

## PUBLIC OPINION ON DNA PATERNITY TESTING: THE INFLUENCE OF THE MEDIA

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*There has been a substantial shift of opinion among Australians in support of DNA paternity testing without the knowledge of the mother. The shift has been driven by the influence of the media, fanned by the fathers' rights movement.*

By far the most contentious public policy issue in relation to DNA paternity testing is the status of those tests conducted without the knowledge or consent of the mother. Such tests are usually arranged by men, and involve comparison of samples from a man and his putative child. On this account they are often described as 'motherless tests', although not all motherless tests are done without the knowledge of the mother. The tests are currently legal in most jurisdictions, but they do not have standing in a court of law.

In 2003 a representative national telephone survey found that there was substantial diversity and uncertainty among Australians regarding the tests; more Australians were 'uncomfortable' with the tests than were 'comfortable'; and gender was not a significant variable shaping these responses. Since 2003 media coverage of DNA paternity testing has escalated dramatically. This coverage has overwhelmingly focussed upon 'celebrity' cases, or 'paternity fraud' cases where men prosecute their former wives or partners for claiming child support under false pretences.

Given the extent of media coverage, there is good cause to suggest that public opinion might have shifted on the question of whether paternity testing without the knowledge of the mother is acceptable or not. This article reports on evidence that this is indeed the case. First, it provides background on the DNA

paternity testing industry, and its articulation with the media. Second, it describes the small literature on public perceptions of DNA paternity testing, in particular the 2003 Swinburne National Technology and Society Monitor (SNTSM). Third, it describes the findings of the 2005 SNTSM, which replicated questions from the 2003 SNTSM. Finally, the article explores the implications of the findings.

### THE INDUSTRY AND THE MEDIA

'DNA fingerprinting', as it became known, was invented in 1984. Paternity testing was one of its main applications from the start, second only to forensics. The tests were much more accurate than the serological (or blood-based) testing that had been used before. From the late 1980s, the use of DNA-based paternity testing increased rapidly. In the US the number of paternity tests increased from 143,459 cases per annum in 1991 (86 per cent of them serological) to more than 350,000 cases in 2003 (99.8 per cent of them DNA based).<sup>1</sup> In Australia there are no public records on the number of paternity tests, but industry sources suggest that the number of cases increased from about 1000 to 4000 per annum during the same period.<sup>2</sup>

Notwithstanding rapid growth of the paternity testing industry, the number of tests was still tiny relative to population. Their main application, after all, was the enforcement of child support payments by

government agencies. By 2003 there were about 1.25 tests per 1000 people per annum in the US and, in Australia, about 0.25 tests per 1000.<sup>3</sup> In other words, most people did not have personal experience of the tests. By implication, their knowledge of the tests mostly came through the media. Accordingly, the analysis of public perceptions necessarily focuses upon the influence of the media.

As it happens, since the 1990s there has been immense media coverage of paternity testing. In the US the media coverage has been heavily promoted by the paternity testing industry.<sup>4</sup> It has also been fanned by fathers' rights activists, unhappy with the family law system and its effects on men in the event of divorce. These activists have seized upon DNA paternity tests as a vehicle for their cause, uncovering 'paternity fraud'.<sup>5</sup> The US sociologist Dorothy Nelkin observes:

Tabloids pursue cases of paternity fraud: 'Who's the daddy?' Soap operas and television dramas revolve around the tensions and uncertainties of paternity—uncertainties to be resolved by genetic tests. Television shows feature 'live' paternity testing, as on the Montel Williams Show. The paternity struggles of celebrities, from Thomas Jefferson to Bill Cosby, from Yves Montand to Hollywood producer Steve Bing, are displayed in the news. Advice columnists advise their readers to resolve their suspicions by getting tested. Highway billboards attract commuters to genetic testing firms. Especially important are the growing number of Web sites that are providing information, advertisements, and promotional discussions about the value of paternity testing. The public is bombarded with media palaver.<sup>6</sup>

