable, was within the four seas of England during the period of gestation, the courts would not listen to evidence casting doubt on his paternity" (cited in Anderlik and Rothstein 2002: 222). The invention of DNA paternity testing meant that for the first time in human history it became possible to identify paternity with reasonable certainty.

Since its invention, DNA paternity testing has become an industry in its own right. It has been institutionalised through family law and associated institutions – in Australia, the Family Court, Legal Aid and the Child Support Scheme. Mothers are now required to enforce the tests in order to secure child support from reluctant fathers who deny paternity and do not wish to pay child support. Fathers' rights activists have rallied around the tests, and some men have successfully sued their

MICHAEL GILDING

former partners for alleged "paternity fraud". In turn, the mass media have seized upon

the tests. As one United States commentator observed, they are an "elixir" for television ratings, tapping into themes of "betrayal, revenge, truth and the search for resolution" (Stanley 2002).

Governments around the world are now coming to terms with the regulation of this new industry. The most controversial regulatory issue is the provision of paternity tests without the knowledge or consent of the mother, or what is sometimes described as "motherless testing" or "non-consensual testing". At the moment such tests are allowed in Australia. A recent government-commissioned inquiry recommended tight regulation of such tests, notwithstanding strong representations in their favour from fathers' rights groups and some industry providers.

This article is about DNA paternity testing without the knowledge or consent of the mother. It describes the structure of the industry in terms of its provision of such tests; what we know about public opinion on the issue; the push for regulation in the Australian



context; and the case for and against the tests. The article concludes with a suggestion for a way forward in for the regulation of these tests.

Key terms

This article is framed in terms of "DNA paternity testing without the knowledge and consent of the mother". This is a long-winded phrase. The alternative terms – widely used in the debate so far – are more punchy, but they are also ambiguous and politically loaded.

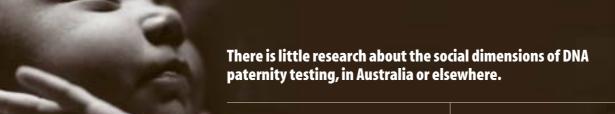
The opponents of DNA paternity testing without the knowledge or consent of the mother describe the practice simply in terms of "non-consensual testing". This term draws attention to the fact that mothers have not provided their consent for these tests. Given that informed consent is a much valued principle in our society, the term loads the debate against such testing.

The problem with the term "non-consensual testing" is that it covers a wide range of activities. For example, it includes those circumstances where a sample has been stolen from an individual and tested without his or her consent, whatever the

context. DNA paternity testing without the consent of mothers does not involve taking a sample from the mother and testing it without her consent. It involves taking a sample from a child who is not in a position to provide informed consent. The test is conducted at the behest of the father who, with the mother, is normally expected to make decisions for the child in his or her best interests. In other words, the term "nonconsensual testing" is too broad, obscuring specific issues involved in paternity testing.

The advocates of DNA paternity testing without the knowledge or consent of the mother describe the practice simply in terms of "motherless testing". This term draws attention to the fact that the test is conducted without taking a sample from the mother.

The problem with the term "motherless testing" is that it also covers a variety of circumstances. It includes those occasions where a mother is unavailable to participate in a test; and also those occasions where a mother is informed of the test and agrees to it, but does not personally participate. The opponents of "non-consensual testing" have no objection to motherless tests in these circumstances. They object specifically where there is no attempt to inform



the mother and obtain her consent. That is, testing is done behind her back. In other words, the term "motherless testing" is also too general, and loaded insofar as it obscures the critical issue of consent.

The term "DNA paternity testing without the knowledge and consent of the mother" is certainly wordy, but at least it is accurate. It also makes the important distinction between knowledge and consent, which the alternative concepts collapse together.

Sources

There is little research about the social dimensions of DNA paternity testing, in Australia or elsewhere. This article draws upon three main sources of data.

