

Unmasking Scientific Controversies

Forensic DNA Analysis in Canadian Legal Cases of Sexual Assault

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Depuis les années 80 les analyses médico-légales de l'adn ont augmenté dans les cas légaux de violence sexuelle au Canada. En dépit de cette ouverture, les pratiques et la controverse qui entourent l'application légale de cette science sont toujours dissimulées chez les victimes d'agressions sexuelles et dans l'aide apportée par les communautés. Cet article attaque cette invisibilité dans un effort de stimuler la réflexion féministe sur l'efficacité de l'évidence qu'apporte l'adn dans les cas d'agression sexuelle.

Since the late 1980s, forensic DNA analysis has become a central practice within the legal response to sexual violence in Canada. DNA analysis is used in these cases to scientifically demonstrate the occurrence of a sexually violent act and to identify its perpetrator (Nelkin and Lindee). Although DNA analysis has aided in the successful resolution of some Canadian sexual assault cases, as defined by the conviction of a sexual assault offender (Gerlach), there continues to be a need for critical feminist reflection on the efficacy of DNA analysis in legal cases of sexual assault.

Despite the increasing use of DNA analysis in the Canadian legal system, much of its history and current uses and procedures have remained largely invisible to the public. Although the history of DNA analysis in sexual as-

sault cases has been relatively short, it has been riddled with controversy, from Canadian feminists arguing for more systematic procedures in the legal handling of sexual assault to scientific communities debating the validity and reliability of different approaches to DNA analysis. These historical and contemporary debates around DNA analysis have remained absent from public discourse. The contemporary scientific practices involved in DNA analysis have been similarly made invisible to victims¹ of violence and their communities of support. Despite the significant impact these practices have on the lives of victims and their communities, they are often encased in legal and scientific discourses that render them inaccessible. This paper tackles the invisibility that surrounds forensic DNA analysis in cases of sexual assault in an effort to enliven feminist reflection on the scientific practices involved in the legal response to sexual violence.

Few academic works have outlined the debates and contentious issues among feminists, scientists, and legal professionals regarding the nature and use of DNA analysis in cases of sexual violence. This paper addresses this gap by first outlining some of the historical controversy surrounding DNA analysis in the Canadian legal system. It then turns to a discussion of some of the current debates within

the scientific community regarding the appropriate technologies for DNA analysis.

This paper will conclude with a critical discussion of DNA analysis in cases of sexual assault and raise a call to feminist thinkers to address the question: what are the consequences for Canadian women of DNA analysis in the legal handling of sexual violence? The authors of this paper recognize that not all women share the same lived experiences of sexual violence and the Canadian legal system. However, there is a significant lack of empirical research on the experiences of women, particularly racialized women, in relation to the collection and analysis of DNA evidence. For the purposes of this preliminary investigation of the area, this paper assumes some shared experiences between women in relation to forensic science in cases of sexual assault, and uses the singular term woman to reflect this assumption.

Before beginning this discussion, two central concepts important to this paper will be outlined for those unfamiliar with the scientific practices involved in the legal handling of cases of sexual assault in Canada. These concepts are DNA and the Sexual Assault Evidence Kit (SAEK).

DNA (Deoxyribonucleic Acid)

DNA is an abbreviation for deoxyri-

bonucleic acid. This specific nucleic acid has been suggested to be the “blueprint of the body”, or the map of an individual’s genetic information (Solicitor General of Canada 2). Individuals are considered to have unique DNA profiles. As such, if an individual’s DNA profile can be located, it is assumed that it can be used for identification purposes. Forensic DNA analysis involves the extraction of DNA profiles from forensic samples gathered at a crime scene (Caddy and Cobb). In cases of sexual violence, the DNA profile that is generated from forensic samples is used to identify the perpetrator of the crime.

Several technologies for DNA analysis exist. The specifics of some of these methods will be discussed in this paper (Gerlach; Quinlan; Lynch; Cole, McNally and Jordan).

Sexual Assault Evidence Kit

The Sexual Assault Evidence Kit (SAEK)² is a tool that is used in the medical examinations of victims of sexual violence. This kit is also commonly referred to as a “rape kit.”³ The SAEK contains materials, such as swabs, vials, and hair combs, which assist in the collection of various types of forensic evidence from the victim’s body. The administration of the SAEK kit is completed by a trained forensic nurse and takes approximately four hours to complete (Du Mont and Parnis). During this time biological materials are extracted, and victim’s injuries, emotional status, and medical and assault history are documented (Parnis and Du Mont 2002). The SAEK, once completed, is sent to the forensic laboratory. The contents of the kit are examined by forensic scientists and used to locate a potential DNA profile that could identify the perpetrator.

