CITATION: *Russell v Mark Lirrpiya Dhamarrandji* [2006] NTMC 099

PARTIES:	PETER JOHN RUSSELL
	v
	MARK LIRRPIYA DHARARRANDJI
TITLE OF COURT:	Court of Summary Jurisdiction
JURISDICTION:	Justices Act
FILE NO(s):	20530011
DELIVERED ON:	18 December 2006
DELIVERED AT:	Darwin
HEARING DATE(s):	17 & 18 May 2006, 14 November 2006
JUDGMENT OF:	Mr V M Luppino SM

CATCHWORDS:

Evidence – Identification - Circumstantial Evidence – DNA Evidence – Statistical Database Correction Coefficient to account for possible corruption of the database due to the incidence of inbreeding amongst Aborigines – Validity of the database for statistical analysis purposes.

R v Bropho [2004] WADC 192

REPRESENTATION:

Counsel:

Informant:	Ms Hardy
Defendant:	Mr Bryant

Solicitors:

Informant:	ODPP
Defendant:	NAAJA

Judgment category classification:	B
Judgment ID number:	[2006] NTMC 099
Number of paragraphs:	103

IN THE COURT OF SUMMARY JURISDICTION
AT DARWIN IN THE NORTHERN
TERRITORY OF AUSTRALIA

No. 20530011

BETWEEN:

PETER JOHN RUSSELL
Informant

AND:

MARK LIRRPIYA DHARRARRANDJI
Defendant

REASONS FOR DECISION

(Delivered 18 December 2006)

Mr V M LUPPINO SM:

1. The defendant is charged on information with two counts of aggravated assault and one count of deprivation of liberty, all offences involving the one victim. In relation to the first count of aggravated assault, the circumstances of aggravation are that the victim suffered bodily harm, that she was indecently assaulted and that she is female and the defendant is male. The circumstance of aggravation in relation to the second count of aggravated assault is solely that the victim was indecently assaulted. Presumably the omission of the male/female circumstance of aggravation in the second count of aggravated assault was an oversight given that the prosecution case is that the assailant and the victim are the same in all charges.

2. The hearing proceeded as a summary hearing with the consent of the parties. The nature of the defence meant that there was little challenge to the circumstances of the offending. The issue in dispute is identification. Although some identification evidence in the physical sense existed, the

prosecution relies mainly on DNA evidence to establish that the defendant is the assailant. It is necessary to go into the actual evidence called in some detail to properly understand the issues in relation to the DNA evidence.

3. The first prosecution witness was Mr Brian McDonald. He previously worked in Arnhem Land as a community educator. He has known the defendant's family since the 1980s and the defendant since 1990 when he was a young lad. He said that the defendant has two sisters and one older brother. He said that the defendant's brother name is Shaun Lajbuana Dhamarrandji and that the brother also lives on Elcho Island.

4. Mr McDonald said that it had been arranged that he would meet the defendant at Darwin airport when he flew in on Sunday 4 December 2005. He said that he missed the defendant at the airport and that he first heard from the defendant at approximately 11.00pm that evening when the defendant telephoned him. He had been asleep at the time of the call. He said that he noted the time of the call as one would when awoken by a telephone call. He said that he recognised the caller as the defendant. During the call, arrangements were made for Mr McDonald to meet the defendant at 11 Halls Circuit, Alawa (hereinafter referred to as "Alawa" where the context permits) at 8.30am the next day.

5. Mr McDonald said that he attended as arranged but that the defendant was not there. He eventually located the defendant near the Darwin Sailing Club. He said that the defendant was walking towards the city. He said that he then picked him up. He said that the defendant was wearing dark long pants, a light thin jacket and a shirt. He could not recall the details of the shirt nor could he recall the style of the jacket. He was not sure if he was wearing a cap. He thought that the defendant was wearing thongs but was not sure. He said he took him to court and that at the conclusion of court he took him back to Alawa. He said that they were there briefly to get the defendant's bag and then he took him to the defendant's aunt's home in

Palmerston with the arrangement to pick him up from there the next morning.

6. Relevantly to the issue of the validity of the database for DNA statistical purposes, he was cross-examined about the social circumstances at Elcho Island and the nearby islands. He said that the general location is very remote and that there are a number of very remote outstations east of Elcho Island, both on islands and on the mainland. He said that the defendant lived on one of these outstations and there were limited outside contacts there.

7. Relevant to issues which would subsequently surface in relation to identification, he said that the defendant had not been a regular attendee at school. He generally described him as having a bare understanding of English and was generally capable of understanding and conversing with simple sentences but having limited understanding beyond that. He said the defendant is aged in his early twenties.

8. He was also cross examined about the time he attended at Alawa to pick up the defendant. He said that there was a large group of people there at the time, of the order of ten to twelve people. Specifically in response to a direct question by Mr Bryant, counsel for the defendant, he said that he was then told that the defendant had left the home shortly after the time he spoke with him on the phone. He said that when he and the defendant attended at Alawa to pick up the defendant's bag that he, Mr McDonald, waited in the car while the defendant retrieved his bag. He did not know what was in the bag as the defendant did not open it and there was no discussion about its contents. He said that the defendant took the bag with him to his aunt's home in Palmerston.

9. He was also cross-examined as to a cultural matter which would also subsequently become relevant to the challenge to the DNA evidence particularly the evidence in relation to innocent transfer of DNA. He said in

response that it is common amongst Aboriginal people in close relationships to share their clothing, although permission is at least expected to be obtained. He agreed that the defendant had close relatives living at Alawa, possibly close enough for them to take his clothes and wear them without permission. There was to be some later evidence which contradicted this but irrespective of the cultural issues, whether the sharing of clothing actually occurred at the relevant time was subsequently specifically refuted by the evidence of the relevant others.