First, it is based upon interviews with key informants from around Australia, including middle and senior management (eight) from all of the current parentage testing laboratories, one-time management (three) who were active in the formation of the industry, and a representative from the National Association of Testing Authorities (NATA), the main regulatory authority. These interviews occurred between April 2003 and July 2004, and they provide the main source for the discussion of the parentage testing industry.

Second, the article draws upon a national random survey of public opinion about new technologies the 2003 "Swinburne National Technology and Society Monitor" (ACETS 2003). This survey asked 1000 respondents about their views on DNA parentage testing under a variety of conditions, including testing without the knowledge of the mother. The survey was supplemented by six focus groups: three consisting of women, and three of men. Four of the focus groups were recruited on the basis of education: two consisted of tertiary-educated men and women, and two consisted of men and women who were not tertiary educated. The remaining focus groups consisted of stakeholders: one of men from the fathers' rights movement, and the other of women with personal involvement of DNA paternity testing. The Monitor, including the nationwide survey and focus groups, provides the basis for the discussion of publie opinion in this article.

Finally, the article draws from the government-commissioned inquiry conducted by the Australian Law Reform Commission (ALRC) and the Australian Health Ethics Committee (AHEC) of the National Health and Medical Research Council. The non-confidential submissions to this inquiry and its findings provide the basis for the discussion of

proposed regulation of the parentage testing industry, notably in relation to tests without the knowledge or consent of the mother.

The industry

The discovery of blood groups and the refinement of serological research in the course of the twentieth century created the scope for science-based parentage testing – or more to the point, paternity testing, given that most parentage tests are paternity tests. Yet the results were often inconclusive. In this context, the demand for paternity testing was small, and the providers of tests were non-commercial organisations, such as the Red Cross and the Commonwealth Serum Laboratories (then a government agency).

From the late 1980s to the mid 1990s there occurred a proliferation of providers in DNA parentage testing services across Australia. Then, from the late 1990s, there was a process of rationalisation, whereby a national market increasingly prevailed over state-based regional markets. Genetic Technologies, a Melbourne-based biotechnology group, became the dominant provider, taking over labs in Sydney and Perth; and two nationwide pathology companies, Sonic and Gribbles, already collecting samples for existing providers, entered the market. In the late 1990s a Melbourne-based company GENE-E also established a broking service for paternity testing, using television advertising to generate clients whose tests were then outsourced to laboratories

There are no public records concerning the scale of the parentage testing market in Australia. Nonetheless informants generally agree that there are now about four to five thousand parentage tests conducted each year in Australia, that is about 0.25 tests per 1000 persons (at the most). This compares with 340,798 accredited parentage tests in the United States for 2002 (AABB 2002), or almost 1.2 tests per 1000 persons. This figure does not include tests by non-accredited services, so the United States per capita rate could be much higher. In other words, there is scope for substantial growth in the Australian market.

There are also no public records concerning the client base of the industry. Nonetheless informants agree that the overwhelming majority of tests are paternity tests, embedded in conflict between couples, or one-time couples. They are mostly conducted outside the court system, but with an eye to family law and paternity fraud proceedings. Sometimes they



are facilitated by doctors, sometimes by lawyers, and sometimes by individuals acting on their own behalf. Informants estimate that somewhere between one-half and two-thirds of the tests are ultimately initiated by men, or parties acting on their behalf (the man's parents, say, or his new wife). Most of the balance are initiated by women who want to enforce child support from reluctant fathers.

In this context, family law heavily influences the industry. Family law regulations require that tests used in court proceedings are only conducted on children with the knowledge and consent of all legal guardians, usually the mother and father. They also require that these tests are only conducted at laboratories accredited by the peak accreditation organisation in Australia, the National Association of Testing Authorities (NATA). In this context, nearly all laboratories have NATA accreditation for their parentage tests.

In turn, the majority of DNA parentage testing laboratories refuse to conduct what they describe as "non-consensual testing". Informants concede that they have lost many clients on account of turning away requests for such tests. For example: "I admit it's a bad business decision to do this, because there is . . . certainly a want for it at the moment, but it is certainly not an area that we want to get into at all."