The SAEK and the scientific procedures that accompany its use are considered by the legal system to result in reliable, valid accounts of sexual violence. The importance

placed on the SAEK within the legal institution often results in “the evidence generated through the rape kit becom[ing] the basis on which a sexual assault is deemed to have or have not occurred” (Temkin cited in Du Mont and Parnis 2003: 173). The evidence produced by the SAEK is considered scientifically sound and, thus, has equal if not silencing authority over all other voices within

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the court room. As Du Mont and Parnis state, the SAEK is the “tool that science converges with the law in the attempt to determine the ‘truths’ of women’s claims of sexual violence” (2003: 847).

As will be further explored in this paper, feminist scholars and activists have criticized the use of the kit for its revictimizing effect on victims (Du Mont and Parnis, 2003; Doe, 2008). Doe states that all of the women she interviewed described the process as “painful, humiliating, intrusive and/or a violation—a veritable second assault” (2008: 10). In addition to these critiques, feminists have called attention to the lack of standardization in the application of the SAEK across regional and provincial borders (Parnis and Du Mont 2002; Doe, 2008). This paper will trace some of these debates, while situating them within a historical narrative of DNA analysis in Canada.

The History of DNA Analysis in Canada

Despite the growing predominance of DNA analysis in the Canadian legal system, the history of controversy surrounding its use in cases of sexual assault is largely unknown. Contentious historical issues related to DNA analysis are rarely discussed in the media and are often rendered absent by forensic scientists and legal professionals. The presumed success of DNA analysis, a practice that has become tightly woven into networks of legal institutional action, conceals and masks its own historical complexity. An exploration of this complexity, however, is crucial to the project of understanding how this practice is organized in the contemporary legal system. This exploration also serves the political purpose of rendering some of these debates visible.

The use of DNA analysis in legal cases of sexual violence has a short but complex history filled with the competing voices of scientists, feminists, and legal professionals. Alec Jeffreys, a prominent British geneticist working in the 1980s, is considered by the scientific community to be responsible for the discovery forensic of DNA testing (Bieber; Gerlach). While forensic analysis stems back to the 1800s with the investigation of fingerprint evidence, Jeffreys’s work marked the first exploration of forensic analysis of DNA in criminal investigations (National DNA Databank⁴). Jeffreys and his team of scientists at the University of Leicester explored how genetic codes, considered to be reflective of an individual’s genetic composition, could be extracted from cellular material (Gerlach). The team examined how an individual’s genetic map remains consistent across many different types of cells in the body. In addition, the team investigated the degradation of DNA within old samples of blood and semen (Gerlach). The findings from this exploratory work formed the



Shary Boyle, "Bloody Writes An Anthem," 2005, ink and gouache on paper, 60 x 50cm.

basis upon which DNA analysis was soon used in legal systems in North America and Western Europe.

In 1983, following several publications of Jefferys' work, a young woman in a town near Liechester in the United Kingdom was sexually assaulted and murdered (National DNA Databank¹). The case remained unsolved until several years later when, following a second murder, police sent a collection of blood samples from the crime scenes to Dr. Alec Jeffreys. He compared the DNA collected at each crime scene and concluded that it originated from the same individual. Blood samples from 4,500 men were collected from nearby communities until a profile that matched those found was discovered (Bieber). The man whose DNA profile matched

those found at the crime scenes was convicted of two crimes: murder and sexual assault.

The History of the Sexual Assault Evidence Kit

Alongside these scientific developments in the 1980s in the United Kingdom, feminist groups in Canada were lobbying for the improvement of medical and legal responses to sexual violence (Feldberg). In 1978, the Ontario Provincial Secretariat for Justice held a consultation on rape where lawyers, police officers, rape crisis professionals, and physicians met to discuss the issues surrounding the medical care of victims of sexual assault and the gathering of forensic evidence (Feld-

berg). Unlike its contemporary use, forensic evidence in the early 1980s was not collected for the purposes of DNA analysis. Physical evidence was instead used to determine if male sperm was present on a woman's body and if a physical struggle between the victim and perpetrator had occurred. Things such as clothing, hair, and blood samples were collected for analysis (National DNA Databank). While the analysis of physical evidence was routinely used in legal cases of sexual violence, its impact and usefulness has been widely debated (Feldberg; Martin et al.).

Feminist groups and several other professionals argued that the lack of standardization in the collection of forensic evidence rendered the results

of its analysis problematic (Parnis and Du Mont 2006). The tension at the time was described in the following lines:

Community-based feminists, crisis workers and some medical, scientific, law enforcement and legal professionals complained that inadequate and haphazard medical and forensic evidence collection practices were meeting neither the needs of sexually assaulted women nor those of the legal system with respect to providing reliable and useful evidence. (Parnis and Du Mont 2006: 77)

As a result of pressure from these feminist groups, the consultation on rape developed the Sexual Assault Evidence Kit (SAEK). The current SAEK contains materials to assist in the collection of forensic evidence, including, “cotton swabs, test tubes, microscope slides, a comb and fingernail clippers” (Martin et al.). The swabs, test tubes, and microscope slides were designed to collect semen and blood, and fingernail clippers for collecting fingernails if the victim scratched the assailant (Martin et al.). While the formation of the SAEK calmed some of the debate regarding forensic evidence collection in cases of sexual assault, new controversies regarding its production and use emerged.