10. Mr McDonald said that he was present when the defendant was arrested which was when they were en route to the airport for the defendant's return flight to Elcho Island. He said that the defendant had his bag with him at the time which the police took when they arrested him.

11. In re-examination it was revealed that the bag the defendant collected from Alawa on the Monday was the same bag that the defendant had with him when arrested. He said that it looked fairly full on both occasions. He said that he did not recall the defendant commenting that any of the items in his bag had been missing.

12. The victim in the matter then gave evidence. She said that she shares a home with Peter Hickmott who later also gave evidence. She said that she attended a work function on 4 December 2005. She said that she went there with Mr Hickmott and a friend in Mr Hickmott's car.

13. Not surprisingly, she consumed alcohol at that party and interacted with a number of people. At the conclusion of the function she said that she dropped her flatmate off and then went in his car to a hotel where a girlfriend worked. She left there somewhere between 11.00pm and 11.30pm but could not be more precise about the time.

14. She then visited a person in Moil and then went to a pay phone outside Casuarina next to the bank on Bradshaw Terrace. She thought the time

would have been approximately midnight. While on the phone a male person approached her. She described him as dark and Aboriginal, taller than her, wearing long dark pants and a dark collared jacket. She said she did not notice whether or not he wore a cap or had any footwear. No doubt with the perspective of a person in her late teens or just beyond, she said that he was an "old man" as he was in his mid twenties. She said that the person was not of large build and did not have any facial hair. She said that he asked for money. She said that she was still holding the phone but was in between calls at the time and had the phone to her ear.

15. She said that she was wearing three quarter length black pants, a black halter top and high heels. The black top was produced and identified by her and tendered in evidence (Exhibit 1). Relevantly to issues of possible secondary transfer of DNA, she was specifically asked whether the phone touched the top and whether she then touched her top with the hand that had held the phone. She responded in the negative in both cases.

16. She said that despite telling the male to go away, he stayed around. He then grabbed her by the throat with one hand and started to take her across the car park. She said that she tried to scream and he told her to "shut up". She said that he took her to a grassy area behind a small tree and near a fence. She was trying to fight him off and he kicked her feet out from under her and took her to ground. She said she tried to kick him off. She was lying on her back on the ground and he was on top of her. She said that he was strangling her with a hand on her throat. She said that he then sat on top of her. She tried to push him away with her hands and legs but could not do so. She said that he had his hands around her throat the whole time and that prevented her from screaming. She said she stopped moving because she could not breathe and so she decided not to resist. He thereupon let go of her throat.

17. She said that he then motioned her towards a tree. When there, she noticed that her top had come down. She was not wearing a bra at the time. She claims that he asked her to sit on his lap which she did. She said that he wanted a hug. She said that he started to hug her and that he put his arms around her. She said that to appear compliant, she also put her arms around him. She said that he kissed her on the forehead and the cheek. She said she became really scared and was panicky. She said that she was afraid that she would be killed or raped and pleaded with him not to do so. She said that he asked her to kiss him. She said that she started to "really cry". She told him that she would give him money or take him wherever he wanted to go. She told him that she had a car and showed him the car keys. She said that he did not say much. She said that she was doing all the talking, mostly as a way to calm herself.

18. She said that they got up together and he led her to the car. He detoured back to the tree area because apparently he had lost a thong there. He had his arms around her during this time. At the car she suggested that he get into the back seat and he did so. She said that she really had no wish to take him anywhere in the car but she felt that she had no choice and could not run away. She said that he asked to go to Casuarina beach. She said that he asked her to turn the interior light off, that she tried to but could not and that made him frustrated. She therefore suggested that he turn the light off. He attempted to do so but he could not turn it off either. Apparently he asked her to turn the windscreen wipers on and she did. She said that in the course of the conversation in the car that he said he was a killer. She said that she tried to chat with him in the car during the course of the journey. She said that he said something about his house which she could not make out. She said that he kept saying "don't worry".

19. She said that she was crying as she drove and kept asking him not to kill or rape her. She said that he got up close to her and wiped the tears off the left side of the face with his thumb and kissed her on the forehead. She said that

a taxi stopped next to her vehicle at traffic lights. She said that the assailant had told her to turn left but she said that she jumped out in front of the taxi and screamed for help. She said her car proceeded forward and went towards the gutter where it came to a halt. She said the assailant got out and ran off. Police were called by the taxi driver and attended shortly afterwards and took her to Casuarina Police Station.

20. She said that the assailant's voice was not distinguishable and that he had an accent. She said that he spoke in English and she could understand him except the part of the discussion when they were first in the car. She said that he did not speak in full sentences.

21. Lastly, and I think this is the most obsolete evidence of all in all of the circumstances, she confirmed that she gave no permission to the assailant to assault her and likewise she did not consent to going with the defendant.

22. In cross-examination her recall of the description of the assailant, the various times involved and the amount of alcohol that she consumed on the evening were tested. She agreed that she had been told that a suspect was located based on DNA evidence taken somewhere from her top. She denied discussing how the DNA may have got on to the top with the police. She was asked to confirm that her statement to the police made no mention of how she held the phone or how she was standing in the phone booth. She agreed. I do not find this omission surprising. She conceded however that it was possible that she leant onto the phone console and onto the side of the phone booth. She said that the ear piece touched her ear but she did not use her shoulder to cradle the phone. She said that she was in the phone booth for something of the order of five minutes.

