

**FIREARMS AND HOMICIDE:  
THE INFLUENCE OF THE WEAPON SUBSTITUTION HYPOTHESIS  
ON THE AMERICAN GUN CONTROL DEBATE**

by

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## Abstract

For several decades now the gun control literature in the United States has continued to produce conflicting accounts in regards to the availability of firearms on the U.S.'s high rate of homicide. This thesis proposes that this conflict is, *in part*, due to the implicit and continued influence of Wolfgang's (1958) 'weapon substitution hypothesis'. Wolfgang's hypothesis proposes that the intentions of an assailant, whether they be to kill or injure, determined the weapon selected. Since guns are recognised as being highly lethal, all assailants who use such weapons were believed by Wolfgang to have been highly determined to kill. Among other negative effects, it is argued that Wolfgang's hypothesis introduced a mind-set to this controversial research area that has continued to influence the opinions of academics from *both* sides of the debate. This mind-set revolves around the consensually held belief that if a firearm assailant is believed to have been determined to kill then they would have been capable of killing in the absence of firearms. Importantly, this belief implies that the best possible predictor of lethal weapon substitution is if a firearm assailant is determined to kill. This is unlikely to be true.

Mischel (1968: 135) has argued: 'A person's relevant past behaviours tend to be the best predictors of his future behaviour in similar situations.' After adapting Mischel's logic to fit the weapon substitution debate, the following predictor was produced. The best possible predictor of lethal weapon substitution to non-firearm weapons is whether people who had killed with firearms were as experienced at killing victims with non-firearm weapons as assailants who had actually killed with such weapons. This predictor was further developed into a more workable methodology that was capable of testing the validity of both Wolfgang's hypothesis and the consensually held belief it initiated. This methodology involved a comparison of the *previous* serious to fatal violent *non-firearm* convictions between those most likely to be determined firearm and knife killers. It was discovered that only 2.94 percent of those most likely to be determined firearm assailants and 25.23 percent of those most likely to be determined knife assailants had previous convictions for serious to fatal non-firearm assaults. This result was statistically significant to the  $p < 0.005$  (Z score=2.84). After eliminating all other possible explanations for these results it was concluded that, in conflict with both Wolfgang's hypothesis and the consensually held belief, not all determined firearm assailants are likely to be capable of lethal weapon substitution. Furthermore, if some proportion of determined firearm assailants are unlikely to be capable of lethal weapon substitution, then those not so determined are likely to be even less capable. Therefore, it was concluded that inhibiting *all* potential firearm assailants from accessing guns would be likely to reduce the overall rate of homicide. However, this thesis was limited in being able to apply this conclusion to the United States because it was based on a New Zealand population. Nevertheless, it is argued that the perpetuation of the consensually held belief has inhibited the best possible predictor of lethal weapon substitution from being applied to a research area where prediction is of paramount importance. When the best possible predictor of lethal weapon substitution has not previously been applied, it therefore becomes more understandable why this research area is plagued by such controversy.

## CHAPTER ONE

### HOMICIDE AND FIREARMS: AN INTRODUCTION TO THE AMERICAN GUN CONTROL DEBATE

One of the most persistent debates in the “weapons and crime” literature concerns an issue involving criminal motivations, and that is whether restrictions in the availability of firearms would cause the number of violent crimes to decrease.....it is self-evident that if there were no guns, then no crimes could be committed with them. But a wide range of alternative weaponry would remain. Would the people who presently kill.....in a “no-guns” condition, simply substitute some other weapon instead? And if so, then what would be the effect? Would death.....increase, decrease, or remain the same? (Wright, Rossi and Daly, 1983: 189)

The above quotation alludes to one of the many complex issues involved in the international firearms debate. It raises questions that will form the essence of this thesis. Firearm discourses on criminal motivation, gun availability and weapon substitution have produced contentious and highly politicised debates. This thesis will present the modern discourse that has focused on whether or not firearms are predominantly responsible for the high rate of homicide in the United States. It shall demonstrate the current conflict that exists between academics regarding the availability of firearms and the rate of homicide in this highly controversial research area. This thesis will then argue that the lack of consensus that has continually plagued this research area stems *in part* from the powerful influence of the first solid contribution to this area of the American firearms debate. That is, Wolfgang’s (1958) ‘weapon substitution hypothesis’ will be presented along with the variety of ways it has continuously thwarted progress in the homicide area of the firearms debate. This presentation will firstly demonstrate how Wolfgang’s

hypothesis thwarted academic and political progress in the homicide area of the gun control debate up until the early 1990s. Secondly, this thesis will then explore the possibility that the implicit and continued influence of Wolfgang's weapon substitution hypothesis may be a significant contributor to the inconclusive nature of the modern American gun control debate surrounding homicide. More specifically, it shall be argued that Wolfgang's hypothesis introduced a mind-set into this controversial research area. As this mind-set has continued to influence researchers from both sides of the debate, Wolfgang's study has inhibited the best possible predictor of weapon substitution from being introduced to the firearms debate. Lastly, this thesis will introduce this predictor to aid a later analysis of original data gathered in New Zealand.