DNA Analysis in Canada

In 1989, the RCMP employed DNA analysis for the first time in a sexual assault case that occurred in Ottawa (RCMP 2003). Reports have suggested that Hilary McCormack, the Crown prosecutor of the case, was familiar with some of the developments in DNA analysis that were forming in the United States. She had reportedly planned to send forensic samples from the case to the newly formed private DNA labs across the border. However, before the samples were sent, the RCMP

made an offer to conduct the analysis locally (RCMP 2003). As McCormack remembers, “it was going to be far less expensive and would also give the RCMP an opportunity to enhance their knowledge and expertise in this new field” (McCormack cited in RCMP 2003: 13).

Following in the path of Jefferys’ work, a DNA code of the perpetrator was extracted from the forensic

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samples and was then compared to the DNA of the suspect. When a match was found, it was concluded that the suspect was the perpetrator (National DNA Bank). While the victim of the case had previously visually identified the perpetrator, the suspect had denied any involvement with the crime (National DNA Bank). The scientific findings, however, significantly altered the course of the trial. During the court case, the suspect changed his plea to guilty. The case set a historical precedent as it marked the first time DNA analysis was conducted by the RCMP for its successful use in a Canadian legal case.

After the success of the 1989 trial, DNA analysis became a common, although not uncontested, practice in the legal system. As Neil Gerlach contends, DNA testing formed the “new forensic paradigm with tremendous authority” (38). The SAEK became the tool through which

forensic samples were collected from the woman’s body, and DNA analysis the instrument that uncovered the facts of rape. Feldberg describes the kit of the 1990s by stating,

In a society where hard facts and scientific truths are revered, the purpose of the kit is to provide corroboration in the form of meticulous scientific evidence ... it attempts to produce “hard” physical evidence that will withstand scrutiny better than more subjective emotional/psychological measures. (110)

With the influx of DNA analysis into the legal system, the voice of science came to dominate the courtrooms of sexual violence cases. Victims’ stories of violence became overshadowed by the authoritative claims of forensic science (Quinlan). Despite DNA’s appearance of authority in the Canadian courtroom, various feminists, scientists, and legal professionals have debated the terms of its use. The debates have helped to expose the unfounded assumption that DNA analysis works in victims’ best interests. In doing so, these debates have not only charted out crucial beginnings to a feminist critique of DNA evidence in sexual assault cases, but have also laid the groundwork for possible future analyses of the sexist and racist views of female sexuality and racialized women that accompany the introduction of forensic science in the courtroom. While the influence of racism on women’s experiences of reporting sexual assault has been empirically taken up by some (Doe 2009), the intersection of racism and DNA analysis in sexual assault cases appears significantly understudied. There is a need for further empirical and theoretical work in this area.

This paper will focus on some of the contentions that feminist scholars and grassroots activists raised in relation to DNA evidence in cases of sexual assault.

DNA Analysis in the 1990s

In 1996, the Solicitor General of Canada spoke to the new found power of DNA analysis by stating: "DNA can focus investigations, and will likely shorten trials and lead to guilty pleas. It could also deter some offenders from committing serious offences. The increased use of forensic DNA evidence will lead to long-term saving for the criminal justice system" (2). While DNA typing was regarded by some to be the technology that was going to revolutionize the legal system, others raised strong reservations surrounding its use.

Patricia Lee, a grassroots feminist working at a Vancouver Rape Relief Centre, placed the presumed power of DNA analysis in a new light. She argued that the authority DNA was gaining in the legal system, as well as within broader society, could be detrimental to the interests of female victims of sexual violence. She claimed that:

In the few sexual assault cases where DNA evidence could be useful, it seems likely that attackers who realize the strength of the scientific evidence against them will switch from "identity" to "consent" as their defense. This means that instead of claiming that he was not the man who attacked her, the accused will claim that she agreed to sexual contact. It has already been demonstrated in Canadian courts that consent cases are harder to win. This could mean that with increased use of DNA technology, the conviction rate will not increase, and may even decrease. (2)

This argument, as well as the many others that echoed its sentiment, was in sharp contradiction to that of the Solicitor General's contention that DNA analysis would be the new time-saving device of the legal system.

Despite this dispute, and many

others of its kind, DNA analysis grew to become a central practice in the Canadian legal system (Gerlach). The RCMP Forensics Division expanded to allow for the influx of forensic samples that required testing, and forensic experts were routinely brought into the courtroom to explain their findings. This increased presence of science in the courtroom brought further critiques.