23. She conceded that she told police initially that the assailant appeared to be thirty years of age. The defendant being an apparently full blood Aboriginal male of very dark appearance, in very poor lighting and with all her anxiety at the time, such a discrepancy in her estimate of age and the defendant's

actual age is excusable. I would not on that account alone necessarily rule out the defendant. She also admitted that she was told by the police that the suspect did not speak very good English. The issue that was subsequently made of this was to suggest that the victim tailored her evidence concerning the defendant's age and his English speaking ability to suit. The defence also submitted that she tailored her evidence also in relation to how well the assailant spoke English. The defence would ultimately submit that her evidence was discredited and rendered less reliable by reason of that.

24. She said that the assailant was not wearing white runners. There was some evidence later, not necessarily conclusive evidence, that the defendant wore white runners and not thongs when he went out later that night. Mr McDonald however said that he thought the defendant was wearing thongs when he met up with him on the following morning.

25. In re-examination it was revealed that when she was asked in cross-examination about leaning on the console in the phone booth, she thought that Mr Bryant was referring to the structure of the phone booth. When it was clarified that the reference was in fact to the actual telephone unit, she confirmed that she did not lean on that. In relation to leaning on the side of the phone booth she said that if she did that it would have been with her arm and with no other part of her body. She said that she held the phone in her right hand and to her right ear.

26. Overall the defence challenged the reliability and credibility of the victim's evidence on a number of bases. I have already referred to the suggestion that she has tailored her evidence. I do not accept that to be the case. I do not regard her evidence as unreliable by reason of the discrepancy in her estimate of the offender's age in all the circumstances. That is quite an easy error to make and the extent of the difference is not excessive. I note with interest that Ann Gurruwiwi, who knows the defendant, would later say that a person present at Alawa that night (Ted Gurruwiwi) was slightly older

than the defendant and other evidence revealed that the person she referred to was is in his late thirties. As to the suggested discrepancy in her assessment of the offender's English speaking ability, closer scrutiny of her evidence reveals that what she described was an ability not far off from what Mr McDonald described i.e., simple responses lacking fluency. This was consistent with my assessment of the defendant's ability from hearing the taped conversations with police. It is also consistent with the assessment and evidence of police officer Megan Blackwell.

27. Another suggestion later made by the defence as being indicative of possible unreliability in the evidence of the victim was the discrepancy regarding the colour and type of clothing worn by the offender, in particular that the offender wore thongs. There was evidence to the effect that the defendant was wearing white runners or at least closed shoes when he was at Alawa and possibly when he left that night. Again I do not consider that conclusive. There was considerable variation in the evidence in this respect including some evidence consistent with the defendant having thongs.

28. Peter Hickmott next gave evidence. He owns the motor vehicle which the victim had that night. He confirmed the victim's evidence that the car was left with her that night. He said that he did not know the defendant, the car had not been interfered with prior to the night in question and he had not lent the car out to any other person before that time either.

29. He confirmed that the victim had telephoned him late on that night at approximately midnight but he could not give a more precise time other than that it was sometime between 11.00pm and 1.00am.

30. The next witness was Ann Gurruwiwi. She lives at Alawa and is an aunt of the defendant. She remembered that the defendant had come to her place on a Sunday and that he arrived at approximately 6.00pm. She said that the other people there at the time were her sons Phillip Gumbala and Richard Gumbala and her sister Janice.

31. She said that the defendant had arrived by taxi and asked to stay. She said that he had a bag with him and was wearing long trousers and a blue and white pullover type jacket. She said that he wore white adidas shoes. She said that he didn't actually stay that night. She said that he left his bag in the yard with her and that she then put it in one of the rooms of the house. She said that the defendant went out at approximately 7.30pm wearing the same clothes. She said that he did not come back that night nor did he say where he was going.

32. She said that she did not see the defendant again after that night. In relation to the bag, she said that someone called Brian, presumably Mr McDonald, came to collect the bag some days later. She retrieved it for him. It was still in the same room where she left it and it was still closed.

33. In relation to the other persons at the house that night she said that her son Robert is 38 years old and Richard is 39 years old. The other person there was Ted Gurruwiwi who she said was slightly older than the defendant.

34. As with Mr McDonald, she also gave some evidence of Aboriginal custom. She said in the Aboriginal way someone can borrow another's clothes, but she said that permission was required. She said that Ted Gurruwiwi is the uncle of the defendant, however that relationship did not give him any authority over the defendant. Particularly she said and quite adamantly, he would not be able to use the defendant's clothes without permission.

35. She said that the defendant had left before she went to bed which was at approximately 9.30pm. She said that the defendant was still wearing the same top when he left that night. She also confirmed that the room in which she left the defendant's bag is a spare room and is not locked. In re-examination she elaborated that the room was her daughter's room which her daughter uses normally but that she was away on the night in question. She said no-one else stays in there and other than the defendant's bag which she put there herself, no-one put anything else in that room that night.

36. Phillip Gumbala next gave evidence. He confirmed that Ann Gurruwiwi is his mother and he lives with her at Alawa and was living there in December 2005. He said he knows the defendant who is his brother in law in the kinship way. He recalls an occasion on a Sunday shortly before Christmas 2005 when the defendant came to the house. He thought it was at approximately 3.00pm. He said that he arrived unannounced by taxi and had a big black bag. As an aside this would suggest that the defendant was able to communicate sufficiently with the taxi driver. He did not see what the defendant did with the bag although when prompted he said that the defendant left the bag on the front veranda. He said that the defendant did not stay overnight but went for a walk after sunset and did not return at all that night. He said that the defendant did not go inside the house.

37. In terms of other persons present at the house he said that there was his mother, his brother Richard and his uncle Ted. He said his uncle Ted is thirty eight years of age. Interestingly, Ann Gurruwiwi said he was slightly older than the defendant.