### *Homicide In The United States*

The questions raised in the above quote by Wright et al. (1983) are of most interest to those nations with high rates of firearm homicide, for example, the United States of America. In 1994 the United States had an overall homicide rate of 8.95 per 100,000 (United Nations International Study of Firearm Regulations, 1998). This overall rate of homicide was typically four to five times higher than all the other modern western industrialised nations. Furthermore, Zimring and Hawkins (1997) point out that the current rate of homicide in the United States is equivalent to that of the top one-third of all undeveloped nations (also see United Nations International Study of Firearm Regulations, 1998). According to the above United Nations research, 70 percent of



homicides in the United States involved firearms<sup>1</sup>. The important and undeniable point to take from here is that, in comparison to all other modern western industrialised nations (and the majority of undeveloped ones too), the United States has an exceptionally high rate of firearm homicide. That said, it is not surprising that scholars in the United States have produced substantial quantities of research examining the nexus between gun availability and homicide rates.

### *Recent Research Suggesting Firearms Are Likely To Elevate The Rate of Homicide*

Research on the effects that state gun control measures have had on homicide rates in the United States has produced mixed results. The inconclusive nature of such research centres on the geographical limitations confronting state legislation. State firearm legislation in the United States has lacked uniformity. As a result, guns could always be obtained from neighbouring states with more liberal gun control laws (Killias, 1990). To overcome this confounding variable, Killias (1993) compared the household ownership of firearms in the United States, Australia, Canada and eleven European nations. After matching each nation's household gun ownership with its corresponding rate of homicide, Killias (1993: 1721) concluded that 'the correlations detected in this study suggest that the presence of a gun in the home increases the likelihood of homicide'. Furthermore, Killias (1993) argued that in countries with low rates of firearm homicide there did not appear to be a compensatory increase in non-firearm methods of homicide.

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<sup>1</sup> More specifically, 6.24 out of a total of 8.95 per 100,000 homicides in the United States involved firearms (United Nations International Study of Firearm Regulation, 1998).

Therefore, in the absence of guns, assailants<sup>2</sup> were not substituting firearms with other weapons to commit acts of homicide (see Lester, 1991). However, it must be noted that Killias' study did not control for confounding variables such as the violent tendencies of different nations.

A more persuasive study suggesting that guns are largely responsible for the high rate of homicide in the United States was undertaken by Sloan, Kellermann, Reay et al. (1988). Sloan and others compared the rate of handgun homicide between two comparatively similar cities, in different countries, with very different laws affecting the general availability of firearms; namely Vancouver (with, relatively speaking, a low availability of firearms) and Seattle (with a high availability of firearms). Although the two cities had similar crime rates for burglary, robbery, non-firearm assault and non-firearm related homicide, the rate of assault with a firearm and homicides involving handguns in Seattle was 7 and 4.8 times higher than in Vancouver (respectively). As a result of these findings, Sloan et al. (1988: 1261) concluded that 'our results suggest that a more restrictive approach to handgun control [in the United States] may decrease national homicide'.

Centerwall (1991) alludes to methodological deficiencies in his critique of the research by Sloan et al. arguing that the two cities were not the same in every aspect except firearm availability because their ethnic diversities were fairly different, with Seattle having a larger African American and Hispanic population (also see Cook, 1991). Killias

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<sup>2</sup> The word 'assailant' is frequently used throughout this thesis. It is used to describe a person who has committed a homicide.

(1993: 1722) added to this criticism by stating that Sloan et al's study 'was based not on comparative survey data on gun control in the two cities but, rather, on the cities' different approaches to gun control and on indirect measures such as the number of weapon permits issued and the proportion of suicides and homicides involving a firearm'.

A particularly robust US study suggesting that a reduction in the availability of firearms would lead to a decrease in the rate of homicide was conducted by Cook (1982). Cook's 'relative vulnerability hypothesis' has asserted that more vulnerable assailants tend to use the most lethal weapons, like guns, to kill less vulnerable victims. In other words, physically weaker people are likely to depend on the most lethal weapons like guns, to hurt physically stronger people. For example, Cook argued that women tend to rely on more lethal weapons like guns and knives to commit homicide on their male partners than men do to kill their female partners. Moreover, Cook (1982: 256-257) argued that in brawls and arguments between two males: 'The highest gun fraction (87 percent) involves elderly killers and youthful victims; the lowest gun fraction (48 percent) involves youthful killers and elderly victims. Since age is highly correlated with strength and robustness, these results offer strong support for the 'relative vulnerability hypothesis'.

In light of this hypothesis, Cook predicted that homicides by relatively weaker assailants would decrease in the absence of guns. This would include reductions in homicides committed by intimate females, youths and the elderly. This study is important in that it

has produced compelling evidence to suggest that should the availability of firearms be reduced in the United States the rate of homicide would be *very* likely to decrease.