Feminists since the 1990s have continued to critique the ways in which the scientific voice has overpowered women's voices in the courtroom.

Silencing Women's Voices

Feminists in the 1990s argued that the authority of forensic science in the courtroom worked to silence women's voices and their narratives of sexual violence (Feldberg). Julie Kubanek and Fiona Miller asserted that the introduction of DNA evidence brought with it an increased reliance on scientific expertise (Kubanek and Miller). They stated that, "in the eyes of the judge and jurors, the verbal testimony of ... the victim, cannot carry the statistical reliability of scientific evidence, a bias which can only work against women in the majority of cases" (3). In Kubanek and Miller's analysis, women and their experiences were overshadowed by the imposition of DNA in the legal system. Echoing this contention, Georgina Feldberg quotes a victim of rape who reflected on her experience within the courtroom: "I

felt like an exhibit at my own trial; I had no voice, the experts and facts spoke instead of me" (113).

Feminists like Kubanek, Miller, and Feldberg claimed that despite the 1979 attempts to remedy the institutional handling of sexualized violence, the influx of DNA analysis served to reinforce and recreate traditional power inequalities between victims of violence and the legal system. As Feldberg argued, "the path to reform has led us onto troubled ground, and in some respects, the very tools we developed to achieve reform have in fact inhibited it" (110).

The Authority of Forensic Science

Throughout its short history, the voice of forensic science has carried with it the authority of being the "heroic truth" within legal cases of sexual violence (Di Fonzo). As J. Herbie DiFonzo suggests, since its inception "DNA forensic procedures have attained the courtroom air of flawlessness, often referred to as the 'mystical spell' of DNA" (2). Along a similar vein, the RCMP National DNA Data Bank Annual Report states that DNA analysis marks the "dawn of a new era in the administration of justice in Canada ... our work provides safer streets and safer communities for all Canadians and increasingly, for citizens around the world" (5). From all appearances, DNA analysis has grown to become a stable, uncontested practice within the legal system. However, it can be argued that this stability is an illusion.

Despite the growing reliance on DNA analysis in the Canadian legal system, many debates surrounding its use have continued. Feminists since the 1990s have continued to critique the ways in which the scientific voice has overpowered women's voices in the courtroom. In addition to these critiques, debate has also extended into the scientific community, where significant controversy over the technologies, procedures, and interpretations of DNA analysis in

cases of sexual assault exists. While these controversies flourish between scientists and legal professionals, they often remain invisible or inaccessible to victims of violence and their support communities.

In an effort to bring some of these debates into the public eye, the following section will outline some of the contemporary scientific controversies surrounding the use of DNA analysis in cases of sexual assault. While many debates surrounding robotics and automation, standardization, and technological change exist within the scientific community studying DNA, this section will focus specifically on the controversies surrounding the privatization of DNA analysis in Canada.⁴

Contemporary Scientific Controversies: Privatizing DNA Analysis

Since the first Canadian legal case to use DNA analysis in 1989, the vast majority of forensic analysis in Canada has been conducted in publically funded Royal Canadian Mounted Police forensic labs. However, there are now approximately nine privately funded DNA labs in Canada in addition to the public RCMP forensic laboratories (Quinlan). Two of these privately funded labs are accredited⁵ to do forensic DNA casework. Presently, however, the involvement of these labs in legal cases of sexual violence has been somewhat limited. To date, the private labs have been primarily involved in conducting analyses that have been contracted by the defence counsel⁶ as well as secondary analyses for the RCMP. As the popularity and reputations of these labs grow, however, this limited use is beginning to change.

The methods for DNA analysis used in the RCMP and private Canadian labs are similar, but there are some notable differences. For example, one Canadian private lab, similar to the RCMP, uses what is called PCR/STR nuclear profiling (Quinlan). However, this lab also uses other technologies that

have been argued by some to be more sensitive than those used by the RCMP. While most of the RCMP technologies have the ability to isolate and examine 9-13 locations on the DNA strand, methods used in the private lab have the capacity to locate 15-19 locations on the DNA strand (Quinlan). This greater number of locations has been suggested to increase the accuracy of the analysis.

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While this scientific development appears as though it would have a positive effect on cases of sexual violence, the discrepancy of practices between the publicly and privately funded labs in Canada have introduced the problem of divergent scientific results, an outcome that could challenge the authority the legal system has granted forensic DNA analysis. The prospect of inconclusive or contradictory forensic results that could result from differing practices raises questions about the ability of the legal system to make use of developing science. In addition, the tensions between public and private labs introduce the possible misuse of differing scientific practices and results by the defence. While much further discussion and exploration of these developing sciences is needed, critical thinkers should consider the possible impacts of differing scientific practices.