In Australia the paternity testing industry is much less aggressive in promoting the tests; there are no home-grown 'live' television shows, and no

billboards.<sup>7</sup> Yet media coverage has still played a pivotal role in people's understanding of the tests. A 2003 Australian focus-group study found that the 32 participants in the four focus groups overwhelmingly obtained their knowledge of DNA paternity testing through the media. Participants referred to: American talk shows, such as Jerry Springer and Ricki Lake; television dramas, such as *CSI*, *The Bold and the Beautiful* and *Stingers*; television advertisements for commercial paternity services; and newspaper and television current affairs coverage, notably recent court cases whereby men had taken legal action against their wives following discovery of misattributed paternity. Participants tentatively quoted the media as their source for claims that between 20 and 30 per cent of offspring were instances of misattributed paternity. Only one participant declared that she knew somebody who had undertaken a DNA paternity test.<sup>8</sup>

Since 2003 media coverage of DNA paternity testing has escalated in Australia. A rough indication of this process is the *Factiva* online database, measuring newspaper coverage across various topics. *Factiva* identified 63 Australian newspaper articles concerned with paternity testing in 2000, 50 in 2003, and 114 in 2005.<sup>9</sup> Coverage reached a high water mark in March 2005, when it was revealed that the Commonwealth Minister for Health, Tony Abbott, was not the biological father of his alleged exnuptial son, a young man who had made contact with him some 26 years after being placed out for adoption at birth. As sociologists doing research on the social implications of paternity testing, we (the authors) found ourselves swept along by the media frenzy, doing 48 interviews for television, radio and the press over the span of a few weeks.

In the US context, Nelkin observes that the ‘media blitz’ attending instances of misattributed paternity consistently assumes that ‘infidelity and paternity fraud are so rampant that there are real reasons for suspicion’.<sup>10</sup> We had the same experience in the course of the media frenzy around Tony Abbott. As already discussed in an earlier article for *People and Place*, interviewers consistently asked us about the true extent of misattributed paternity.<sup>11</sup> We both insisted that the figures commonly cited—between 10 and 30 per cent—were improbable. Our observations had little effect. Media stories regularly reported high rates of misattributed paternity. This bias was highlighted by the fact that one of the authors of this paper (Lyn Turney) was erroneously cited in one Queensland newspaper as the author of a study that found a 20 per cent non-paternity rate!<sup>12</sup>

In fact, there is no evidence to support claims of a non-paternity rate of between 10 to 30 per cent in western countries. In the wake of the Tony Abbott story, the other author of this paper (Michael Gilding) marshalled all of the available evidence—medical studies, sex surveys, the records of DNA testing laboratories and genetic studies—concerning misattributed paternity. The resulting article suggested that the true extent of misattributed paternity in western countries is ‘closer to one per cent, and not more than three per cent’.<sup>13</sup> It is revealing that there was little media interest in this story. It was too much of a ‘non story’. It is tempting to imagine what the media interest would have been in the event of a much higher estimate.

The media account of DNA paternity testing is also misleading in its focus upon ‘paternity fraud’. Industry sources and available records leave no doubt that most paternity tests are not driven by men suspicious of ‘paternity fraud’. On the

contrary, most tests—in both the US and Australia—are driven by unmarried mothers seeking irrefutable proof of paternity in order to obtain child support. In the Australian context, the firm Genetic Technologies—the largest provider of tests—estimates that about 70 per cent of tests are driven by mothers enforcing child support payments on reluctant fathers. Genetic Technologies also report that the exclusion rate for all tests is about 20 per cent, whereas the exclusion rate for ‘motherless tests’ done without the knowledge or consent of the mother is about 10 per cent.<sup>14</sup> (The exclusion rate is the number of putative fathers per 100 tests whom tests exclude from the possibly of actually being the father.) To put it another way, nine out of ten men who have a test without the consent of the mother are actually found to be the biological father of the child in question. Even so, there have been calls from fathers’ rights activists and experts alike for mandatory testing at birth to uncover the extent of misattributed paternity and to avert altogether the possibility of paternity fraud.

Briefly, most people depend upon media coverage for their knowledge of DNA paternity testing, but media coverage is highly selective at best, and inaccurate at worst. It consistently presents a view that misattributed paternity is widespread, and that tests are motivated by ‘paternity fraud’. It would be surprising if this view did not influence public opinion.