Finally, a study conducted by McDowall, Loftin and Wiersema (1992) produced a convincing argument that reducing the general availability of firearms would be likely to reduce America's high rate of homicide. In six American cities a marketing campaign promoted that gun related crimes would receive enhanced mandatory sentences. This information is believed to have encouraged some violent assailants to substitute guns with alternative types of weaponry. Interestingly, there was a reduction in the overall rates of homicide in these cities. As a result, McDowall et al. (1992: 390) have argued that:

The only plausible interpretation of the results is that the reductions in gun homicide are due to the announcement of the laws. Since there was no compensating increases in the number of homicides committed with weapons other than guns, these effects can be interpreted as truly preventive of homicides.

However, due to some statistical limitations, the authors recommend caution in making generalisations from their results until further research has been undertaken.

#### *Recent Research Suggesting Firearms Are Unlikely To Elevate The Rate Of Homicide*

Although the majority of academic research suggests that guns are mostly responsible for the high rate of homicide in the United States (Zimring and Hawkins, 1997), a number of studies have come to a different conclusion. As the following will demonstrate, this

research has suggested that firearms may actually reduce the current rate of homicide and/or may inhibit the rate from increasing further.

In 1982 the Kennesaw town council in Georgia passed an ordinance that required all households to possess a firearm. As a result, the burglary rate apparently experienced a dramatic decrease (Kates, 1989, cited in Cook, 1991). Although others have argued that the decrease in burglary was not due to the ordinance<sup>3</sup>, authors such as Kleck (1988) have suggested that the arming of law-abiding citizens could be a solution to America's violent and non-violent crime problem. Based on a question about defensive gun uses from the 1981 Hart poll, Kleck reinforced the above suggestion by concluding that there are about one million defensive gun uses per year in the United States. However, the main problem with Kleck's research is that, due to subjective variations in what constitutes a defensive gun use, the estimates can vary greatly. For example, based on the National Crime Survey's definition, Cook (1991) has estimated that there are only about 50,000 defensive gun uses per year involving violent crimes<sup>4</sup>. At the other end of the scale, based on an average of 10 different nation-wide polls, Kleck and Gertz (1995) estimated there to be two and a half million defensive gun uses per year.

Interestingly, Kleck and Gertz (1995) argued that from the two and a half million defensive gun uses, 400,000 believed that their firearms 'almost certainly' saved a life. This statement is important because if this 400,000 figure is correct, the wide availability of guns used for defensive purposes may be inhibiting the rate of homicide in the United

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<sup>3</sup> See McDowall, Wiersema and Loftin (1989, cited in Cook, 1991).

States from experiencing a substantial increase. For example, if the disarming of citizens resulted in the deaths of only a small proportion of this 400,000 figure, the current rate of firearm homicide in the United States could experience a substantial increase. The main limitation with Kleck and Gertz's '400,000 saved lives' estimate is that it is impossible to know if, in the absence of guns, the criminal attacks really would have ended in a fatality.

Nevertheless, the evidence from research, like Kleck (1988), played an influential role in convincing over 30 American states throughout the 1990s to pass legislation that would enable law-abiding citizens to carry concealed handguns (Squires, 1999). Also influential in these changes was the popular and appealing logic behind such laws: That is, because criminals are unable to tell which of their potential victims are armed and which are not, the fear of experiencing potentially lethal resistance may deter them from engaging in criminal activity (Lott and Mustard, 1997).

Lott (1998) undertook the first in-depth evaluation of whether the popular 'concealed carry laws' have saved lives by deterring attacks by 'would-be' criminals. More specifically, based on the number of concealed-carry permits issued in 3,054 counties across a 17-year period, Lott documented the effects that the carrying of concealed weapons have had on violent crime rates. As a result, Lott (1998: 159) has concluded that:

Allowing citizens without criminal records or histories of significant mental illness to carry concealed handguns deters violent crimes.....If the rest of the country had adopted right-to-carry concealed-handgun provisions in 1992, about

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<sup>4</sup> Cook (1991: 56) has stated that this figure of 50,000 is likely to under-estimate the actual number of defensive gun uses because it 'excludes almost all defensive uses against members of the same household.'

1,500 murders.....would have been avoided.....[because] the deterrent effect of.....handgun laws is largest for violent crimes.

Lott also argued that an armed citizenry would be the most cost-effective way to deal with the violent crime problem in America. However, Squires (1999: 319) has critiqued the rigour of Lott's methodology stating:

Lott's discussions of his multiple regression analyses are not for the statistically faint-hearted but, equally, a more informed readership is likely to feel rather dissatisfied by his presentation of results. At first sight the findings appear impressive but there is seldom enough information available to be entirely clear about how these are derived.

Furthermore, in conflict with Lott's conclusion, McDowall Loftin and Wiersema (1995) found that in urban areas the carrying of concealed weapons do not reduce the rate of homicide. Nevertheless, in contrast to the earlier conclusions drawn by Killias (1993), Sloan et al. (1988), Cook (1982) and McDowall et al. (1992); Lott (1998) argues that more guns in the hands of law abiding citizens would actually decrease (not increase) the current rate of homicide in the United States. Moreover, estimates from Kleck and Gertz's (1995) research would imply that homicide may significantly increase if guns were no longer available to citizens for protection.