38. He also said that the defendant left sometime between 6.00pm and 7.00pm. He said that he was wearing long shorts made of black "plastic" as well as a black "plastic" top which was pullover style. He could not remember the footwear other than that he wore closed shoes.

39. He said that he went to bed before his mother and that the defendant had left by then. He said the defendant did not tell him where he was going. He confirmed that his brother Richard, who also lives there was also still there when the defendant left. He said Ted Gurruwiwi, although normally residing on Elcho Island, was staying that night and stayed overnight. He said that Ronnie, a "cripple" from Oenpelli, was also staying that night. He was not sure if Ronnie and Ted were still up when he went to bed.

40. He said that he has his own bedroom as does Richard. Ted and Ronnie were sleeping in the lounge. There is also a bedroom for his sister but she was

not in Darwin on that occasion. He said his mother has her own bedroom. He said that no-one stores things in his sister's bedroom and did not see anyone going into that room that night.

41. He said that the last he saw of the defendant's bag was when the defendant put it down on the veranda that night. He said that he did not go out that night nor did he see Richard, Ted or Ronnie go out. He said that he has never borrowed clothes from the defendant and would not do that as he has his own.

42. He said that he did not see the defendant again after that night. He saw the bag on the veranda in the same spot the next day and the bag was still closed. He said he was there when Brian came, alone, and picked up that bag.

43. In cross-examination he said that Ronnie was aged in his mid thirties. He said there was no-one else there near the defendant's age, the closest being his brother Richard at thirty five and Ted Gurruwiwi at thirty seven. He said that he went to bed before his mother and that it was between 10.00pm and 11.00pm. He said the defendant had left by then and was wearing the same clothes that he arrived in. He said that all men present at the house that night were from Elcho Island and all were related in some way to the defendant.

44. There is quite a deal of discrepancy in the evidence of the persons present on the relevant night at Alawa. This was mostly as to matters where I would not expect any better recall, such as times, the persons present at various times, the handling of the defendant's bag, the clothing and footwear worn by the defendant and the time the defendant left. As to the latter, I rely mostly on the evidence of Mr McDonald, particularly that he was called at 11pm by the defendant coupled to his evidence that he was later told by the persons at Alawa that the defendant went out shortly after that call. He gave

a very valid reason for recalling the time of the call and his evidence was very convincing.

45. Raylene Dhamarrandji next gave evidence. She is the sister of the defendant's father. She confirmed that although it was not pre-arranged, the defendant stayed with her when he came to Darwin in December 2005. She said that he arrived on the Monday morning and she did not see him on the previous day. She said that Brian McDonald brought him to the house at approximately noon. She said that the defendant had a large black bag and was wearing long black jeans, closed in shoes and a black jacket.

46. She said that the defendant stayed at the house for four nights. He was due to leave on the Friday. She said that Brian McDonald came to get him on the Friday. She said she saw the defendant each day. She said that he mainly wore the same clothes throughout and did not change.

47. The first of the police witnesses was Megan Blackwell. She outlined her involvement in the case. She said that she took a swab from the victim. She said she was also present on the occasion when the defendant was arrested en route to the airport. She said that Brian McDonald was with the defendant. She said the defendant was wearing blue jeans, black lace up shoes, a blue zipped jacket and t-shirt. He had a puma black sports bag.

48. She said that the clothing that the defendant wore was seized and Detective Wurst searched the bag and seized some items. The jacket the defendant was wearing at the time of arrest was put in evidence as Exhibit P3.

49. She said that the defendant was sober at arrest although I think this is incorrect. She said that Detective Wurst conducted the section 140 recorded interviews in her presence. The tapes were produced and played. There were two tapes in all. They became Exhibit P4.

50. She was also present during a further conversation between Detective Wurst and the defendant at Berrimah Prison on 22 December 2005. That tape was

produced and played. That interview was adjourned to obtain an interpreter and concluded the following day. The tape was put in evidence as Exhibit P5.

51. Through her, a map indicating the location of 11 Halls Street Alawa, Kilfoyle Street in Nakara and the telephone booth in Bradshaw Terrace in Casuarina were marked. She also said that she had travelled the distance between the Alawa house and Bradshaw Terrace and it is a distance of approximately one and a half kilometres.

52. Some cross-examination centred on the defendant's understanding of English. This is relevant to identification purposes given some evidence of the victim. She said that an interpreter was suggested by Detective Wurst. She said that in their opinion it was fair, albeit not absolutely necessary, that an interpreter be obtained. In re-examination she elaborated that although she thought the defendant could easily understand and answer questions, he might have had difficulty with concepts such as the caution and the like. That is a fair assessment in my view going by the section 140 tapes.

53. The next police witness was Amanda Ruzsicska. She is stationed at the crime scene examination section and had been in that position for five years. She said that after being tasked to the present matter she was briefed at the Casuarina Police Station and then attended at the junction where the victim escaped from the assailant where she took some photos of a motor vehicle. She also took photos of the interior of the motor vehicle at the forensics branch premises. She said she also took photos of the victim and collected evidence from her at Casuarina Police Station. She gave evidence of the swabs that were taken off the victim, the location of the swab areas coinciding with the apparent contact between the assailant and the victim according to the briefing that she received. She said that she did not take any swabs of the phone booth because it had been contaminated since the incident.

54. The next witness was Denise Grover a forensic scientist employed by Northern Territory Police Forensic Services. She described her qualifications. I accept her as suitably qualified. She described the areas of the motor vehicle that she swabbed as well as a description of the swabs she was provided with by others. There was no dispute as to the chain of evidence.