## **PUBLIC PERCEPTIONS**

A pioneering survey of public perceptions of DNA paternity testing was conducted in the early 2000s by Lisa Hayward and Sievert Rohwer, sociobiologists in Seattle, USA. The respondents were 655 first-year university students, supplemented by 78 adults recruited from

outside a drivers' licensing office and at the gates of an airport! The researchers, guided by their sociobiological framework, expected that men would favour routine paternity testing more than women, on account of 'selective pressure for mechanisms ensuring certainty of paternity'.<sup>15</sup> Their hypothesis was supported. They found that 50 per cent of the men in their sample favoured routine testing, compared with 32 per cent of women. They were, however, puzzled by the 50 per cent of men in their sample who did not favour paternity testing. 'Perhaps', they speculated, 'a "polymorphism" among men in their attitude towards routine paternity testing implied a mixed strategy among males, suggesting that in our evolutionary history cuckoldry was common'.<sup>16</sup> In other words, they interpreted their results in a way that was consistent with their sociobiological framework, and its incorrect assumption that misattributed paternity is both natural and widespread.

The first ever representative survey of public perceptions of DNA paternity testing was conducted through the 2003 Swinburne National Technology and Society Monitor (SNTSM), a national telephone survey of a random sample of Australian residents aged 18 and over concerning attitudes to emerging technologies. Of those contacted, 30 per cent responded, resulting in 1044 respondents. The survey included questions specifically directed towards perceptions of DNA paternity testing. It also included a general question that asked how much respondents trusted various organisations and institutions for information about new technologies, using a scale from 5 ('trust a very great deal') to 0 ('don't trust at all'). 'The media' was by far the least trusted institution—its mean trust rating was 1.64.<sup>17</sup>

In relation to DNA paternity testing, the 2003 SNTSM asked 'how comfortable' respondents were with testing in a variety of contexts, using a scale from 0 ('not at all comfortable') to 10 ('very comfortable'). Respondents were extremely comfortable with DNA paternity testing where all parties agreed to the test (mean = 9); that is, they were very comfortable with consensual testing. Respondents were less comfortable with the scenario whereby mandatory DNA testing was used to enforce child support (mean = 7.1). They were less comfortable again with paternity testing without the knowledge of the mother (mean = 4.9). On this question there was evidence of both polarisation and uncertainty. The most common response was 0 ('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.<sup>18</sup>

Although the 2003 SNTSM questions were not strictly comparable with the US study, sociobiologists would presumably predict that men would be more likely than women to favour paternity testing without the knowledge of the mother. This was not the case. The only significant difference between men and women in 2003 occurred in relation to the uncontroversial question about DNA paternity testing when all parties agreed to the tests, with women more likely to feel comfortable.<sup>19</sup> The fact that men and women were equally polarised and uncertain in relation to testing without the knowledge of the mother suggests—contrary to socio-biological accounts—the importance of social dynamics rather than 'hard wiring' in relation to attitudes to paternity testing. It also implies that such

attitudes are liable to change over time. In 2005, in the wake of extensive media coverage on the issue, this proposition was put to the test.

**CHANGING ATTITUDES—THE 2005 SNTSM**

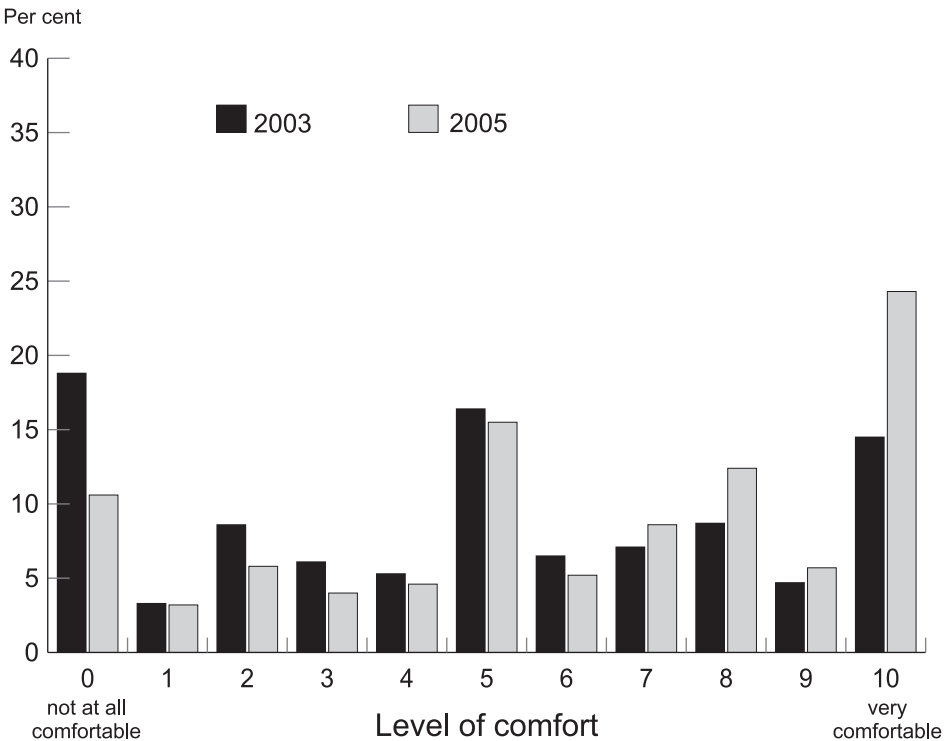
The 2005 SNTSM replicated the approach and methods of the 2003 SNTSM. The survey was conducted by telephone, and the sample was drawn from Australian residents aged 18 and over. Of those contacted, 25 per cent responded, resulting in 1013 respondents. The 2005 SNTSM also replicated large sections of the 2003 interview schedule, including questions on DNA paternity testing.