In conclusion, the majority of the modern research has suggested that reducing the general availability of firearms in the United States would be likely to reduce the current rate of homicide. However, in conflict with these conclusions, some researchers have produced a highly influential argument with the American public that firearms may actually reduce or inhibit the rate of homicide from increasing further. As mentioned

earlier, this thesis will argue that the lack of consensus that has continually plagued this research area is believed, in part, to have stemmed from Wolfgang's (1958) weapon substitution hypothesis. The following section will describe Wolfgang's hypothesis, as well as the subsequent literature that was inspired by this important study. The variety of ways in which Wolfgang's hypothesis is likely to have continuously thwarted academic and political progress in this area of the firearms debate up until the early 1990s will then be presented.

### *The Weapon Substitution Hypothesis: And Its Influence On The Direction Of Subsequent Research*

Wolfgang (1958) discredited the suggestion that guns elevated the rate of homicide. He based his opinion on the following evidence. During 1924 and 1926 the state of Pennsylvania had an overall homicide rate of 5.9 per 100,000. Firearms were involved in 68 percent of these homicides; yet between 1948 and 1952, Philadelphia (the state capital of Pennsylvania), had a similar homicide rate (6.1 per 100,000), with only 33 percent involving firearms. Based on this evidence, Wolfgang (1958: 82) stated that:

[W]hile the homicide rates for these two population units are similar, the proportionate use of firearms is quite dissimilar, being over twice as high for the state as for the city. The hypothesis of a causal relationship between the homicide rate and proportionate use of firearms in killing is, therefore, rejected.

As a result of the above conclusion, Wolfgang proposed the 'weapon substitution hypothesis'. This hypothesis posits that the intentions of an assailant, whether they be to



kill or injure, determines the weapon selected. For example, if an assailant has a single-minded, thoroughly 'determined' intent to kill their victim, they will seek out the kind of weapon that is most likely to ensure the desired outcome. Because a gun is well recognised as being a highly lethal weapon, those intent on killing will, if it is available, seek out such a weapon. If a firearm is not available, then this effective weapon will be substituted for the next most available and lethal weapon. This hypothesis suggests that if an assailant did not intend to kill but only harm their victim, then they would have selected some other less lethal weapon (Wright et al., 1983). Therefore, Wolfgang (1958: 83) concluded: 'It is the contention of this observer that few homicides due to shootings could be avoided merely if a firearm were not immediately present, and that the assailant would select some other weapon to achieve the same destructive goal.'

Wolfgang (1958) argues that although most homicides in the United States involve firearms, the assailants who lethally use such weapons have a 'destructive goal'; if the guns were taken away, the destructive goal would still remain. Wolfgang further argues that if assailants only intended to injure their victims then why would they select such a lethal weapon like a firearm? Cook (1983: 56-57) provided an alternative way to appreciate the appealing nature of Wolfgang's logic when he pointed out that:

Husband and wife may exchange punches or throw dishes any number of times, yet refrain from reaching for the carving knife or shotgun. These commonsense observations suggest that the assailant's choice of weapon is a good indicator of his intent in assault offenses.....the assailants' intent is a major determinant of his choice of weapon. The assailant who clearly intends for his victim to survive will not fire a gun at him.

To summarise, Wolfgang (1958) argued that reducing the availability of firearms from American society would not reduce the rate of homicide because *all* firearm assailants have a destructive goal and are *determined* to kill. If guns were no longer available to such assailants, they would substitute firearms with the next most lethal and available weapon and then kill their intended victims.

However, Zimring (1968) disagreed with Wolfgang's (1958) argument that all firearm assailants were determined to kill their victims. Zimring argued that two (not one) categories of firearm assailants are likely to exist. The first being Wolfgang's 'determined' to kill category. The second were those firearm assailants whose actual intention was only to harm their victim, however, in the 'heat of the moment' this intention to harm was exceeded by the highly lethal nature of the firearm. This type of assailant is commonly referred to in the literature as being 'impulsively (or ambiguously) motivated'<sup>5</sup>.

Why was Zimring's (1968) suggestion that there may be two categories of firearm assailants (determined and impulsive), so important to this area of the firearms debate? It was important because if research was able to demonstrate that a significant proportion of firearm assailants were impulsively motivated, then such a finding would suggest that if these assailants did not have access to such lethal weapons, their victims would have

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<sup>5</sup> A statement taken by the New Zealand Police encountered during the data-collection process in this thesis demonstrates an example of somebody likely to be an 'impulsively motivated' firearm assailant. After being presented with some irrefutable evidence by the police which identified the assailant's guilt the assailant stated: 'I got a beating from....[the victim's name]....over the darts. He knocked me down. I went back to the room and got the shotgun, went back to the door and called him. He turned and told me I didn't have the guts to shoot. I didn't mean to kill him, I just pulled the trigger.'

been much more likely to have survived. Gabor (1994: 31) supports the logic behind this argument when he pointed out that:

Discovering the relative proportions of these types [of perpetrators] is crucial.....[to this area of the firearms debate].....as impulsive crimes, in which the perpetrator has no access to firearms, might result in less harm even if the perpetrator has the opportunity and inclination to substitute some other weapon.