Mitochondrial DNA

A few private DNA labs in Canada have introduced “mitochondrial DNA profiling (mtDNA)” to the Canadian scientific community (Quinlan). This approach, although similar to what is used by the RCMP, involves the analysis of different locations within the cell. Instead of examining nuclear material, mtDNA analysis focuses on the mitochondria in the cell (cellular material that is outside of the nucleus). There are 700-2000 mitochondria within a given cell (Cheng). In cases where the nuclear material of a cell is damaged or degraded, mtDNA has been suggested as being extremely effective in locating a DNA profile (Paneto et al.; Cheng). The introduction of this methodology to Canadian forensic casework by private DNA labs has raised some contentious issues.

Mitochondrial DNA testing gained its reputation for generating DNA profiles from degraded or severely damaged samples through its use in successfully identifying individuals in large mass disaster zones, such as the 2001 9/11 attack on the World Trade Centre (“DNA Missing Persons Index”). In cases of sexual violence where there is a limited amount of biological material or the material that was collected remained inside the woman’s body for an extended period of time before being extracted, mtDNA has the potential to be particularly useful. Mitochondrial DNA typing has also been shown to be useful for hair analysis, more so than its nuclear DNA typing counterpart (Paneto et al.). In cases of sexual violence, where the only forensic evidence that can be gathered is a small piece of hair, mtDNA testing could also prove useful (Paneto et al.).

The exclusionary power of mtDNA is considered to be the same as methods involving the analysis of nuclear DNA (Quinlan). They can both exclude the possibility of a DNA sample being from a particular individual, when, by comparison, the DNA profiles from the two samples are found to be different. However,

the “evidentiary weight” of mtDNA is thought to be different than that of nuclear DNA testing (Cheng 100). Mitochondrial DNA is inherited maternally and, as such, grandmothers, mothers, and daughters will share the same mtDNA profile. As a result, the capacity of mtDNA analysis to identify a particular individual is lessened in comparison to nuclear DNA testing. Despite this, however, mtDNA analysis has been shown to be a useful technology in some legal cases.

Public vs. Private DNA Labs: Competing Practices and Conclusions

When mtDNA was first introduced in a Canadian legal case of sexual violence, there was substantial courtroom debate regarding its validity as a method (*R. v. Murrin*). However, since that time, there have been several Canadian cases that have garnered much attention in the media, pointing to the increased use of private DNA labs for mtDNA analysis. While these stories are ones of legal prosecution, they introduce questions surrounding the differing practices of the public and privately funded DNA labs in Canada. The most recent case of this nature involved an unsolved murder case from 1984 that was reopened and, with the employment of mtDNA typing, was solved in 2007.

The 1984 case involved a young woman named Candace Derksen who was killed and found seven weeks later, frozen in an abandoned shed (CTV.ca). In 2001, investigators sent forensic material from the case to the RCMP laboratory for analysis. However, they were told by the RCMP that the lab was unable to process the material. The forensic samples were sent to a private Canadian DNA lab and through mitochondrial DNA testing, a profile was generated. Mark Grant, a previously convicted sexual offender, was charged on May 16, 2007 with the first-degree murder of Candace Derksen. As one Canadian reporter wrote, “Winnipeg police say they could have arrested the man accused of killing Candace Derksen more than

five years ago if the National RCMP lab was able to do the [mtDNA typing] DNA testing” that was required to solve the case (Clayton).

The recent visibility of this case in the media introduces some contentious issues for DNA analysis in Canada. It marks one of the first cases in which the divergence between the methodologies employed by the RCMP and private labs in Canada was

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made visible to the public. However, much of the complexities of the scientific methods behind mtDNA and PCR/STR nuclear testing were not divulged in the media representations. Instead, the public was notified only of the different conclusions reached between the RCMP and private labs.

Faced with these contemporary complexities surrounding the influx of mtDNA testing in Canada, the RCMP responded in a somewhat contradictory manner. On the RCMP’s website, some of the benefits of mtDNA testing are acknowledged. However, they assert that it can only serve as a “secondary analysis” as mtDNA “does not necessarily provide conclusive identification of an individual” (RCMP 2007). Further to this, a consultation paper written on the possibility of creating a new missing persons index in the Data Bank stated that “the scientific techniques required for mitochon-

drial DNA analysis are significantly more expensive and time consuming than those for nuclear DNA” (Public Safety and Emergency Preparedness Canada). The expense that would be required to implement a new technology in the RCMP labs would be large, which explains the RCMP’s hesitation to introduce mtDNA testing (Quinlan). However, with the increased visibility of cases requiring mtDNA testing, it is possible that the RCMP may choose to implement the technology in the future. Until such time, Canadian DNA analysis will struggle with the current disjuncture between practices in the RCMP and private DNA labs.