Informants explain the decision to refuse these tests mainly in terms of "ethical" considerations, and to a lesser extent in terms of public image. DNA paternity testing is a procedure with potentially major ramifications for the life of the child, and the interests of the child demand that his or her legal guardians are involved in the process. In the absence of such involvement, paternity testing amounts to "assault", or perhaps theft.

A few accredited commercial providers do provide what they describe as "motherless testing" on the understanding that the tests have no legal standing. Above all, the dominant industry player, Genetic Technologies, adopts this policy. In 2003 the company declared on the public record that about 20 per cent of its parentage tests were conducted with the consent of one parent only. These tests were overwhelmingly motherless tests (as opposed to "fatherless tests" - tests conducted at the initiative of the mother without the participation of her husband, using samples from her lover or other children). According to the company, the rate of non-paternity in such tests was about 10 per cent, roughly half the rate of non-paternity for consensual tests (ALRC/AHEC 2003b: G245).

Informants from these providers take the pragmatic view that motherless testing is legal, and there is a demand for the service. They also maintain that the ethical case for prohibition is more ambiguous than made out by their competitors. Fathers have a "right to know", and motherless testing potentially enhances children's security. For example: "A lot of these fathers don't bond with the child because they don't think the child is theirs. We tell them – 90 per cent of them – that yes, that is your child and they can go and live their life and bond with that child, or stay in the relationship."

Besides accredited laboratories, several nonaccredited agencies - the Melbourne-based laboratory DNA Solutions and the broker GENE-E also provide "motherless testing". More than this: they actively solicit the tests. DNA Solutions, for example, marketed itself through the Internet at a time when this was not common; promotes its tests through the mass media and organised men's groups (its website includes links to the Lone Fathers Association, "Mens Confraternity", and the "Anti Feminist Pro Mens Page"); and conducts tests on hair samples, making it easier to do tests without the knowledge of other parties. The fact that DNA Solutions is not accredited also reduces its expenses and allows it to compete on price with other providers.

Vern Muir, DNA Solutions' owner, justifies mother-less testing in terms of revealing "the truth". People who come to him "just want to know the truth". It is "a bit like child abuse in the church". It was once routinely covered up. This is no reason to let it remain that way. "I mean, look, this is obviously something that happens. It's not a good thing. Here's a method that tells the truth. Nothing more, nothing less. If the service is out there, well, it's just one thing to make everyone honest. It's a bit like breathalysers. People won't drink-drive because they don't want to get caught. Well, maybe it's just one more thing to keep a bit of honesty in society."

Public opinion

Most Australians say that they are comfortable with DNA parentage testing where both parents consent to the tests. When asked to rate their comfort on a scale from zero ("not at all comfortable") to ten ("very comfortable"), the mean level of comfort among respondents in the 2003 national survey was 9.0. Most Australians say that they are also comfortable – albeit less so – where tests are used to enforce child support payments. Here the mean level of comfort was 6.9.



Australians are much less comfortable where DNA parentage testing is done without the knowledge of the mother. Their views are also more diverse. Here the mean was 4.99. The most common response of respondents was zero ("not at all comfortable"), nominated by 18.8 per cent of the sample; the second most common response was 5 (indicating uncertainty, ambivalence or indifference), nominated by 16.4 per cent; and the third most common response was 10 ("very comfortable"), nominated by 14.5 per cent of the sample.

In the 2003 survey, education was the only demographic variable that correlated at a significant level with comfort in relation to testing without the mother's knowledge. The less education, the more comfortable were the respondents. There was no significant difference in the comfort levels of men and women. Nor was there any significant difference on the basis of age, marital status, occupation, income, religious affiliation, ethnicity and life satisfaction.