*Trust in the media:* The 2005 SNTSM replicated the 2003 question on how much respondents trusted various ‘people and organisations’ to provide them with

information about new technologies, using a scale from 5 (‘trust a very great deal’) to 0 (‘don’t trust at all’). As was the case in 2003, respondents rated the media the least credible source of information from thirteen given categories of people and organisations: the media received a mean trust rating of 1.64, the same rating as it had received in 2003. The most highly rated institutions were again the Commonwealth Scientific and Industrial Resesarch Organisation (CSIRO) (3.83), universities (3.62) and hospitals (3.49).

*Replication of the 2003 paternity testing questions:* In relation to DNA paternity testing, the 2005 SNTSM again asked how comfortable respondents were with testing in a variety of contexts, using a scale from 0 (‘not at all comfortable’) to 10 (‘very comfortable’). The three

**Figure 1: Comfort over time with DNA paternity testing without the knowledge of the mother**



contexts and wording replicated the 2003 SNTSM:

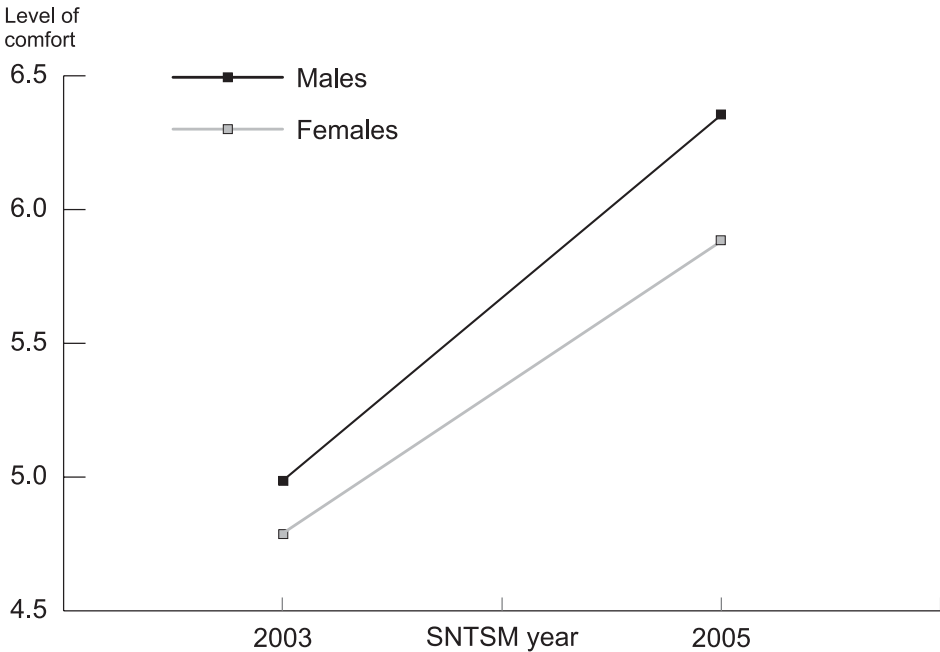
- DNA testing of a father and child to see whether he actually is the father—where all parties have agreed to the test.
- Mandatory testing of a father and child to establish whether he actually is the father, so that he can be made to pay Child Support.
- DNA testing of a father and child to see whether he actually is the father—where the test is conducted without the knowledge of the mother [‘motherless testing’].

