

DNA Evidence

Contamination, Transference, Timing & Mens Rea

I hold both degrees in both law and science. For my science degree I majored in genetics. As such, I am constantly surprised by the blind faith some people place in DNA evidence. It seems the general population, and indeed many lawyers, believe that DNA can to prove every aspect of a criminal prosecution. I assure you this is not the case. This article seeks to explain the limitations of fingerprint evidence to assist legal practitioners in NSW.

The Limitations of DNA

There are four main limitations to DNA evidence:

1. DNA can be transferred from one object to another,
2. The sample is usually from more than one individual,
3. The technology cannot say when the sample was deposited, and
4. DNA is silent on the issue of mens rea.

Contamination

It is rare for police to recover a pure sample of DNA from only one person. Most samples are mixtures from two or more individuals. Obviously, one of the profiles will match the Accused. But the DNA also proves that a second person contributed to the sample and suggests that that other person was at the scene and had the opportunity to commit the offence.

Often this other person or persons cannot be identified. Just like with fingerprints, if the person of interest is not in the database, then there is nothing to which to match the sample. This surprises many jurors, especially after the expert has given evidence about how accurately DNA can be matched.

Timing

The DNA expert cannot say when the sample was deposited. Just as with fingerprints, it can be left at the time of the incident, minutes before, hours before, or days or weeks before. So, the DNA attributed to the Accused could have been left at another time either before or after the incident.

By the time jurors have heard the expert concede these three points:

1. Timing - the DNA cannot place the Accused with the object at the relevant time,
2. Contamination - the DNA proves that other, unknown persons handled the object in the same time frame, and
3. the Accused may never have handled the object directly because his DNA may have transferred from another intermediate object,

they are usually deeply unimpressed with the DNA evidence. And we haven't even come to mens rea yet.

Mens Rea

While DNA may suggest that the Accused handled a murder weapon, it is silent as to his state of mind at the time. If the Accused is claiming accident or self-defence, the DNA cannot contradict him or her. The crown will have to rely on other evidence to prove the Accused's state of mind at the time. Likewise, if semen is recovered from a complainant, this cannot by itself say if the sex was consensual much less whether the Accused was aware that the complainant was not consenting.

Cross Examination

As always with XX, less is more. Jurors lose interest and will tune out after a few minutes. Sadly, many lawyers spend hours on XX hoping that the expert will slip up. Instead, the expert gets a further opportunity to persuade the jury of the infallibility of the technology. A better strategy is to get the expert to make the four concessions and then sit down. For example:

- 1. The phenomenon of transference means that the Accused may never have handled the object from which his DNA was recovered?*
- 2. You're unable to tell us whether the DNA was placed on the object at the time of the incident or before or after?*
- 3. Another unidentified person also contributed to the recovered sample in the same time frame?*
- 4. Even if the Accused did come into contact with the object, the technology cannot tell us what he was thinking at the time?*

Once you have these concessions, sit down! Its not going to get any better but it can get a whole lot worse.

If you have any interesting issues, I am available every day.

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