Although Zimring's (1968) logic had the potential to demonstrate that the removal of guns could decrease the rate of homicide, its highly testable nature could also result in research demonstrating that most firearm assailants are actually highly determined killers. This was pointed out by Wright et al. (1983: 191) when they concluded: 'If the proportion of homicides resulting from a single-minded [determined] intent to kill is very large, there is probably very little that could be done to prevent them.' Such a finding would suggest that Wolfgang's (1958) weapon substitution hypothesis was likely to be correct and that the removal of guns from society would result in no change to the current rate of homicide.

So what did the research based on Zimring's (1968) logic discover? Zimring (1968: 722) himself first tested his own 'proportion of determined versus impulsive assailants logic' when he asked the following question:

Do a significant proportion of homicides result from a less deliberate and determined intention? If this question may be answered in the affirmative, and if the probable substitute for firearms in these situations is less likely to lead to death, then the elimination of guns would reduce the number of homicides.

Based on the above question, Zimring (1968) attempted to identify evidence that would *firstly* demonstrate that a significant proportion of firearm assailants were *not*, as Wolfgang (1958) had suggested, highly determined to kill their victims, but were actually 'impulsively motivated'. Before Zimring could demonstrate that a significant proportion of firearm assailants were impulsively motivated he needed to identify an accurate measure of an assailant's level of determination. This was necessary to distinguish impulsively motivated from highly determined assailants. Therefore, Zimring reasoned that if an assailant had a 'destructive goal' to end their victim's life, that is, they were highly determined to kill, surely such an assailant would have inflicted more than one wound to seal their victim's fate. Furthermore, if an assailant only shot their victim once, this, Zimring reasoned, would suggest that they were impulsively motivated. Using the number of wounds inflicted as a measure of an assailant's level of determination, Zimring discovered that seventy percent of the victims in his sample killed by a firearm were only shot once. Therefore, Zimring (1968: 724) argued: 'that a significant proportion [of firearm homicides] do not result from an attack committed with the single-minded [determined] intention to kill.' Consequently, Zimring conservatively argued that a significant proportion of this seventy percent were likely to be impulsively motivated assailants.

After identifying that a significant proportion of firearm assailants were likely to have been impulsively motivated, the *second* piece of evidence that Zimring used to reinforce his earlier presented question was to identify which weapons impulsively motivated firearm assailants would be likely to turn to in the absence of guns. That is, what was the

most probable substitute weapon likely to be? With knives being the second most commonly used weapon of homicide in his sample, Zimring identified evidence that suggested, in the absence of guns, impulsively motivated firearm assailants would substitute guns with knives. Zimring reasoned that if people who killed with guns and knives were similar types of people, then he could suggest that, in the absence of guns, impulsively motivated firearm assailants would probably turn to knives. To demonstrate this similarity, Zimring presented two lines of evidence: assailants using guns and knives were involved in proportionally similar types of altercations and used guns and knives in racially similar proportions<sup>6</sup>. Based on these demographic similarities between people who killed using guns and knives, Zimring (1968: 726) concluded that ‘guns and knives are used by the same sorts of people’.

Now that he had demonstrated that a significant proportion of firearm assailants appeared to be impulsively motivated and that, in the absence of guns, such people would probably substitute to knives; Zimring then needed to demonstrate that the knife was less lethal than the firearm. Zimring (1968: 728) achieved this by identifying that ‘the rate of knife deaths per 100 reported knife attacks was less than 1/5 the rate of gun deaths per 100 reported gun attacks’ – attacks involving guns appeared to be five times more lethal than attacks involving knives. This finding was later replicated by several other studies<sup>7</sup>.

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<sup>6</sup> To elaborate, Wright et al. (1983: 200) describes Zimring’s (1968) results in the following way: ‘To show that they are not radically different, Zimring reports two additional bits of information: (1) that, in general, knife killings are accompanied by the same kinds of altercations as gun killings; and (2) that firearms and knives are used by whites and nonwhites in about the same proportions.’

<sup>7</sup>Vinson (1974) in Australia, Curtis (1974) in the United States and Hedeboe, Charles and Neilson (1985) in Denmark found guns to be three, two and fifteen times as deadly as knives (respectively). In fact Cook

To summarise, Zimring (1968) argued that his research demonstrated, in contrast to Wolfgang's (1958) substitute weapon hypothesis, that *not* all firearm assailants were determined to kill their victims. This was due to the fact that a significant proportion of assailants in his sample who killed with guns were likely to be impulsively motivated. In the absence of guns, this significant proportion of impulsively motivated firearm assailants would probably turn to the less lethal knife and many of the victims would have survived. Therefore, in the absence of guns, the rate of homicide would be expected to significantly decrease. Or, as Zimring (1968: 728) himself said, 'These figures support the inference that if knives were substituted for guns, the homicide rate would drop significantly.' It was this evidence that initiated the development of Zimring's 'weapon instrumentality effect'. The weapon instrumentality effect proposed 'that weapon dangerousness independent of any other factors.....[has].....a substantial impact on the death rate from attack' (Zimring and Hawkins, 1987: 18). In other words, becoming a victim of homicide is largely a matter of chance in that the more lethal the weapon involved the more likely an attack will end in a fatality. The weapon instrumentality effect has particular relevance to the firearm because of its incomparably lethal nature (see Cook, 1987).