Follow-up focus groups provided a more nuanced picture of public opinion about DNA parentage testing. The non-stakeholder focus groups – men and women – were overwhelmingly "comfortable" with tests where all parties had agreed. By the same token, their views were "highly abstracted and tentative, based upon the media" (Turney et al. 2003: 11). There was no enthusiasm for DNA paternity testing. The tests opened "a can of worms" (in the words of one participant), but the "right to know" meant that the can had to be opened (Turney et al. 2003: 11).

Participants in the non-stakeholder focus groups were not so sure about tests without the consent of the mother. Here, the principle of the "right to know" became more complex: that is, the father was exercising his right to know, but concealing information from the mother. The tertiary educated focus groups were especially concerned with regulatory issues in this context; more specifically, the accreditation of the laboratories and the reliability of the tests.

Focus groups with stakeholders – one with fathers' rights activists and the other with mothers who had experience with the tests – took a very different direction. Here the participants held strong views, and the men and women adopted polarised positions.

According to the fathers' rights activists, DNA paternity testing "meant that men, as non-custodial parents, were able to make sure that they were not treated as just 'a wallet', or a 'means of income' for women to 'live off the Family Law settlements and ongoing Child Support" (Turney et al. 2003: 13). More generally, it was "an enabling technology in

the context of an unfair legal system stacked in favour of fraudulent women" (Turney et al. 2003: 13). The participants strongly supported men's right to conduct paternity tests without the knowledge or consent of the mother.

In contrast, the women – all of whom had experience of the tests in relation to their own children – were most concerned with the "accuracy", "validity" and "confidentiality" of the tests. They believed that "men used paternity tests as a means to 'delay and thwart' access to child support payments, and as 'a way to punish their ex-partner, rather than out of any real concern about paternity" (Turney et al. 2003: 14). More generally, they regarded the tests "as a destructive technology, used as a weapon by angry men to punish their former partners" (Turney et al. 2003: 14). They accepted that there was a place for the tests where paternity was uncertain, but strongly opposed men's right to conduct paternity tests without the knowledge or consent of the mother.

Proposed regulation

In 2001 the Australian Government commissioned the Australian Law Reform Commission (ALRC) and the Australian Health Ethics Committee (AHEC) of the National Health and Medical Research Council to conduct an inquiry into the "Protection of Human Genetic Information". An Issues Paper then included "a brief discussion of the use of DNA parentage testing in family law proceedings", precipitating submissions from "various support groups, laboratories conducting parentage testing, and private individuals – both in support of, and sharply critical of the current regulatory framework and industry practice" (ALRC/AHEC 2002: 44).

In 2002 the ALRC/AHEC Inquiry elaborated upon its consideration of DNA parentage testing in a Discussion Paper, observing "the sensitivity of this area, and the need for greater regulation of DNA parentage testing in the public interest" (ALRC/AHEC 2002: 45). The Inquiry advocated compulsory accreditation and the development of the "highest technical and ethical standards, particularly in relation to consent to testing" (ALRC/AHEC 2002: 45).

More specifically, the Inquiry recommended that testing should not be allowed using samples from one parent and an immature child; and that where one parent (presumably the mother) refused permission for the test, then an application could be made to the Family Court for an order to carry out the test. It also recommended that testing should be permitted using samples from one parent and a child where the child



was 12 years of age or more, and deemed mature enough to make the decision by an independent professional (ALRC/AHEC 2002: 890-897).

The Discussion Paper precipitated another round of submissions, taking the full gamut of positions in relation to regulation. Altogether the Inquiry received 316 submissions, of which 34 were confidential. Of the 316 non-confidential submissions, 48 (15 per cent) addressed DNA parentage testing to greater or lesser extent. Of these 48 submissions, 21 came from government and professional organisations, 19 came from fathers' rights groups and activists, five came from industry providers, and there were five miscellaneous submissions.

