CONSTRUCTING BODILY EVIDENCE THROUGH SEXUAL ASSAULT EVIDENCE KITS

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This article begins by discussing the social construction of scientific evidence, arguing that, as it intersects with the law, it is further configured in accordance with legal needs and requirements. We then suggest that, in certain circumstances, there may exist an antecedent level of evidence construction whereby medical professionals use forensic technologies to gather material findings. We posit that sexual assault cases that involve a Sexual Assault Evidence Kit for the purpose of substantiating a complainant's allegation may provide an example of this process. Our preliminary analyses of interview, focus group and survey data suggest that how this standardised tool is applied in practice may influence the shape of the medicolegal evidence extracted for potential court use. A substantial proportion of physicians, nurse examiners and nurses revealed that they had difficulty remaining completely objective when administering the kit. Many deviated from the prescribed protocol, omitting items and failing in certain instances to be guided by the history of assault when collecting specimens for forensic analyses. We hypothesise that the discretionary practices of these professionals may reflect a structural contradiction in the medical application of science for legal purposes.

Introduction

The use of scientific evidence and expertise has become commonplace within legal systems in recent years. In the courts, scientific 'facts', backed by scientific experts, have taken centre stage in the determination of legal 'truth' across cases ranging from pharmaceuticals-related class action suits (eg Merrell Dow Pharmaceuticals' Bendectin) to DNA-driven criminal trials (eg OJ Simpson). At the same time, there is a growing body of literature demonstrating that scientific evidence is largely the product of social structures

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and actions and, once in the courts, is further reframed to meet the requirements of the law. We argue that, in certain circumstances, the evidence may first be shaped by the activities of health care professionals who assemble medicolegal findings for the courts. An illustration of this might be found in the crime of sexual assault. Here, the customary use of a sexual assault evidence kit (often referred to as a rape kit) for purposes of collecting specimens and documenting injuries from a sexually assaulted woman's body,[1] produces findings that constitute the basis of what is later deemed forensic evidence for science-reliant law.

This article provides a brief overview of the social studies of science literature and of the sociolegal context of sexual assault in Canada. Following this, it describes the Sexual Assault Evidence Kit (SAEK) as employed in the province of Ontario and presents interview, focus group and survey data from physicians, Sexual Assault Nurse Examiners (SANEs)[2] and nurses who administer the SAEK. The data centre on their practices with respect to the collection of forensic evidence. Finally, we discuss the implications of these findings and raise the concern that sequential re-presentations of the evidence taken from a woman's body across medical, scientific and legal cultures may contradict her account of the assault, thereby challenging her veracity.

Scientific Evidence in the Legal Arena

We are a culture bound by Western rationality. Its values saturate our social organisation through rationalised modes of production, and pervade our knowledge systems through notions of logic, objectivity and proof. As the embodiment of these values, scientific methods used to uncover reality represent both the apogee of rationality and the dominant form of knowledge production in our society.[3] In the words of one proponent, 'there can be no denying the proposition that science is the best procedure yet discovered for exposing fundamental truths about the world'.[4] In contrast, branches of knowledge characterised as value laden, utilitarian and context dependent (eg feminist or Indigenous knowledge) are subordinated to the hegemony of science.[5] As Thomas Gieryn has stated: 'If "science" says so, we are more often than not inclined to believe it or act on it — and to prefer it over claims lacking [its] epistemic seal of approval.'[6]

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1 The overwhelming majority of sexual assault victims are female. For this reason, we have chosen to refer to sexually assaulted women in this article.

2 Known also as nurse examiners, these professionals receive extended training which qualifies them to conduct forensic medical examinations without the presence of a physician.

3 See Gieryn (1999); Lidskog (1996).

4 Atkins (1995), p 97.

5 See Foucault (1980); Fox Keller (1995); Harding (1991); Longino (1990); Watson-Verran and Turnball (1995).

6 Gieryn (1999), p 1.

The cultural credibility of science stems in large part from its approach to fact-finding premised on detached analysis, free of prejudice and human bias.[7] However, despite claims to objective measures capable of producing evidence of truth or falsehood, there exists an extensive literature demonstrating the fallibility of science and its status. The production of scientific evidence has been shown to be a process laden with cultural, political and personal biases — from the micro-practices of laboratory scientists to the consensus-building surrounding claims-making in the scientific community.[8] For example, in her study of the scientific language used in immunology laboratories, Emily Martin illustrates how pervasive metaphors of warfare ('invasions', 'killer cells', 'attack and defence', 'resistance fighters') reflect militaristic ideology and shape research investigations.[9] Similarly, Helen Longino has shown how experimental data and hypotheses come to be accepted as scientific knowledge following a process of conflict and integration across a wide variety of viewpoints.[10] These and other observations have led prominent scholars such as Sheila Jasanoff to comment that 'science is socially constructed'.[11]