55. She said that she analysed three swabs taken from the victim, namely from her left hand, her right hand and the neck region. She said that the analysis revealed a partial DNA profile from the right hand which matched the DNA profile of the victim. Surprisingly, at least in my view, she said that the swab of the victim's left hand did not reveal any DNA profiles, not even that of the victim. She did not appear too surprised by that and said that is sometimes depends on the shredding rate of epithelial cells or the actual process of taking the swab.

56. Relevantly, she said that the sample from the neck area swab resulted in a partial mixed DNA profile from at least two people. Some of the DNA components matched those of the victim and the remaining ones were insufficient for identification purposes. This is despite what the victim described as quite a prolonged contact between the offender's hand and her neck. No doubt the explanation Ms Grover gave in the preceding paragraph applies equally to this.

57. She also described the samples taken from the top which the victim wore on the night. She said that she took four samples in all, namely from the outside front (mainly the breast region), the outside back, the neck ties (both the outside and inside surfaces) and the inside rear surface. All four samples were analysed. A mixed DNA profile from at least two people resulted from the samples from the outside front surfaces of the top. She said that excluding those components which are attributable to the victim, the remaining DNA components "matched" the DNA profile of the

defendant. She said there were no extra DNA profiles that could not be attributed either to the victim or the defendant.

58. In relation to the match, she confirmed that she subjected it to statistical analysis and said that the relative frequency of the DNA components attributed to the defendant is at least 1:200,000,000 in the Northern Territory Aboriginal database. She confirmed there are three databases used, a Caucasian database, a declared Aboriginal database and a pure bred Aboriginal database. It was the last mentioned database that she used. She said that the figure of 200,000,000 is a cut off, and that any excess above 200,000,000 is ignored and simply reported as 200,000,000.

59. She confirmed that there were variations for this in the cases of siblings. The figures that she quoted were still 1:4,653. This was based on a theta value of three per centum. She said that the theta value is a correction coefficient used in statistical analysis to correct for inbreeding amongst specific racial groups. With that correction she said that the relative frequency would be 1:4,653 had a full sibling been involved. She said that the correction coefficient used for Aboriginal communities in Northern Australia due to the incidence of inbreeding. The figure used is three percent.

60. She said that the three percent correction coefficient was universally accepted until recently. When she gave evidence on 18 May 2006, she said that some statisticians had put up a case that the rate should increase to five percent. She said that she recalculated the result based at five percent and she said the 200,000,000 cut off would still apply. The actual figure she said is just over two billion. She had not then performed the recalculation based on a biological sibling utilising a five percent theta value but did so later.

61. Questioning then moved to analysis from samples of the neck ties. Ms Grover said that mixed DNA profiles from at least two people were

obtained. She said that the major DNA components matched the profile of the defendant and others matched that of the victim. The major contributor was the defendant, i.e., the defendant contributed more DNA to the sample than did the victim. Ms Grover said that there was nothing in the profiles to suggest that there could be a third contributor.

62. Analysis of the samples from the trousers resulted in mixed DNA profiles from at least three people and due to the number of contributors she could not definitively say whether or not those of the defendant were present although she could not exclude him.

63. Analysis of the sample of the inside thigh region revealed only female DNA and that matched the victim. Other components were also present but they did not match the defendant. The other contributor was a female in any event.

64. Next she attested to the results of analysis of profiles obtained from samples from the motor vehicle. She said that a mixed DNA profile from at least two people was obtained from the sample from the left inside rim of the driver's seat. Some of the DNA components there matched the profile of the defendant. She said there were four other DNA components which did not match the defendant. Two of those matched the victim and another one could have been Mr Hickmott but the sample was insufficient to be definitive. Statistically, noting that the DNA mixture contains biological material from the defendant and another person she said that the likelihood ratio for the comparison is that the mixture is 169 million times more likely to be the result of biological matter from the defendant and an unknown person than from two random individuals selected from the Northern Territory databases.

65. Profiles were obtained from other samples. A partial DNA profile from unknown individuals was obtained from the left shoulder region of the driver's seat and the right shoulder region of the front passenger seat. She

said that the victim, Mr Hickmott and the defendant are excluded as contributors from those partial samples.

66. Questioning then turned to the possibility of transfer of DNA material. She confirmed that the simplest way of transferring DNA from one person to the clothing of another would be by touch. She was asked about secondary transfer and said that although it was potentially possible with the medium of a glass surface, she said that it would not be overly likely. She said that the likelihood was “minimal”.

67. A specific hypothetical example was put to her namely:- a person other than the defendant wearing the defendant’s jacket, makes contact with the victim. She was asked if it would it be possible for the defendant’s DNA to be transferred to the clothing of the victim. She said that the most likely transfer is from the outside of the jacket. She said that the suggested scenario was possible but only if it has been worn a lot and had not been, for example, freshly washed. She said it is more likely that a persons DNA would be on the interior of the garment.

68. Importantly she was asked if another person had been the assailant wearing the defendant’s jacket, would her results have been any different. She said that she would have expected at least some indication of a third person being present. I do however note that one swab taken from the victim’s own hand did not even reveal the victim’s DNA. Another taken from the victim’s neck did not reveal a sample sufficient for identification despite the victim’s evidence of prolonged and forcible contact between the offender’s hand and her neck. Having regard to Ms Grover’s explanation for this it appears that contact involving skin alone differs to contact involving skin and clothes

69. Next she was specifically asked about a transfer onto the inside rim of the drivers seat in the vehicle. She said that this would depend on the length of time that they were sitting there and whether they were rubbing their hand furiously or just touching it. She said it is not possible to definitively

determine those things as people shed epithelial cells at different rates. Although she did not rule out a secondary transfer via the jacket it would appear from the first part of her answer that this would be less likely. To her credit however she conceded that she could not say either way.