The submissions from fathers' rights groups (such as "Mens Confraternity" and "Dad's Landing Pad") and activists were overwhelmingly concerned with the issue of paternity testing. They were uniformly against compulsory accreditation, and insisted upon the "fundamental and inalienable right of a father to know his own paternity" (ALRC/AHEC 2003b: G280). These submissions argued that paternity fraud was widespread; "vindictive" exwives had every reason to refuse testing; the Family Court was routinely biased against fathers; and legal costs were prohibitive for many fathers in any case. "If you really think that legislating against fathers determining their paternity for themselves will stop it happening," one man wrote, "you're dreaming. It will be a law without effect because it will grossly violate a fundamental human right." The only winners, he argued, would be "the lawyers – as usual" (ALRC/AHEC 2003b: G280).

The submissions from government and professional organisations - such as the Attorney General's Department, the Family Law Council, the Victorian Bar and NATA (plenty of lawyers there) - were mostly broader in their concerns. The issue of paternity testing was only one of many issues addressed. These submissions were uniformly in favour of the Discussion Paper's recommendations. Insofar as they went further, they addressed the nuts and bolts of regulation. For example, the Family Law Council – a statutory authority that advises the Attorney-General on the workings of family law – suggested that the procedure for determining a child's maturity should only be triggered where parents disagreed about the test, or where the child and a parent disagreed. This would result in less cases requiring the involvement of an independent professional, which would justify a "higher level of intervention" in such cases (ALRC/AHEC 2003b: G202).

The industry providers, like the fathers' rights groups, were mostly concerned with the issue of paternity testing. They took different positions consistent with their current business strategy. Sydney IVF, the largest of the accredited laboratories that did not provide DNA paternity testing without the consent of the mother, supported the recommendations of the Discussion Paper. It observed: "Parentage testing is usually initiated for the purpose of defining responsibility for child support payments. Non-consensual testing might be initiated for financial reasons and without consideration for the welfare of the child. Our current laboratory practice is to require the consent of the custodial parent or guardian." (ALRC/AHEC 2003b: G246)

Genetic Technologies – the market leader – also supported mandatory accreditation, but opposed tighter regulation of "motherless testing". Its submission observed that routine medical procedures normally required the consent of only one parent; that tighter regulation would generate unnecessary litigation; that motherless testing was permitted in comparable jurisdictions such as the United States and the United Kingdom; and that testing had potential benefits, notably "keeping families together" and "allowing a parent to bond with a child" (ALRC/AHEC 2003b: G245).

The non-accredited DNA Solutions ignored the issue of compulsory accreditation altogether and advocated men's "right to discretely [sic] test their conception". Its submission drew attention to the "rights of the father", the exposure of "the truth", and the effect of DNA testing in keeping "both parties honest". "Trauma and stress for Father and Mother is greatly reduced, especially in positive cases. Children will not be depressed that Fathers went to court for DNA testing. Men who use discrete [sic] testing [and] then take the matter to court will do so with the knowledge that they have a genuine case, and not based on suspicion and doubt alone. The courts [sic] time is saved, and couples already under stress are saved undue costs and anxiety.' (ALRC/AHEC 2003b: G162)

For the most part the Inquiry stuck to its guns. In 2003 its final report recommended compulsory accreditation and much tighter regulation of paternity testing without the knowledge or consent of the mother. So far the government has not acted on its recommendations. As the discussion of public opinion showed, there is no pressing electoral reason to do so. Indeed, the fact that fathers' rights groups are



strong and active opponents of tighter regulation might mean that there is some electoral risk in tighter regulation.

The debate

DNA paternity testing highlights the way in which new technologies are creating new choices and dilemmas in contemporary families. New technologies such as IVF, sex selection, antenatal screening and parentage testing mean that what was once left to nature (such as infertility) or convention (such as attribution of paternity) now call for active decision-making.

DNA paternity testing also highlights the way in which markets are playing a growing role in families. The market has encroached upon a wide range of activities that were once conducted on an unpaid basis, from meeting a partner (dating services) to food preparation (fast food outlets) and child care (listed childcare companies). It has also encroached upon activities that were once left to nature or convention, such as conception (with the creation of markets for eggs, sperm and surrogacy) and the attribution of paternity.