Revelations concerning the social nature of scientific fact-making have not eclipsed normative assumptions of neutrality and objectivity. Scientific evidence continues to be accorded social authority with respect to determining truth. This authority persists, it has been argued, not because scientists themselves perpetuate it, but because of the way their representations are taken up in other sectors by those who seek to attach the credibility of science to their own pursuits and practices.[12] 'Scientists, their expertise, their claims and material artifacts eventually leave laboratories and technical journals and make their way out into the rest of the social world, where they are called upon to settle disputes, build airplanes, advise politicians, ascertain truth.'[13] One sphere into which science has been deeply drawn in recent years is the legal system, where professionals use the evidence and analyses generated in their quest for legal truth.[14] In a context where the ability to 'achieve closure in legal uses of expertise is ... reliant upon the initial "reduction" of issues to narrow, precise, technical legal questions',[15] it is not surprising that the law has turned increasingly to science as the basis for establishing fact.

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7 Atkins (1995); see also Franklin (1995).

8 See Aronson (1984); Brown and Michael (2001); Collins and Pinch (1998); Fleck (1979); Gieryn (1999); Golinski (1998); Knorr-Cetina (1981); Latour and Woolgar (1979/1986); Lynch (1984).

9 Martin (1999).

10 Longino (1990).

11 Jasanoff (1996), p 98; see also Pinch and Bijker (1989).

12 See Gieryn (1999); Hacking (1999).

13 Gieryn (1999), p ix.

14 Smart (1995); see also Carrington and Jones (1996); Faigman (1999); Freeman and Reece (1998); Moenssens (1993); Neufeld and Colman (1990).

15 Smith and Wynne (1989), p 13.

While science carries a broad cultural legitimacy that is rarely challenged,[16] what is notable about the convergence of these two otherwise distinct domains is the higher institutional power with which the law is imbued. Reflecting Gieryn's observation that 'Science gets stretched and pulled, pinched and tucked, as its epistemic authority is reproduced time and again in a diverse array of settings',[17] in the legal arena we see that it is, to a great extent, moulded to the imperatives of the law. The ability of legal professionals to reframe science through a legal lens not only suggests the authority of law, but fosters the further transformation of what may already be socially constructed scientific facts. This reconstruction is circumscribed through the questions deemed to be relevant, the (in)admissibility of particular forms of evidence and the validity of certain experts and counter-experts.[18] Here, judges act as the gatekeepers of scientific knowledge.[19] Here too, legal professionals highlight the social nature of science through their intensive cross-examinations, which can show 'even the most robust kinds of ... evidence to be a contestable product of dubious technical procedures, questionable leaps of causality and loosely controlled discretionary judgment'.[20] In fact, as Roger Smith has suggested, counsel will choose both facts and experts for their contribution to a case and to satisfy legal requirements, not for their neutral standing.[21] Thus, while the law can be instrumental in attaching credibility to science, it simultaneously holds the power to remove it.[22] In the end, this presupposes an arrangement whereby legal, as well as scientific, determinants structure the production of truth in the courts.

The expanded presence of technical evidence in the resolution of legal conflicts has engendered new types of expert. For instance, the health care disciplines have spawned a genre of professionals for whom it has become convention to move between practice and the courts. Medical experts are enlisted to comment on existing evidence in cases related to claims of human damage or its likelihood (eg internal injuries resulting from Shaken Baby Syndrome, immunological responses to silicon gel breast implants). They are also asked to represent evidence they themselves have assembled, often psychological or behavioural in nature (eg results from psychometric tests to ascertain dangerousness or the presence of post-traumatic stress disorder). In some circumstances, the evidence they are required to collect may also be physical. This is the case for the crime of sexual assault, where physicians and nurses are engaged to administer forensic technologies to document biological samples and injuries from a woman's body, in order to create technical information which may eventually constitute expert evidence for the courts. It

16 See Hacking (1999); Toumey (1996).

17 Gieryn (1999), p xi.

18 Cole (1998); Collins and Pinch (1998); Lynch and Jasanoff (1998); Smith (1989).

19 See Gutheil and Sutherland (1999); Solomon and Hackett (1996).

20 Rose (1999), p 11; see also Halfon (1998).

21 Smith (1989).

22 See Gieryn (1999).

is here, we argue, that the initial social shaping of scientific evidence may occur.