70. She was then asked about the different ratios applicable to relatives other than full siblings. Noting that a full sibling is 1:4,653, she said that a parent or child of a person is 1:548,893, a half sibling is 1:22,000,000, an uncle, aunt, niece or nephew is also is 1:22,000,000 and a cousin is 1:327,000,000 based on the declared Aboriginal database. These figures are based on a three percent theta value.

71. When the hearing resumed on 14 November 2006, cross-examination was suspended and some further evidence in chief was led. This related to changes regarding the theta correction coefficient that had occurred in the intervening period. She said that since her initial evidence there had been some modifications to both practice and to thresholds. Firstly she said that since August 2006, unlike before then when all peaks were taken into account in the analysis process, only full alleles are now used. This results in a more conservative analysis and therefore one that is more favourable to a defendant. On that basis alone she said however that there was no change to the frequency to 1:200,000,000 as that is the cut off used and even with the change of practice, the cut off was still exceeded. She said that the use of only full alleles made no difference as the DNA profile obtained from the sample on the neck tie was a full profile in any event.

72. In relation to the samples found on the inside rim of the driver's seat of the car, noting that the frequency she gave in her initial analysis that it was 169,000,000 more times likely that the sample represented the DNA profile of the defendant and an unknown person as opposed to two persons at random, she said that having regard to the changes of practice, the figure was now significantly reduced and the frequency is now 3,800 times more

likely using the declared Aboriginal database or 3,100 times more likely if the purebred database is used. Those are substantial reductions but nonetheless represent a significant frequency given the evidence overall.

73. She said that this difference was accounted for more by the change in the guidelines as the profile there only gave three peaks high enough for analysis purposes. Although the rest are still consistent with the defendant's DNA profile and didn't exclude him, application of the new guidelines has resulted in the significant reduction in frequency rate.

74. The second aspect of the change in the intervening period is in relation to the theta value or the correction coefficient used to take into account the extent of inbreeding in Aboriginal communities. She confirmed that as at January 2006, the coefficient accepted by the forensic community was three percent. She said that since August 2006 that has been varied to five percent, which again is a change in favour of a defendant, at least an Aboriginal defendant. She said that the change makes the statistical interpretation more conservative. She confirmed however that there could not be any certainty as to the extent of inbreeding in any particular Aboriginal communities or in general. She said that there have been no specific studies in the Northern Territory in relation to particular regions in an attempt to develop a specific database to determine the specific prevalence of inbreeding.

75. In cross-examination she was initially asked to explain the failure to obtain even the victim's own DNA profile off the swab taken from her left hand. She said that although this was unusual, it is not impossible as the effectiveness varies and depends on the shedding rate of epithelial cells which varies amongst people. That is an individual characteristic not a racial or ethnic characteristic. In terms of samples transferred between garments she said this depended specifically on how regularly the item was

worn and how clean it was, in particular the less it is washed the more DNA she would expect to obtain.

76. When asked about transfers of DNA, although she confirmed that it was possible for DNA to transfer from one person to another through the medium of a commonly handled item, she said that this was not overly likely. The likelihood would increase if the person was sweaty. A specific scenario was put to her, namely if the defendant was in the phone booth before the victim used the phone, noting that it was a hot and sweaty night, if the victim then used the phone, would a transfer be possible. Again she agreed that it was potentially possible but said that that was not very likely. Re-examination on this point reduced the likelihood even more.

77. In terms of secondary transfer she was asked to comment on the hypothesis that if someone else had worn the defendant's jacket, which had not been washed, and that jacket had come into contact with the victim while being worn by that other person, would it be possible to transfer the defendant's DNA to the victim. Again she said it was possible but not overly likely and it was more likely for transfer to occur from the inside of the fabric. She added however that in that circumstance she would expect to find the discrete DNA profile of that other person.

78. She was then questioned about the existence of the DNA profiles from unidentified persons. She confirmed there was one on the top. She said the neck ties only had the DNA profiles of the victim and the defendant and the victim's pants had the profiles from the victim, the defendant and another person. In relation to the vehicle she confirmed that partial DNA profiles on the driver's seat in the shoulder region excluded the victim, Mr Hickmott and the defendant.

79. She was then questioned in relation to the issues which arose in the case of *R v Bropho* [2004] WADC 182 in the District Court of Western Australia. She was aware of that case and the adverse comments made therein in so far

as it affected the validity of the database for Aboriginal people given the extent of inbreeding. She said that the concern of the court in that case was apparently that in small groups of people sharing common ancestors, it is harder to secure a statistically valid database for analysis and DNA matching purposes.

80. Mr Bryant suggested to her that there was insufficient information for a valid database. She would not agree. She said that the recent change in the theta correction coefficient accounted for the extent of the inbreeding. Although the absence of specific studies means that the extent of inbreeding cannot be precisely confirmed, she said that the five percent rate has appropriate regard to that. She said that the five percent rate was developed following research addressing the concerns in *R v Bropho*. She said that the five percent rate is now accepted within the forensic community as the appropriate rate to specifically address concerns such as in *R v Bropho*. She said that the studies have been peer reviewed and publication in scientific journals is pending. Although Ms Grover was cross-examined extensively on this topic, she was unshaken in her views and there was no evidence called to contradict her evidence.

81. It was suggested to her however that the thirteen percent rate should be utilised. She said that that had been specifically rebuked by forensic scientists when resolving to adopt the five percent theta value. She said that the databases used have studied the general Aboriginal population and it is accepted as valid by the forensic community. She said that forensic statisticians had validated the databases twice now and they have been accepted internationally. It is from there that the five percent rate is derived. Again, although Ms Grover was cross-examined extensively on this topic, she was unshaken in her views and there was no evidence called to contradict her evidence.