However, not all agreed with the methodology used by Zimring (1968) to support his weapon instrumentality effect. For example, Wright et al. (1983) suggested that Zimring's criteria for identifying determined firearm killers may have grossly underestimated the actual proportion of such assailants. As already mentioned, Zimring

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(1987: 372) went even further by suggesting that 'a gun is intrinsically more dangerous than other types of weapons.'

reasoned that a highly determined assailant surely would have shot their victims two or more times to achieve their 'destructive goal'. Wright et al. (1983) disagreed with Zimring's criteria arguing that a determined firearm assailant was likely to stop shooting when the victim was dead - and this may have been achieved with just one bullet. Therefore, some unknown proportion of all the assailants that Zimring had categorised as being impulsively motivated (because they only shot their victims once), may actually have been highly determined to kill their victims. Therefore, due to Wright et al's criticism, once again, it was possible that *all* of the firearm assailants in Zimring's sample may actually have been highly determined to kill (which is exactly what Wolfgang's (1958) weapon substitution hypothesis had proposed).

Nevertheless, in theory, Zimring's (1968) 'proportional logic' had the potential to demonstrate whether or not reducing the general availability of guns would or would not reduce the rate of homicide. As a result, Zimring's logic, to some extent, stimulated a new direction in research that attracted others to try and contribute by applying different methods to his 'proportional logic' (see Curtis, 1974; Vinson, 1974; Dansys Consultants Inc., 1992). It is unnecessary to describe the results of these studies because as Wright et al. (1983: 203) have argued: 'All such studies necessarily suffer from the same general problem, namely, that in the absence of direct information on the underlying motivations, these motivations must be inferred from the objective circumstances surrounding each case, an indirect and perilous inference.' In other words, there is no objective way of knowing whether the assailant intended to harm or kill their victims at the time of the

attack<sup>8</sup>. Due to this insurmountable methodological criticism, any attempts to shed light on the relative proportion of impulsive versus determined assailants was easily discounted by the critics. For example, Kleck (1991: 169) uses this very criticism to discount Zimring's research:

[T]here is no reason, on the basis of Zimring's evidence for believing that all, most, or even a large minority of gun killings are ..... [impulsively] ..... motivated ..... For all one can tell at this point, the majority of gun killers are, at the time of the attack, strongly motivated enough to kill even if no guns were available. On the other hand, the opposite could also be true. Existing evidence does not permit any strong conclusions one way or the other.

The complete absence of any objective measures of an assailant's intentions placed Wolfgang's (1958) hypothesis in an unusual position in research - it appeared to be impossible to discredit. To clarify, typically in research it is easier to discredit than it is to prove an argument because only one example of conflicting information is required to discount the strength of an argument. However, the research surrounding the proportion of impulsive versus determined assailants is limited in that all avenues of evidence surrounding motive are solely based on subjective sources of information. Therefore, any evidence demonstrating that most assailants appeared to be impulsively motivated could be easily refuted because it was based on a subjective source of information. Thus, with only subjective sources of data available Wolfgang's weapon substitution hypothesis managed to maintain its powerful influence on the homicide area of the gun control

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<sup>8</sup> In fact, Zimring (1968: 722) was well aware of this methodological limitation right from the beginning when he said: '[f]or obvious reasons, there are no precise data on the intentions of an attacker toward his victim - whether he wished to wound or injure, with some apprehension of the risk of death or some desire to kill, or whether he single-mindedly intended to kill at any cost.'



debate up until the early 1990s<sup>9</sup>. From the late 1960s up until the early 1990s, the seemingly undiscreditable nature of Wolfgang's (1958) weapon substitution hypothesis went on to have a similar effect on both the academic and political debates surrounding gun control. This effect on both the academic and political debates will be described in the following section.

*The Weapon Substitution Hypothesis: Inhibiting Progress In Both The Academic And Political Debates Up Until The Early 1990s*

The undiscredited status of Wolfgang's (1958) weapon substitution hypothesis went on to have an important effect on the *academic* firearms debate surrounding homicide. The hypothesis provided some academic critics with a generically applicable criticism that was capable of discounting the importance of the strongest 'pro-control' research. To clarify, the strongest 'pro-control' studies up until the early 1990s continued to be