While cases such as the Candace Derksen murder introduce some questions about the results assembled in the RCMP labs, the common practice has been to place full trust in the RCMP’s conclusions (Quinlan). When the RCMP stated that no DNA could be found on the woman’s body, their contention remained unchallenged until a private DNA lab with alternative technologies proved otherwise. As has been suggested in this paper, DNA analysis has been given an authoritative voice within the legal system. It is assumed that results from the forensic laboratory are “truth.” Conclusions drawn in the laboratory have significant impact on victims of violence and their experiences within the legal system. As feminists concerned with enacting change in the legal institution, we should be considering the impact of these divergent scientific practices and conclusions on victims of violence, their supporting communities, and Canadian legal precedent.

Feminist Perspectives

The authority that DNA analysis has been granted in Canadian cases of sexual assault alongside the growing controversies in the scientific forensic community raise some significant questions for feminists. Some of these questions will be explored in this section.

The Problem of Consent

As feminists in the 1990s contended, the rise of DNA analysis in cases of sexual violence has the potential to shift legal focus from the problem of the identification of the perpetrator to the issue of proof of non-consent. The “consent defence” can be used by defence attorneys to suggest that no crime has occurred, regardless of DNA evidence revealing sexual contact. The result could be that women would be forced back into the courtroom for the purposes of being prodded and probed in attempts to reveal that they in some way consented to the activity, or at least that the accused thought she did.

Further, with the increased focus on DNA analysis in sexual assault cases, police and prosecutors may hesitate to pursue those cases where DNA cannot be obtained from the crime scene or from the woman. This result is particularly problematic where, for example, the woman has declined the SAEK to avoid being re-victimized. This presents some crucial issues for victims seeking legal resolution and feminists fighting for change in the legal system, issues that must be seriously considered.

Transparency

Gerlach suggests that with the increase in public awareness of DNA analysis and the sensationalized accounts of the technology in the media, the contemporary Canadian legal system runs the risk of attributing DNA results with more power than they deserve. He writes “judges and lawyers, and even scientists, are all too easily misled regarding the sorts of conclusions a DNA match allows them to make about the defendant’s guilt or innocence” (46). The lack of transparency surrounding the controversies of DNA analysis in Canada perpetuates visions of its power and ability to uncover truth. This could have significant consequences for victims of violence, whose mistaken faith in the power of DNA evidence could lead to consenting to invasive DNA collection procedures without

full knowledge of how their DNA will be used and stored, as well as the efficacy of forensic DNA testing.

In an effort to address these issues, there must be greater demand for transparency around the practices and controversies involved in DNA analysis in cases of sexual violence. The results of DNA analysis have profound impacts on the lives of countless Canadian women who experience sexual violence. The knowledge of these processes should not be restricted to the scientific community. If issues exist surrounding the effectiveness of certain methods of DNA extraction and analysis, then these issues must be openly acknowledged and represented in public discourse rather than obscured and rendered inaccessible.

The Silencing Effect

As feminists of the 1990s argued, the authority that has been granted to forensic science has worked to overshadow and, at times, silence women’s experiences of sexual violence in the courtroom (Kubanek and Miller; Feldberg). Andrea Quinlan captures the voices of several Crown prosecutors who described DNA analysis as “incredibly powerful” and “the best evidence by far.... It’s not an eye witness who may have had a few too many beers and might have forgotten over the past couple of months ... it’s hard to explain away” (94). Statements like these speak to the way in which the scientific rendering of rape has been granted authority over all other types of evidence, including women’s narration of their experience. This silencing of victims in the courtroom could lead to further trauma for reporting victims, decreased likelihood of reporting among recent victims, and increased legal and public misunderstanding of the experience of sexual violence.

The tensions in the scientific community that have been discussed in this paper may shed a new light on this discussion. The existing controversies over the conclusions of forensic science should lead to some questions

about the processes that have worked to grant forensic science its authority over women’s narratives within the courtroom. This paper has outlined only one of the many scientific controversies over DNA analysis.⁷ As technologies continue to develop, tensions between public and private labs will grow. As feminists interested in positive change for victims in the legal system, we should be closely watching these developments in the scientific community, challenging the authority of their conclusions that have been arbitrarily granted, and demanding their greater visibility in public discourse.

Conclusion

As Gerlach suggests, the power we have granted DNA analysis is perhaps far more generous than it deserves. While DNA has successfully aided in the resolution of several cases, the controversies surrounding its use and the conclusions it draws should be cause for both hesitation and reflection. This paper is a starting point for further critical dialogue. It is a call to Canadian feminists to critically consider the implications of the widespread use of DNA analysis in cases of sexual assault in Canada.