82. Notwithstanding that, at the request of Mr Bryant, Ms Grover arranged for a recalculation of the figures based on a thirteen percent theta value. She said that when applying that to the sample on the neck tie (which was a full DNA profile) the frequency based on the Aboriginal database reduces to 1:28,252,475 and based on the purebred database reduces to 1:16,000,000. In so far as that sample might be that of a relative, again at thirteen percent, the frequency for a full sibling is 1:1,040, the frequency for a parent or child is 1:20,627, for nieces and nephews it is 1:342,816 and in the case of a cousin it is 1:2,162,080. These frequencies are still very significant in any event having regard to all the evidence in the case.

83. In re-examination she elaborated that the reason that a specific separate study for the people of Elcho Island is not required is that the studies that have been done have been internationally accepted for all Aboriginal people as statistically valid. She confirmed that that research was instigated by the *R v Bropho* decision and that set the appropriate theta correction coefficient at five percent.

84. Other than a formal admission by the defendant that Shaun Lajbuana Dhamarrandji was not in Darwin on 4 or 5 December 2005, that concluded the evidence. A person by the name of Shaun Lajbuana Dhamarrandji is, according to the evidence of Brian McDonald, the only biological brother of the defendant.

85. Applying that evidence to the issues in this case, the nature of the defence case does not involve any contradiction to the evidence of the victim as to the actual events of the night in question. Indeed the only contentious issue is identification. I accept the unchallenged evidence of the defendant as to the events of that night and therefore in relation to counts 1 and 3, I find that the elements of assault are satisfied. In relation to the circumstances of aggravation in count 1, there can be no issue in relation to the male/female circumstance. Secondly the injuries on the victim's neck satisfy the

definition of “bodily harm” in the Criminal Code and applying the standard of common decency in the context of the events, the exposure of the victim’s breasts in the course of the assault at least satisfies the circumstance of aggravation of indecency. I consider that it is also satisfied by the evidence of the victim that the offender had her sit on his lap.

86. In count 3, the circumstance of aggravation of indecency is likewise satisfied by the evidence of the kissing.

87. In relation to the charge of deprivation of liberty, the evidence of the victim and inferences logically drawn from that evidence clearly establish that the victim was forced to go with offender and that her liberty was deprived.

88. I am therefore satisfied that all of the elements required for each of the charges as laid are proved beyond reasonable doubt. However, before a finding of guilt can be made in this case, I must also be satisfied beyond reasonable doubt that the offender was the defendant. The only direct evidence of identification comes from the victim herself. Bearing in mind the warnings that are appropriate in relation to her identification evidence I could not be satisfied as to the identity of the offender on the victim’s evidence alone.

89. There is however indirect evidence in the form of DNA evidence. DNA evidence is a specific type of circumstantial evidence. Therefore, before that can be found a finding of guilt, all reasonable hypotheses consistent with innocence must be excluded.

90. The issue with DNA evidence most commonly is not so much whose DNA profile matches the DNA sample taken from crime scene (which relates to the science of DNA), but how did that DNA sample get to the crime scene. The latter raises issues of contamination and of innocent transfer of DNA. Such a challenge of the DNA evidence was made in this case.

91. There was also a challenge to the statistical validity of the DNA evidence. This arises because DNA evidence is based on the theory that a person's DNA profile is unique. This theory could only ever be conclusively proved if the DNA profile of every person is recorded and analysed. That is impossible for all practical purposes. The alternative accepted by the scientific community is the interpretation of DNA samples based on the science of statistical evidence and processes. The process is about the possibility of recurrence or put another way, the likely frequency that a DNA sample taken from a crime scene matching the profile of a suspect is the DNA sample of that suspect as opposed to any other person. The validity of the evidence then depends on the validity and sufficiency of the databases used for comparison purposes.

92. This stage of the DNA evidence process uses statistics to determine the probability of an event, in this case specifically that the DNA from the crime scene is that of the suspect. Statistics and databases are the tools used for this purpose. The assumption made and accepted by the relevant scientific community is that the databases are as good as a whole population survey. They also assume that persons with similar DNA profiles such as close relatives can be excluded. Lastly, and relevant to the matter of the theta correction coefficient, is the assumption that an appropriate correction can address anomalies arising from inbreeding. This last assumption is directly relevant in the case of the problems of inbreeding in remote Aboriginal communities and it is highly relevant that the defendant is a resident of such a community.

93. Again absent the sampling of the whole population, the statistical approach taken to address possible corruption of the database due to inbreeding is to apply an appropriate correction. That correction is known as the theta correction coefficient. That issue, especially in the context of Aborigines, was the basis of the decision in *R v Bropho*. It was only the value of the theta coefficient which was challenged in that case not the science of its

application for statistical comparison purposes. That was a criminal case in which DNA evidence of the defendant's paternity of the victim's child was led as possible proof of the charge. In that case the District Court of Western Australia accepted evidence which lead to the conclusion that the appropriate theta value in that case was thirteen percent. The difference in frequency depending on the theta value used can be significant. The analysis of the different frequency results presented by Ms Grover depending on the theta correction coefficient used illustrates this.

94. It is trite to say that the trial Judge's ruling in *R v Bropho* was based on the evidence before that court. Likewise I must decide the case before me on the evidence presented. The finding in favour of a thirteen percent theta correction coefficient in *R v Bropho* does not establish that value as a legal principle for precedent purposes. It represents simply a conclusion arrived at based on the evidence presented in that case. Some very specific evidence was led in that case. The evidence before me is different. Ms Grover said that there had been developments since that case. She said that the *Bropho* decision led to a re-consideration of the issue by the forensic community on an international scale. That has in turn resulted in acceptance of five percent as the appropriate theta value. Her evidence is that the studies have been peer reviewed and publication of the findings is pending. This evidence is unchallenged in that there was no evidence called to contradict Ms Grover's expert evidence. I accept her evidence and the statistical evidence she presented based on that value.