*Increase in comfort with ‘motherless testing’:* By far the most significant change from 2003 to 2005 was the general public’s level of comfort with paternity testing without the knowledge of the mother. Here the mean level of comfort was 6.1 in 2005, compared with 4.9 in 2003 ( $p < .0005$ ). Although respondents were still only moderately comfortable

with motherless testing, *Figure 1* shows how there was a substantial shift in patterns of comfort across the rating scale. The most common response was now 10 or ‘very comfortable’ (24.3 per cent of respondents, compared with 14.5 per cent in 2003); the second most common response was 5 (15.5 per cent), indicating uncertainty, ambivalence or indifference; and the third most common response was 8 (12.4 per cent). In contrast, in 2003 the most common response had been 0 or ‘not at all comfortable’ (18.8 per cent), whereas in 2005 only a little over half this number of respondents (10.6 per cent) were ‘not at all comfortable’ and thus strongly against motherless testing.

*Trend in the direction that men are driving the change:* Between 2003 and 2005 both men and women became significantly more comfortable with ‘motherless testing’.<sup>20</sup> That is, the change of attitude was driven by both men and women. In both years more men than

**Figure 2: Mean comfort with motherless testing by year and gender**



women were comfortable with such testing—but in neither year was the difference statistically significant. Then again, it is unlikely that the difference was a product of chance in both surveys. Moreover, *Figure 2* shows that the difference was greater in 2005 than 2003, so the trend was towards significance.<sup>21</sup> By implication, the growing support for DNA paternity testing without the knowledge of the mother in 2005 was probably driven by men more than by women.<sup>22</sup>

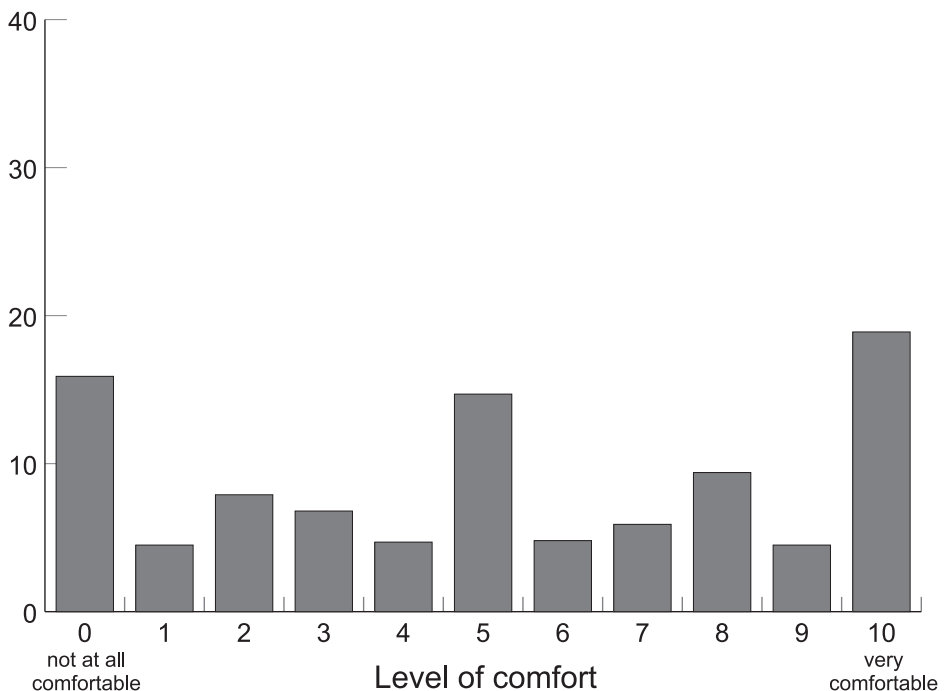
*Comparison with other contexts:* There was no significant change over time for other contexts in which DNA paternity testing occurs. More specifically, there was no significant change in comfort where all parties agreed to the test (mean = 9.1, compared with 9.0 in 2003). Nor was there a significant change in support for the scenario whereby mandatory DNA

testing was used to enforce child support (mean = 7.4, compared with 7.1 in 2003). In other words, in 2005 people remained significantly less comfortable with non-consensual testing to enforce child support than with testing where all people agreed.