In some areas – such as conception and child care – governments play a powerful role in regulating new markets. In other areas – such as takeaway food and paternity testing – governments play a much smaller role. The issue of DNA paternity testing without the knowledge or consent of the mother highlights tensions around the regulation of new technologies and new markets. These tensions are apparent in public opinion surveys, and also in the submissions to the ALRC/AHEC Inquiry.

As the Inquiry concluded, there is a powerful case for more regulation of the market. More than most products, DNA parentage testing calls for independent accreditation, given the opaqueness of the tests and their implications.

There is also a strong case for tighter regulation of paternity testing without the knowledge or consent of the mother. Ainslie Newson, a bioethicist with training in the biological sciences and law, identified five key elements of this case in her independent submission to the Inquiry. First, the tests fail to recognise the rights of the mother and child. Second, they ignore the "collaborative nature of parenting". Third, the tests have "potential for harm", including physical and emotional violence directed by angry fathers against former wives and children. Fourth, the tests are an "inappropriate means of 'holding a family together", if that is the reason for which they

are done. Finally, the tests are inconsistent with "best practice in closely related disciplines", notably medicine and genetic counseling. More generally, Newson observed that easy access to tests "arguably trivialises their seriousness, dismissing their potential consequences" (ALRC/AHEC 2003b: G283).

By the same token, there is also a case – as Newson observed – for permitting tests without the knowledge or consent of the mother. Advocates for this case usually emphasise the rights of the father. The facts of nature mean that mothers already have privileged information about conception. They know their biological offspring by definition. They also know whether there is any doubt about biological paternity. DNA paternity testing without the knowledge or consent of the mother evens up the ledger, so to speak.

The demand for fathers' rights is intrinsically related to the obligations of biological paternity. In recent decades governments in western countries have taken measures to trim their welfare spending through enforcement of child support by biological fathers (Anderlik and Rothstein 2002: 217-218). In the Australian context, the Child Support Scheme created a more effective mechanism to enforce child support from biological fathers, making it a "'lightning rod' for much pent-up anger, grief and disappointment surrounding relationship breakdown" (Smyth 2004: 43). If governments attach more binding obligations to biological paternity, then it is only to be expected that fathers will be more demanding about their rights, not least in the context of paternity testing.

On another tack, Newson emphasised "the importance of balancing harms when considering whether mothers should always be involved". Mandatory consent of the mother demands the involvement of the "entire family in the decision-making process about a parentage test (at least where younger children are concerned)", and "could lead to a destruction of trust between partners and a destruction of the father/child relationship". In fact, most tests without the consent of the mother resulted in the reassurance of the father. It was "better for a father to confirm his fears accurately and quickly, rather than to continue living with the uncertainty" (ALRC/AHEC 2003b: G283).

This is not a straightforward issue. Not least, it is complicated because – as participants in the focus groups observed – the circumstances under which such tests become necessary are unhappy ones at the best of times. There is already a breakdown of



trust. It is questionable whether a deceitful action (doing the tests without the knowledge of the mother) – intended to produce evidence of deceit (misattributed paternity) – can provide the basis for renewed trust.

The debate as it stands is highly polarised. The two sides collapse together the knowledge and consent of the mother, insisting that both are either warranted or unwarranted. Whether the recommendations of the ALRC/AHEC Inquiry are acted upon or not, there will be "winners" and "losers" where different parties will believe that their rights have been sacrificed. A possible way forward in the debate is to pay more attention to the distinction between knowledge and consent.

There is a good reason that the tests should not be conducted without the *knowledge* of the mother. The tests are not trivial or routine. They have immense implications for all parties. Mothers have a right to know that the tests are to be conducted. Children have a right to the advocacy of both the mother and father in the event of such tests. The fact that all parties must be informed of the tests would promote the principle of collaborative parenting and and minimise the potential for harm. It would also mean that they are not undertaken lightly.