95. In any event, Ms Grover did calculate frequency rates utilising a thirteen percent theta value. In my view, even utilising that correction coefficient, the evidence remains highly probative particularly when viewed with other relevant evidence. This is firstly the evidence that the defendant's only brother was not in Darwin at the time and secondly, that the other male relatives of the defendant who were in Darwin that night were not siblings and they did not go out that night.

96. That then leads to the issue of secondary transfer. Again the only evidence in relation to this came from Ms Grover. There was no evidence led which challenged her evidence on the point. She conceded that transfer is possible but considered it was very unlikely. It becomes unlikely even as a remote possibility in one instance when the evidence of the victim is considered (see paragraphs 22 and 25 above).

97. The hypotheses for the possibility of secondary transfer in this case are:

1. Regarding the samples taken from the clothing of the victim, that someone other than the defendant, wearing the defendant's clothes, was the assailant and the defendant's DNA transferred to the victim's clothing from the defendant's clothing when that other person made the various contacts with the victim as described by the victim;

2. Likewise in relation to the DNA samples taken from Mr Hickmott's car;

3. Further in relation to the samples taken from Mr Hickmott's car, that the defendant had previously sat in that car;

4. That at some time prior to the time that the victim used the phone booth on the night in question, the defendant used the same phone booth and the defendant's DNA transferred to the victim when she subsequently used the phone booth.

98. The hypothesis that the defendant had previously sat in Mr Hickmott's car can be quickly dealt with. The defendant is normally a resident of Elcho Island. Mr Hickmott says that he does not know the defendant. Mr Hickmott said other than on the night in question when he lent the car to the victim, he has not lent the car to any other person. He also said that the vehicle had not been interfered with prior to that night. That leaves only the possibility that the defendant may have sat in the car before Mr Hickmott acquired it. Mr Hickmott's evidence in that regard is that he had owned it for approximately a year before the night in question and that he had got it

from his parents who lived in Alice Springs. Absent evidence suggesting that the defendant may have sat in that vehicle at another time, then although the hypothesis is theoretically possible, it is not a reasonable one. There is no evidence to support it and I do not consider that to be a reasonable hypothesis for the purpose of applying the test relating to circumstantial evidence.

99. There is also no evidence that the defendant used the relevant phone booth on the night in question or at all. The hypothesis may have been stronger if there were such evidence. The evidence shows that the defendant had only been in Darwin that day and that he had made a phone call before leaving Alawa at about 11pm. There is no evidence to suggest that he had used the phone. In my view there is no evidence which supports the hypothesis upon which secondary transfer via the medium of the phone or the phone booth can be supported. In light of that, the possibility is no more likely than the possibility for example that the defendant was at the same party as the victim in the lead up to the events of that night and an innocent transfer of his DNA to her clothing occurred. In my view, neither possibility is realistic on the available evidence. The court acts on direct evidence or on inferences which can be validly drawn from the evidence. Neither scenario falls within those categories in my view. The absence of evidence means that the scenarios are mere speculation, not valid inferences. Applying the test required for circumstantial evidence, the hypothesis although theoretically possible falls a long way short of being reasonable.

100. In any event, the unchallenged evidence of Ms Grover coupled with the evidence of the victim, both described earlier, renders the possibility of the secondary transfer in the circumstances described a very remote possibility only. I reject the suggestion of secondary transfer of the defendant's DNA to the victim's clothing via the medium of the phone or the phone booth.

101. Dealing next with the hypothesis of possible secondary transfer by another person wearing the defendant's clothes. The evidence that exists in relation to the events at Alawa accounts for the movements of all other persons present at Alawa that night and had access to the defendant's bag. Absent evidence of the possibility of someone else taking the defendant's clothes, either before he arrived at Alawa or after he departed, the only evidence which exists of the possibility of anyone else wearing the defendants clothes, absent direct evidence from the defendant is sufficiently accounted for by Ann Gurruwiwi saying that she put his bag away and the evidence that other persons at Alawa did not go out that night. Moreover I think that the evidence of Ms Grover on this point is very telling. She considered the possibility of a transfer occurring via the medium of the clothes to be unlikely and would more likely occur from the inside of the garment. Overall therefore the possibility of someone else wearing the defendant's clothes on the available evidence is again entirely speculative. The possibility of transfer is remote and I therefore consider that the suggested hypothesis is not a reasonable one.

102. Overall I consider the DNA evidence to be very convincing when viewed with other evidence. The defendant was in Darwin and in the general vicinity of the scene of the crime on the night in question. He is not a resident of Darwin normally and had only been in Darwin from earlier that day. Furthermore he was last seen wearing clothes which very broadly fitted the description of those worn by the assailant. The other direct evidence of identification does not exclude the defendant. The very general estimation of age of the offender made by the victim does not exclude the defendant. Furthermore the references to the offender's English speaking skills are sufficiently consistent in a broad way with the defendant's apparent abilities from the available evidence.

103. Having regard to the foregoing and having regard to the DNA evidence, particularly the evidence of frequency, I am satisfied beyond reasonable

doubt that the assailant in question was the defendant. In coming to that conclusion I have considered the various hypotheses consistent with innocence of the defendant. These are set out in the course of these reasons. In my view none of those hypotheses are reasonable and I reject those hypotheses.

Dated this 18th day of December 2006.

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V M Luppino
STIPENDIARY MAGISTRATE