The Crime of Sexual Assault

Sociolegal Context of Sexual Assault in Canada

When women in Canada bring charges of sexual assault before the courts, the legal process they face is generally influenced by stereotypical views of womanhood.[23] According to these beliefs, women who have been raped are either young, virtuous victims who have struggled against their aggressors, or nefarious defenders of unwanted pregnancies and vindictive man-haters. One corollary to these myths is that women who are raped will report the assault to the authorities immediately; another is that if they spend time in bars, or dress provocatively, they are inviting rape. The most pernicious of all these stereotypes is a generalised belief that women lie.[24] This has meant that accusations of rape have been viewed with considerable suspicion, unlike accusations of crimes such as theft. Comments made by much-quoted legal scholar Glanville Williams reflect the long-standing distrust of sexually assaulted women:

> sexual cases are particularly subject to the danger of deliberately false charges, resulting from sexual neurosis, phantasy, jealousy, spite, or simply a girl's refusal to admit that she consented to an act of which she is now ashamed.[25]

Indeed, in the Anglo-American tradition of law, the belief that women lie 'has consistently been expressed in legal rules, in jury instructions, in appellate opinions, and in law treatises'.[26] Historically, in Canada, special evidentiary rules governing sexual offences permitted a woman's credibility to be tested with questions regarding her sexual history, and presumed she must register a formal complaint at the first opportunity.[27] Further, while the uncorroborated testimony of a complainant was sufficient in law to establish most verdicts, this was not so for 'victims of sexual offences, historically almost always women'.[28] As a part of what were known as the 'corroboration rules', s 134 of the *Criminal Code 1955* (Can) stated that:

> where an accused is charged with an offence under section 136 [rape], 137 [attempted rape], subsection (1) or (2) of section 138 [sexual intercourse with a female under fourteen or between fourteen and sixteen] or subsection (1) of section 141 [indecent assault on a female],

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23 Busby (1999); Denike (2000); McIntyre et al (2000).

24 Estrich (1992).

25 Williams (1962), p 662.

26 Mack (1993), p 329.

27 Canada, Department of Justice (1991).

28 Hoskins (1983), p 176.

> the judge shall, if the only evidence that implicates the accused is the evidence, given under oath, of the female person in respect of whom the offence is alleged to have been committed and that evidence is not corroborated in a material particular by evidence that implicates the accused, instruct the jury that it is not safe to find the accused guilty in the absence of such corroboration.[29]

Pressure, in part, from the women's movement precipitated the repeal of this 'warning rule' in 1975.[30] Nonetheless, the practice of cautioning juries continued at the discretion of trial judges until the *Criminal Code 1983* (Can) introduced amendments stating that no corroboration was necessary to convict and no warning should be given on the dangers of acting on the uncorroborated testimony of the victim.[31]

These legislative changes notwithstanding, judges may assist juries in deciding the weight to be given to the unsupported evidence of sexual assault complainants.[32] As sexual assaults are seldom witnessed, cases are often reduced in the courts to the competing claims of the victim and the assailant.[33] Under these circumstances, physical findings that may substantiate the allegation are especially salient. It has been argued that the most important evidence in this respect is collected from the woman's body.[34] According to Jennifer Temkin:

> Forensic medical evidence obtained by examination of the victim is of crucial importance in the investigation and trial of rape offences. The outcome of a prosecution is likely to depend on it.[35]

Some have even suggested that the collection of medicolegal evidence be a mandatory component of the legal investigation.[36]