By the same token, fathers have a right to know their biological paternity, not least on account of the obligations attached to it. Indeed, children themselves have a right to know their biological parentage, a principle increasingly acknowledged in policies around adoption and donor conception. Where children are not mature, it should be possible to conduct "motherless tests" without the *consent* of the mother. Where the children are mature, the tests should only require legal mediation in the event that the children themselves do not want to be tested.

Indeed, this approach need not require much more legal mediation than currently exists (one of the objections to more regulation). A father might submit the mothers' contact details as part of the paperwork in undertaking a test. The provider might then formally notify the mother of the test. Hopefully in most instances she would be forewarned. Those instances where she was not forewarned would be precisely the ones that this process was designed to address.

Certainly this approach would not make everybody happy. Then again, perhaps this is a good sign, for it would imply compromise between the rights of fathers, mothers and their children. This is, after all, the basis of successful collaborative parenting and families.

References

- AABB (American Association of Blood Banks) (2002), *Annual Report Summary for Testing in 2001*, AABB, Bethesda MD, http://www.aabb.org/about_the_aabb/stds_and_accred/ptan nrpt01.pdf (accessed 30/7/04).
- ACETS (Australian Centre for Emerging Technologies and Society) (2003), Swinburne National Technology and Society Monitor, Swinburne University of Technology, Melbourne, http://www.swin.edu.au/sbs/acets/monitor/2003MonitorFULL.pdf (accessed 30/7/04).
- ALRC/AHEC (Australian Law Reform Commission / National Health and Medical Research Council) (2002), Protection of Human Genetic Information: Discussion Paper 66, AGPS, Canberra.
- ALRC/AHEC (Australian Law Reform Commission / National Health and Medical Research Council) (2003a), Essentially Yours: The Protection of Human Genetic Information in Australia: Report 96, AGPS, Canberra.
- ALRC/AHEC (Australian Law Reform Commission / National Health and Medical Research Council) (2003b), Non-confidential submissions to the Inquiry into the Protection of Human Genetic Information, available on application.
- Anderlik, M.R. & Rothstein, M.A. (2002), "DNA-based identity testing and the future of the family: A research agenda", *American Journal of Law, Medicine & Ethics*, vol. 28, pp. 215-232.
- Davies, K. (2001), The Sequence: Inside the Race for the Human Genome (revised edn), Phoenix, London.
- The Economist (2004), "DNA's detective story", 13 March, pp. 20-22.
- Smyth, B. (2004), "Child support policy in Australia: Back to basics?", *Family Matters*, no. 67, pp. 42-45.
- Stanley, A. (2002), "So, who's your daddy? In DNA Tests TV finds elixir to raise ratings", The New York Times, 12 March, p. 1.
- Turney, L, Gilding, M., Critchley, C., Shields, P., Bakacs, L. & Butler, K.A. (2003), "DNA paternity testing: Public perceptions and the influence of gender", Australian Journal of Emerging Technologies and Society, no. 1, http://www.swin.edu.au/sbs/ajets/journal/issue1/paternity.pdf (accessed 30/7/04).

Associate Professor Michael Gilding is the Director of the Australian Centre for Emerging Technologies and Society (ACETS) in the School of Social and Behavioural Sciences at Swinburne University of Technology, in Melbourne. He is the author of *The Making and Breaking of the Australian Family* (1991), Australian Families: A Comparative Perspective (1997), and Secrets of the Super Rich (2002).

This research was conducted as part of an Australian Research Council Discovery Grant DP0450010 "Genetic Identity Testing and the Family: The articulation between biotechnology and family relationships, politics and policy". The author is grateful to the industry informants who generously made time available for interviews. Lyn Turney is a collaborator in this research and made many helpful suggestions that have contributed to this article. Christine Critchley, Penelope Shields, Lisa Bakacs and Kerrie-Anne Butler were also collaborators in the ACETS survey of attitudes towards DNA paternity testing. Vikki Bunton, Matt Dodds and Sue Malta provided excellent research support.