*New questions on mandatory testing at birth:* The 2005 SNTSM also asked two questions about mandatory paternity testing at birth. This was in response to media coverage of this issue, closely associated with the fathers' rights movement. As it happens, these questions also tapped into the issue of routine testing as addressed by Hayward and Rohwer, albeit in terms that placed more emphasis on a legal requirement to undertake the tests. Specifically, respondents were asked about how comfortable they were with DNA testing in the following contexts:

**Figure 3: Comfort with compulsory DNA paternity testing at birth**

Per cent



- compulsory DNA testing of all babies at birth to check paternity
- having a compulsory DNA paternity test for your own baby at birth.

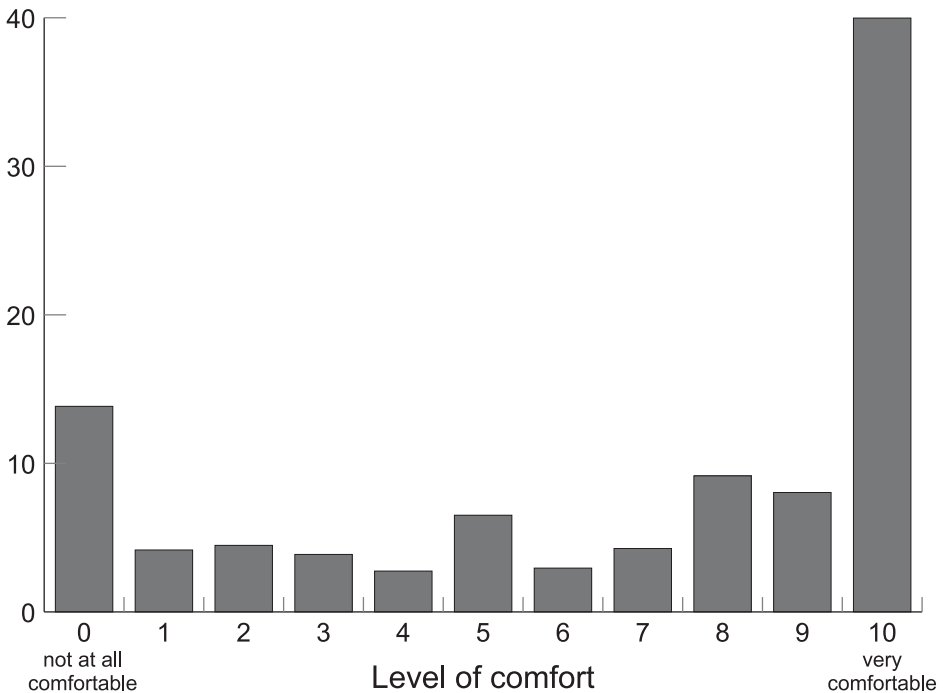
*Low support for mandatory testing at birth:* There was less support for mandatory testing at birth than for testing without the knowledge of the mother. Here the mean level of comfort with mandatory testing at birth was 5.2 compared with 6.1, a highly significant difference ( $p < .005$ ). Again, as shown in *Figure 3*, the distribution of responses indicated a mix of polarisation and uncertainty on this question. The most common response was 10 or ‘very comfortable’ (19.2 per cent), followed by 0 or ‘not at all comfortable’ (16.2 per cent), and then the in-between value of 5 (15.0 per cent).

*More support for mandatory testing at a personal level:* When the question

was framed in the more personal terms of ‘a compulsory DNA paternity test for your own baby at birth’, the mean level of comfort was 6.6, indicating that people were significantly more comfortable with the idea of testing their own baby at birth than with the general testing of everyone ( $p < .0005$ ). As shown in *Figure 4*, the most common response was 10 or ‘very comfortable’ (a massive 40.0 per cent of respondents), followed a long way behind by the 0 or ‘not at all comfortable’ response (13.8 per cent). About three times as many respondents stated that they were ‘comfortable’ compared with those who stated that they were ‘not at all comfortable’. Presumably participants were no longer responding to the issue of mandatory testing *per se*. They were at least partly responding to the suggestion of possible doubt about the paternity of their own children. As they had no doubts

**Figure 4: Comfort—DNA paternity testing for your own child at birth**

Per cent





on this matter, compulsory testing of their own children at birth did not concern most of them.