The Sexual Assault Evidence Kit as Employed in Ontario

In Ontario, the SAEK[37] is the primary tool used to collect medicolegal evidence. The kit is a sealable box comprised of a standardised protocol and the paraphernalia necessary for collecting biological samples. It is administered by specially trained physicians, nurses and Sexual Assault Nurse Examiners in hospital-based sexual assault treatment centres for the purpose of assisting the police in apprehending and prosecuting the individual who has

29 As cited in Hoskins (1983), p 187.

30 Richards and Fruchtman (1991).

31 Canada, Department of Justice (1991); Richards and Fruchtman (1991).

32 *Martin's Annual Criminal Code 2001 [student edition].*

33 See Du Mont and Myhr (2000); Gunn and Linden (1997); La Free (1989).

34 Cabaniss et al (1985); Kalemba (1995); Tucker et al (1990).

35 Temkin (1998), p 821; see also Kelly et al (1998), p 411.

36 Edgardh et al (1999).

37 Produced under the auspices of the Ontario Ministry of the Solicitor General in collaboration with the Centre for Forensic Sciences in Toronto.

committed the assault. It doing so, it aids in establishing whether a forced sexual encounter has occurred and in linking the assailant and the victim to the crime scene.[38]

The protocol which guides the history-taking, physical examination, laboratory investigations, medical care and collection of forensic evidence consists of six forms:

1 a *Consent Form* which describes the process of evidence collection and indicates that results will be disclosed. It explains to the sexual assault victim that she may revoke her consent at any stage of the proceedings, that such a refusal will not affect her treatment and that the physical exam *may* include examination of her mouth, anus, rectum and vagina and collection of pubic and head hair, saliva, as well as blood and urine for drug or alcohol analysis;

2 a *Medical History Form*[39] which contains relevant questions about her medical and surgical history, such as present or past pregnancies and contraception practices;

3 a *Sexual Assault History Form* which requests information regarding the place, date and time of the assault, the number and sex of the assailants, marks or scratches left on the assailant(s), threats or the use of weapons, penetration of the vagina, anus and/or mouth, ejaculation, vaginal bleeding or discharge, and activities prior to (had intercourse during previous week) and following (douched, showered, bathed, voided, defecated and changed clothes) the assault;

4 a *Forensic Evidence Form* which itemises the clothing and body (eg oral swab, seminal stains on skin, blood for alcohol/drug analysis) and anogenital (eg vaginal swabs, combing of pubic hair) samples taken. It is accompanied by explicit instructions that state: 'the evidence collected and documented ... should be directed by the history of the assault'. These instructions specify how the clothes, foreign material (eg hair, fibres), saliva, semen, blood, and urine should be taken and preserved. If specimens are not collected, the form states that medical personnel are required to provide reasons why;

5 a *General Examination Form* for the documentation of physical injuries on enclosed diagrams, as well as of a woman's emotional status; and

6 *Treatment Guidelines* regarding sexually transmitted infections, Human Immunodeficiency Virus or Acquired Immune Deficiency Syndrome, Emergency Contraceptive Pills, follow-up for psychological sequelae and counselling and reports to child protection authorities.

Although the SAEK was implemented with the belief that 'if prescribed procedures [were] followed, it [would] be less likely that the acceptability of [such] evidence [would] be questioned in court',[40] we have begun to discern

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38 See Du Mont et al (1997); Tucker et al (1990).

39 It should be noted that the Medical History Form is not meant to be forwarded to the police.

40 Ontario, Provincial Secretariat for Justice (1979), p 20.

that the professionals who administer the kit may not consistently follow the guidelines as set out in the protocol.

Constructing Bodily Evidence through the Documentation of Physical Findings

In 1997, we conducted an exploratory study, surveying the physicians and nurses of a small city's Sexual Assault Care Centre about practices with respect to the administration of the Sexual Assault Evidence Kit (N = 14).[41] Our intent was to investigate whether their collection of medicolegal evidence was standardised. Standardisation was determined by asking questions related to professionals' ability to remain objective and to adhere to the protocol while administering the SAEK. The findings suggested a lack of uniformity in the application of the kit across cases. We concluded that further research into the practices of evidence collection was warranted, and consequently undertook a more comprehensive examination of the issue.