Many of the cases cited in this paper were stories of successful prosecution of perpetrators. They were stories in which DNA analysis played an important role within the narrative of a completed legal case. However, this very small sampling is not reflective of the majority of cases of sexual violence, many of which do not even make it to the courtroom. When considering the implications of a growing use of science in the legal system, we should be cognizant of the many stories that are not told, those that are ignored by popular media, and those that become stalled in the Canadian legal system, or deemed unfounded by investigators.

In the fight for progressive, positive change in the Canadian legal system, feminists, victims of violence,

supportive community members, scholars, and activists should take seriously the project of interrogating the authority that science has been granted in the courtroom. We should collectively consider the implications of the invisibility of these scientific practices and controversies and jointly struggle for their transparency. In addition, we must consider ways to increase the visibility of our own critical perspectives and acknowledgment of our voices within the legal system and in public discourse.

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¹Within much of the feminist literature on sexual violence, the term “survivor” has been used to replace the more common term “victim”. Despite this trend, there has been significant debate surrounding the meanings of these terms (McCaffrey; Lamb; Atmore; Reich; Young and Maguire). While the term victim can mistakenly suggest weakness, as some scholars have contended, it does not imply a recovered state, or even the possibility of recovery. Rather, it releases women from the societal expectation to heal, and instead acknowledges the possibility of an altered identity from which one cannot recover. Reich contends that if the term victim is to be used, it must be understood not as an encompassing identity that rigidly defines experience, but as a label that

is “fluid, temporal, unstable, and complex” (16). It is in this manner that the term victim will be used throughout this work. For further discussion see Quinlan.

²For a narrative of the experience of the administration of the SAEK, see Doe.

³While the term “rape kit” is widely used in academic literature, it has been contested by some medical professionals who argue that it carries connotations with the “tools of the trade of the offender” (Crowley 104). For this reason, this work uses primarily the term Sexual Assault Evidence Kit (SAEK) to refer to the materials used in forensic medical exams.

⁴For further discussion see Quinlan.

⁵Accreditation involves “the formal, independent evaluation of a laboratory’s competence to conduct specific tests” in accordance with national and international guidelines (Standards Council of Canada). Accreditation is granted to both public and private DNA labs in Canada by the Standards Council of Canada.

⁶The vast majority of DNA analysis conducted by the RCMP is done for Crown counsel. However, in some cases, the defence counsel requests expert opinion or secondary analysis. In these cases, private labs are often employed (Quinlan).

⁷Others tensions include the questionable results that have arisen from the introduction of robotics in DNA testing and analysis and the current inability of the National DNA Data Bank to store and compare any form of DNA profile other than PCR/STR nuclear profiles. For further discussion of these scientific controversies, see Quinlan.

References

Atmore, Chris. “Victims, Backlash, and radical Feminist Theory, or the Morning After They Stole Feminism’s Fire.” *New Versions of Victims: Feminists Struggle with the Concept*. Ed. Sharon Lamb.

New York: New York University Press, 1999. 183-212.

Bieber, Frederick. “Science and Technology of Forensic DNA Profiling: Current Use and Future Directions.” *Harvard Medical Alumni Bulletin* 76 (2) (2002): 34-37.

Caddy, Brian and Peter Cobb. “Forensic Science.” *Crime Scene to Court: The Essentials of Forensic Science*. 2nd Edition. Ed. Peter White. Cambridge: The Royal Society of Chemistry. 1-21.

Cheng, Edward. “Mitochondrial DNA: Emerging Legal Issues.” *Journal of Law and Policy* 2 (18) (2005): 99-118.

Clayton, Adam. “RCMP No Help in Cold Case.” *Sun Media*. 18 May 2007. Online: <<http://www.rcmpwatch.com/rcmp-no-help-in-cold-case>>. 1 October 2007.

Crowley, Sharon. *Sexual Assault: The Medical Legal Examination*. Stanford, CT: Appleton & Lange, 1999.

DiFonzo, J. Herbie. “The Crimes of Crime Labs.” *Hofstra Law Review* 34 (1) (2005): 1-11.

“DNA leads to arrest in 1984 Winnipeg ‘Cold Case’.” *CTV News Online*. 16 May 2007. <http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20070516/derksen_case_070516?s_name=&no_ads>. 15 November 2007.

Doe, Jane. “Who Benefits from the Sexual Assault Evidence Kit?” *Sexual Assault Law, Activism, and Practice in a Post-Jane Doe Era Conference*. Ottawa. 7 Mar. 2009.

Doe, Jane. *The Story of Jane Doe: A Book About Rape*. Toronto: Random House, 2004.

Du Mont, Janice and Deborah Parnis. “Constructing Bodily Evidence through Sexual Assault Evidence Kits.” *Griffith Law Review* 10 (1) (2001): 63-76.

Du Mont, Janice and Deborah Parnis. “Forensic Nursing in the Context of Sexual Assault: Comparing the Opinions and Practices of Nurse Examiners.”