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<sup>9</sup> Since Zimring (1968) up until the early 1990s, the strongest objective attempt to overcome the methodological limitation that has protected Wolfgang's (1958) weapon substitution hypothesis from being tested was by Cook (1976, 1978, 1980a, cited in Wright et al., 1983). Cook proposed a potential solution that would isolate the lethal characteristics of firearms from the confounding effects of whether an assailant was determined or impulsively motivated. Cook suggested that it would be possible to observe the lethal effects of firearms in comparison to non-firearm weapons if a type of crime involving such weapons had a fixed or constant motive. Cook suggested that armed robbery might be such a crime – the motive would always appear to be economic gain. Interestingly, Cook found that the fatality rate for firearm robberies was three times higher than non-firearm robberies (7.66 per 1000 versus 2.71 per 1000 respectively). If the motive was constant, why was an armed robbery involving a firearm almost three times more likely to end fatally in comparison to a non-firearm robbery? With the confounding effects of underlying motivations eliminated, the only plausible explanation was that the lethal characteristics of firearms, on their own, seemed to increase the chances of the robbery ending fatally. This finding would suggest that the gun, not the assailant's motive, was a more important factor in contributing to a fatal outcome. However, Cook (1980a, cited in Wright et al. 1983) later questioned whether economic gain was the only motive in regards to robbery because some assailants, for example, killed their victims for the thrill of watching them die. So motivation for this type of homicide was not always for economic gain. This possibility resulted in Cook conceding that his results were not conclusive. Thus, the uncertainty surrounding Wolfgang's (1958) weapon substitution hypothesis was reinstated. It is reinstated because, as Lester (1981: 7) has argued 'it may be that robbers who are more intent on killing take a gun rather than that robbers with a gun are more likely to kill the victim because of the higher lethality of their weapon.'

reduced to unimportance by the same criticism. That is, pro-control research could not prove that, in the absence of guns, assailants with a preference to use guns were unlikely to engage in lethal weapon substitution. The following is an example of this generic criticism being applied to pro-control research in the early 1990s.

Earlier, Cook's (1982) relative vulnerability hypothesis was presented. This study asserted that more vulnerable assailants tend to use the most lethal weapons, like guns, to kill less vulnerable victims. In other words, physically weaker people are likely to depend on the most lethal weapons to hurt physically stronger people. Cook (1982) predicted that in the absence of guns, homicides in the United States by relatively weaker assailants would decrease. This would include reductions in homicides committed by intimate females, young people and the elderly. This study argued that should the general availability of firearms be reduced in the United States the rate of homicide would be *very* likely to decrease. Incapable of identifying any other criticisms with Cook's research, Kleck (1991: 157) discounted the importance of Cook's research because:

These findings do not conclusively prove that guns facilitate attacks that would not otherwise have occurred. It is possible that.....attackers who choose guns are so strongly motivated that, although they would prefer to use a gun, they would still attack without a gun, even with the odds against them.

What Kleck (1991) is suggesting is that Cook's (1982) relative vulnerability hypothesis only demonstrates that relatively weaker assailants have a *preference* for guns; it does not prove that in the absence of guns they would not substitute guns with other weapons.

Therefore, Kleck discounts the importance of Cook's research because it is not capable of discrediting Wolfgang's (1958) weapon substitution hypothesis.

When the strength of the most robust 'pro-control' research could so easily be weakened by the same generic criticism it becomes more understandable that the United States Government has met great resistance to any attempts at introducing the kinds of gun controls frequently found in other developed nations. With this generic criticism proving to be so effective at discounting the importance of the best 'pro-control' research, it was predictable that political agitators would soon take advantage of the conflicting nature of the academic debate.

From the late 1960s the conflicting nature of the academic gun control debate was being promoted in the *political* gun control debate via a popular and powerful political slogan in the United States. That is – 'guns don't kill people, people kill people'. It is argued here that the undiscredited status of Wolfgang's weapon substitution hypothesis was likely to have been the catalyst for this political slogan. To clarify, a spate of political assassinations throughout the 1960s and the skyrocketing rate of homicide throughout this period caused the American public to become increasingly concerned about the possible negative effects that gun ownership appeared to be having on society (Hardy and Stompoly, 1974). This ill feeling towards guns developed into a major concern for anti-gun control groups. For example, Kennett and La Verne Anderson (1975: 231-232) point out: 'The 1964 issue of the Rifleman acknowledged: "never before has there been such a wave of anti-firearm feeling, or such vocal and almost universal demand for tighter

controls”’. Fearing this concern might result in the introduction of restrictive gun control measures, anti-control groups started to lobby congress.

According to Kennett and La Verne Anderson (1975: 233), these groups kept citing ‘a study.....by Professor Marvin E. Wolfgang’. Not long after the lobbying ‘an editorial in The Nation assailed the pro-gun slogan “guns don’t kill people, people kill people”’ (Kennett and La Verne Anderson, 1975: 236). This evidence demonstrates the likelihood of the political slogan having evolved from Wolfgang’s hypothesis. Enhancing Kennett and La Verne Anderson’s evidence is the political slogan’s overtly obvious relationship with Wolfgang’s hypothesis. For example, Wolfgang argued that people who kill with guns obviously have a ‘determined and destructive goal’, therefore, removing the guns will not remove the destructive goal - ‘people kill people’. Others, like Zimring, argued that guns have highly lethal characteristics that enable people who react impulsively to kill - ‘guns kill people’.