In September 2000, we approached the Ontario Network of Sexual Assault Care and Treatment Centres, the umbrella organisation for 29 hospital-based sexual assault services across the province. It was agreed that revised versions of the pilot study surveys would be distributed to the membership. In order to aid in their construction and to supplement the information collected, in-depth interviews were conducted with two nurse examiners in Toronto, and three focus groups were held involving nurses and nurse examiners from seven geographically and culturally diverse (eg rural, urban, predominantly French-speaking) centres. In February 2001, 417 surveys were sent to physicians, nurse examiners and nurses. Of these, 149 were returned for a response rate of 36 per cent. The results that follow derive from these surveys, as well as the interviews and focus groups.

A total of 17 per cent of the physicians, nurse examiners and nurses surveyed stated that they had difficulty remaining objective while they administered the kit 'all' (5 per cent) or 'most' (12 per cent) of the time. Forty-seven per cent reported difficulty remaining objective 'some of the time'. In discussing these difficulties, one nurse examiner said: 'We have conversations about objectivity all the time, you know, and yeah, I don't know that it's possible not to want to help somebody who's in distress.' She continued: 'I was supposed to be objective, but I mean I would like somebody to write a paper on "can a medical person be truly objective?" I don't think you can.' Another SANE similarly stated: 'I don't ever see myself that way ... qualitative people never see anything as objective. You are trying to get everything that's there ... and you are trying to do it to the best of your ability.'

Deviations from the kit protocols were common. More than three-quarters (77 per cent) of the respondents said that they deviated from the standard criteria of the kit 'all of the time' (8 per cent), 'most of the time' (13 per cent) or 'some of the time' (56 per cent). One nurse examiner stated: 'When I fill in those forms I'm just being very careful [about] what I'm writing there ... not

41 Parnis and Du Mont (2001).

everybody will document in the same way.' Such deviations most frequently involved taking more samples than were required. For example, one nurse said she would do an anal swab even if the woman initially denied having been penetrated rectally. Qualifying this practice, she spoke of a case where at first the victim 'admitted to the vaginal, but she was embarrassed about the rectal, so she just didn't ... she said "no" to the rectal'.

Several respondents stated that their deviations were motivated by their wish to minimise further trauma to victims. In fact, most respondents (87 per cent) stated that they were influenced by the physical and/or emotional condition of the victim when administering the kit. When asked specifically how often they omitted questions or components of the kit because they believed they were too upsetting for the victim, 28 per cent of the respondents replied 'all' (1 per cent), 'most' (1 per cent) or 'some' (26 per cent) of the time. 'If the person has a really difficult time doing it, after a few attempts, or if the person asks me to stop, I would stop [said one SANE] ... I would get what I can ... if it's really traumatising to the person, and they really don't want to do it or cannot do it, then I would put down that I couldn't, that I can't.' She later added that she might not use the kit at all. 'If they are really uncomfortable with everything ... or they can't be touched afterwards, I would probably choose not to use it ... I would choose not to traumatise them any further for the purposes of collecting evidence.'

Further deviations from the standardised use of the SAEK were due to anticipation on the part of medical professionals that findings might be used against victims in court. Thirty-one per cent reported that they omitted questions for this reason, 'all' (3 per cent), 'most' (2 per cent) or 'some' (26 per cent) of the time. In discussing women's coping mechanisms in the face of sexual assault, a nurse examiner pointed out that, whereas she would record that a woman was crying, she would not document a woman's laughter in the treatment room, because although she knew 'that is a perfectly normal reaction ... to go around and go "woo-hoo", and put on a happy face ... a kind of hysterical laughing', it might be misinterpreted by defence lawyers. A colleague of hers concurred: 'I don't ask "emotional status" anymore, and I feel that if I get asked in court why I didn't write anything, I'll say I just feel as a nurse that it's not relevant, because everybody has varied emotions.' Finally, one SANE observed: 'To look at the legal system and to know it's screwed up, to know that it never works for women and not to try to influence that in some way, you know ... for sure, in some way that makes me biased.'

Although the collection of forensic samples for laboratory examination is to be governed by the victim's articulation of what has happened to her, we found that only two-fifths of the respondents (40 per cent) stated that they adhered to this directive 'all of the time'. In fact, 11 per cent stated that they were 'never' guided by the history of assault when collecting medicolegal evidence, and a further 21 per cent said they were guided only 'some of the time'. One nurse examiner declared: 'I'll do what seems reasonable ... I don't do anything that doesn't seem reasonable ... If people are particularly concerned about being tested for drugs or alcohol, I would just omit that with no explanation.'