Contrary to the sociobiological hypothesis (and the US non-representative study by Hayward and Rohwer), there was no significant difference in the comfort levels of men and women in relation to mandatory testing at birth, whether framed in general or personal terms. As in 2003, there was also no significant difference between men and women in relation to testing in order to enforce child support payments.

## DISCUSSION

According to the sociobiological paradigm, men and women have evolved in ways that cause them to have fundamentally different interests in relation to misattributed paternity. Accordingly, sociobiologists hypothesise that men and women will have very different attitudes towards paternity testing. The SNTSM, the most comprehensive and reliable surveys on paternity testing conducted anywhere in the world so far, unambiguously refutes this hypothesis. For the most part, in 2003 and 2005 Australian men and women held much the same views on paternity testing. Most significantly, they held the same views in relation to mandatory testing—both in abstract terms, and in relation to their own children. These are the scenarios in which sociobiologists predict most difference. By implication, such attitudes are not ‘hard wired’ in men and women. They are socially and historically constructed.

In more specific terms, the SNTSM indicates that between 2003 and 2005 there was a significant shift in Australian public opinion in relation to the most controversial aspect of paternity testing. In 2003 the balance of public opinion was against paternity testing without the knowledge of the mother. By 2005, in the

wake of high-level media coverage on the issue, the balance of opinion was in favour of such testing. The shift occurred among both men and women, but more so among men.

The most likely explanation for this shift of opinion is the high-level media coverage during this period. Most people do not have personal experience of paternity testing, and necessarily rely upon the media for information about it. Ironically they have little trust in the media as a source of information about new technologies. Moreover, in the case of paternity testing there is good reason for this view. The media consistently exaggerates the extent of misattributed paternity. It also consistently misrepresents the underlying dynamics of paternity testing, highlighting ‘paternity fraud’ at the expense of the need to test for child support purposes—the most common usage of paternity testing.

The shift of opinion is good news for the fathers’ rights movement. The fathers’ rights movement has actively defended paternity testing without the knowledge of the mother, and strongly pressed its case through the courts and the media. It has consistently maintained that misattributed paternity is widespread, and that paternity fraud is the main rationale for paternity testing. This framework has been largely adopted by the media. The fathers’ rights movement can take satisfaction that its view is gaining ground in the court of public opinion—especially among men.

The shift of opinion provides a revealing insight into the articulation between the media and public opinion. The fact that most people say that they are distrustful of the media as a source of information about new technologies does not mean that they are not influenced by it. It remains to be seen whether this shift in public opinion will persist in the wake of on-going media coverage of the issue,

or whether the public's distrust of the media will assert itself as the technology becomes more familiar.

### Acknowledgments

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 authors are grateful to Vikki Bunton, Helen McDonald and Michelle Bell for their excellent research support on this project. They are also indebted to other members of the SNTSM team at Swinburne: Christine Critchley, Karen Farquharson, Elizabeth Hardie and Simone Buzwell.

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- <sup>9</sup> The search was for 'paternity test\*'.
- <sup>10</sup> Nelkin, 2005, op.cit., p. 4
- <sup>11</sup> Gilding, 2005, op. cit.
- <sup>12</sup> *ibid.*, p. 1
- <sup>13</sup> *ibid.*
- <sup>14</sup> ALRC/AHEC Non-confidential submissions to the Inquiry into the Protection of Human Genetic Information, available on application, No. G245, 2003
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- <sup>18</sup> Turney et al., op cit., 2003, pp. 26–8
- <sup>19</sup> *ibid.*
- <sup>20</sup> A two-way analysis of variance (ANOVA) was conducted to test gender differences over time—that is, whether there was any change in comfort with motherless testing. The result was highly significant for time ( $F=63.28$ ,  $p<.0005$ ).
- <sup>21</sup> This result was significant at the 0.05 level ( $p=0.03$ ) but, given the large sample size (1013), the magnitude of the differences in the means was very small (partial eta squared=.002) so reflects a trend rather than a significant difference.
- <sup>22</sup> The proportion of men relative to women in both year samples was unbalanced (particularly in 2003) with fewer male participants. To ensure the differences over time and by gender were not due to sampling, an analysis of covariance (ANCOVA) was conducted. The reported patterns persisted when controlled for gender; Levene's Test showed that the gender variance in both samples was not significant.