- Applied Nursing Research* 16 (3) (2003): 173–183.
- Feldberg, Georgina. "Defining the Facts of Rape: The Uses of Medical Evidence in Sexual Assault Trials." *Canadian Journal of Women and the Law* 9 (1) (1997): 89-114.
- Gerlach, Neil. *The Genetic Imaginary: DNA in the Canadian Criminal Justice System*. Toronto: University of Toronto Press, 2004.
- Lynch, Michael, Simon Cole, Ruth McNally and Kathleen Jordan. *Truth Machine: The Contentious History of DNA Fingerprinting*. Chicago: University of Chicago Press, 2008.
- Kubaneck, Julie . "DNA Evidence Under Feminist Scrutiny: Myths and Dangers Exposed." *Kinesis* 1997.
- Kubaneck, Julie and Fiona Miller. "DNA Evidence and a National DNA Databank: Not in Our Name." Canadian Association of Sexual Assault Centres. 1 January 1997. Online: <<http://www.casac.ca/english/issues/dna.htm>>. 1 January 2008.
- Lamb, Sharon. "Constructing the Victim: Popular Images and Lasting Labels." *New Versions of Victims: Feminists Struggle with the Concept*. Ed. Sharon Lamb. New York: New York University Press, 1999. 108-38.
- Martin, Patricia, Diana DiNitto, Sharon Maxwell, and Diane Blum Norton. "Controversies Surrounding the Rape Kit Exam in the 1980s: Issues and Alternatives." *Crime and Delinquency* 31 (2) (1985): 223-46.
- McCaffrey, Dawn. "Victim Feminism/Victim Activism." *Sociological Spectrum* 18 (1997): 263-84.
- National DNA Databank. "Forensic History of DNA: Highlights." National DNA Databank Canada. 30 May 2007. Online: <http://www.nddb-bndg.org/foren_history_e.htm>. 1 January 2008.
- Nelkin, Dorothy, and Susan Lindee. *The DNA Mystique: The Gene as a Cultural Icon*. Ann Arbor: University of Michigan, 2004.
- Paneto, Greiciane, et al. "Heteroplasmy in Hair: Differences among Hair and Blood from the Same Individuals are Still a Matter of Debate." *Forensic Science International* 173 (2007): 117-21.
- Parnis, Deborah, and Janice Du Mont. "Examining the Standardized Application of Rape Kits: An Exploratory Study of Post-Assault Professional Practices." *Health Care for Women International* 23 (2002): 846-53.
- Parnis, Deborah, and Janice Du Mont. "Symbolic Power and the Institutional Response to Rape: Uncovering the Cultural Dynamics of a Forensic Technology." *Canadian Review of Sociology and Anthropology* 43 (1) (2006): 73-93.
- Public Safety and Emergency Preparedness Canada. "DNA Missing Persons Index (MPI): A Public Consultation Paper." *Government of Canada*. 1 March 2005. Online: <http://ww2.ps-sp.gc.ca/publications/policing/mpi/index_esp.asp>. 1 Nov. 2007.
- Quinlan, Andrea. "Assembling Legal Truths: DNA and the Enactment of Rape Case Evidence." Unpublished Masters thesis, University of Calgary, 2008.
- R. v. Murrin*. [1999]. B.C.J. 2715.
- Reich, Nina. "Towards a Rearticulation of Women-As-Victims: A Thematic Analysis of the Construction of Women's Identities Surrounding Gendered Violence." *Communication Quarterly* 50 (2002): 292-311.
- Royal Canadian Mounted Police (RCMP). *The National DNA Data Bank of Canada: Annual Report, 2003-2004*. Ottawa: Royal Canadian Mounted Police, 2003.
- Royal Canadian Mounted Police (RCMP). *Forensic Laboratory Services Action Plan: Executive Summary*. Ottawa: Royal Canadian Mounted Police, 2007.
- Solicitor General of Canada. *Establishing a National DNA Data Bank: Consultation Document*. Ottawa: Government of Canada, 1996.
- Standards Council of Canada. "Police labs go under the Microscope." *Consensus Magazine*, 29.
- Young, Stacy and Kathryn Maguire. "Talking about Sexual Violence." *Women and Language* 26 (2) (2003): 40-51.

**CAROLYNE
VAN DER MEER**

**The baby in her belly
(Part II)**

59 days
8 hours
and 23 minutes
more
you stayed inside
you said there
was no purchase
that it did not
feel like
home

Yet a part of you
stayed
grabbing
scraping
pulling at my
insides
swelling, burning
No, mommy,
you said
it's not time yet

Then wordlessly
calmly
you let go
went with the flow
swam outside
your legacy
finally gone
pain
subsides

*Carolyn Van Der Meer's
poetry appears earlier in this
volume.*