Because a woman who has been sexually assaulted may still be in crisis when she presents to a sexual assault treatment centre, the on-call medical professional, by virtue of position, may influence her decision to undergo a forensic examination. Indeed, when physicians, nurse examiners and nurses were asked if there were circumstances under which they would 'discourage' a victim from completing a kit, two-fifths (40 per cent) responded affirmatively. The most common reasons cited were: the issue is consent or the perpetrator is known; the victim is a child; unsure whether to involve the police or distressed; there was no penetration; there is insufficient evidence; and the 'case will go nowhere'. Almost three-quarters (73 per cent) also responded that there were situations when they would 'encourage' a woman to complete a kit. These respondents felt its use would be helpful if: the assailant was a stranger and/or a suspected serial rapist; a weapon was involved; and the victim was penetrated, injured, could not remember the details of the assault (eg she had been drugged or had passed out from alcohol consumption), or was unsure about whether to pursue the case through the legal system. With respect to encouraging a woman to consent to the forensic medical examination, one nurse examiner reflected on just how arbitrary decisions about the use of the kit tend to be:

> For some cases ... I do feel this would be a good case for the kit, we should be doing one; and for some other cases, I just feel that ... we're doing this for no reason, or it's not going to go anywhere. So I just find sometimes that it's a waste; and for the cases where you feel they should have it done, they are the ones that decide not to have it. And the ones who you don't think it is appropriate, or not relevant, but would be useful, they are the ones who want it.

Emerging Hypotheses

We began this article by discussing the social construction of scientific evidence, arguing that, as it intersects with the law, it is further configured in accordance with legal needs and requirements. We then suggested that, in certain circumstances, an antecedent level of evidence construction may exist whereby medical professionals use forensic technologies to gather material findings. We posited that sexual assault cases that involve a SAEK for the purpose of substantiating a complainant's allegation may provide an example of this process. Our preliminary analyses of interview, focus group and survey data suggest that how this standardised tool is applied in practice may influence the shape of the medicolegal evidence extracted for potential court use. A substantial proportion of physicians, nurse examiners and nurses revealed that they had difficulty remaining completely objective when administering the kit. Many deviated from the prescribed protocol, omitting certain items and failing in certain instances to be guided by the history of assault when collecting specimens for forensic analyses.

We hypothesise that the discretionary practices of the health care professionals who administer the SAEK may reflect a structural contradiction

in the medical application of science for legal purposes. Our data suggest that an inevitable tension may be created for those who attend to the physical and psychological needs of the sexually assaulted woman, while at the same time engaging in investigative activities centred on the standardised documentation of corroborative evidence. In the end, it seems, concerns regarding the interests of the client may take precedence, especially in instances where it is believed that evidentiary procedures and findings could work against her. In his experience as a forensic examiner, Raine Roberts has also observed that 'there is a danger of doctors, in an honest wish to assist their "patient", straying into subjective territory in search of evidence to support the case (and occasionally withholding evidence which undermines the case)'.[42] Savage et al concur that a conflict exists between the therapeutic and forensic roles of the police surgeon in Britain.[43] The data also indicate that professional and personal biases may underlie the frequently individualised application of the kit.[44] For example, circumstances in which some survey respondents stated that they would encourage a victim to complete the SAEK mirror societal notions of a 'real rape': one or more stranger assailants, who serially rape with a weapon and vaginally or anally assault the victim, resulting in her being injured. Additional research into the attitudes and experiences of sexual assault professionals might further uncover the factors that influence practices of evidence collection.

To conclude, we suggest that medicolegal evidence may be socially constructed. In the case of sexual assault, physical specimens selectively collected from a woman's body may then be further transformed as they pass through the scientific and legal cultures. In the process, a woman's account of her assault may become a sequentially mutated expert re-presentation of what she states has transpired. The official version of her story may not only appear unrecognisable to her; it may challenge her veracity. Comprehensive and systematic investigation of court transcripts and first-hand experiences of women who have undergone a medicolegal exam and testified in court may be the key to determining whether the kit serves to perpetuate negative stereotypes in the rape mythology, most notably that women lie about being sexually assaulted.

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42 Roberts (1999), p 390.

43 Savage et al (1997).

44 Parnis and Du Mont (2001).

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