Although this political slogan is written to sound as if it is factually correct, the debate between Wolfgang (1958) and those who attempted to discredit his hypothesis never produced any strong evidence demonstrating that ‘people kill people’. It was just that, due to the aforementioned insurmountable methodological limitation, Wolfgang’s protagonists were incapable of discrediting his weapon substitution hypothesis. This was noted by Wright et al. (1983: 205-206) who said, it is not: ‘that Wolfgang's alternative hypothesis is true, but only that the studies most often cited as showing it to be false do not show this at all.’ The major implication stemming from this statement is that until

methodologically credible research was capable of substantiating otherwise, Wolfgang's hypothesis, that is, all firearm assailants may be determined killers, would remain plausible. As a result, for as long as the hypothesis remained plausible, the removal of guns could still potentially result in 'people killing people' – and, therefore, the rate of homicide would remain the same.

This thesis would argue that, to some degree, the political slogan is likely to have inhibited the introduction of significant federal gun control measures in the United States. The reason being was that as the phrase became increasingly popular throughout the 1970s and 1980s, the American public *indirectly* gained a great insight into the inconclusive nature of the academic debate between Wolfgang and those who had attempted and failed to discredit him. Furthermore, the public understood the implications that stemmed from this fundamentally important but ultimately inconclusive research area. In other words, via the political slogan, most Americans were well aware that removing guns from society may have no effect on reducing the rate of homicide because 'guns don't kill people, people kill people'. Due to the American public being well aware of this possibility, it becomes more understandable why the United States Government and its citizens may have been apprehensive to reduce the general availability of firearms when such measures could potentially be a waste of time and money.

*Wolfgang's Hypothesis In The 1990s: A Fading Force*

The previous section argued that the undiscredited status of Wolfgang's (1958) weapon substitution hypothesis was likely to have inhibited academic progress. Furthermore, the influence of Wolfgang's hypothesis via the political debate was also likely to have contributed to the relative absence of any significant federal firearm controls being introduced in the United States up until the early 1990s. However, throughout the 1990s the powerful generic criticism<sup>10</sup>, would seem to have disappeared from the modern academic debate. A review of the literature suggests that Kleck's (1991) use of the generic criticism to discount Cook's (1982) relative vulnerability hypothesis may have been the last time Wolfgang's undiscredited weapon substitution hypothesis was used to discount solid pro-control research. Furthermore the political slogan, that 'guns don't kill people, people kill people', has not been as popular in the public debate surrounding firearms throughout the 1990s as it was in the 1970s and 1980s. The following section will explore a number of possible reasons why Wolfgang's (1958) weapon substitution hypothesis no longer appears to be the force it used to be.

The most probable reason for Wolfgang's (1958) weapon substitution hypothesis having faded as an influential force in the modern gun control debate was because the overwhelming majority of the modern research supported Zimring's (1968) weapon instrumentality effect<sup>11</sup> (see Zimring, 1972; Cook, 1987; Kleck and McElrath, 1991; McDowall et al., 1992). In particular, research conducted by McDowall et al. would seem to have undermined the validity of Wolfgang's hypothesis. As mentioned earlier,

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<sup>10</sup> That is, pro-control research could not prove that, in the absence of guns, assailants with a preference to use guns were unlikely to engage in lethal weapon substitution.

<sup>11</sup> That is, becoming a victim of homicide is largely a matter of chance, and the more lethal the weapon involved, the more likely an attack will end in a fatality.

the study by McDowall and others found that the promotion of enhancing mandatory sentences for gun related violent crimes could reduce the rate of homicide. Although, as also mentioned, the authors did recommend caution in making generalisations from their results until further research had been undertaken – this finding appears to demonstrate that lethal weapon substitution was not occurring in the absence of guns (also see Pierce and Bowers, 1981).

Furthermore, it did not help that Wolfgang himself later disowned the weapon substitution hypothesis. For example, when anti-control groups were lobbying Congress in the late 1960s, they kept citing Wolfgang's (1958) study as evidence that guns do not elevate the rate of homicide. 'So frequently was Wolfgang's name involved that Senator Dodd put through a telephone call to him, and then interrupted a witness who had just cited the professor to announce: "He wants to be on the record as supporting the strongest possible Federal legislation restricting the use and distribution of firearms."' (Kennett and La Verne Anderson, 1975: 236). Wolfgang not only disowned the weapon substitution hypothesis, he later published material that completely contradicted it<sup>12</sup>. On the other hand, however, Zimring has continuously supported his weapon instrumentality effect (see Zimring and Hawkins, 1987; Zimring, 1995; Zimring and Hawkins, 1997). Finally, Cook (1991:24) more concisely alluded to why Wolfgang's weapon substitution hypothesis was no longer the force it used to be when he stated:

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<sup>12</sup> Wolfgang and Ferracuti (1967: 141) argued 'Probably fewer than five per cent of all known homicides are premeditated, planned intentional killings, and the individuals who commit them are most likely to be episodic assailants who have never had prior contact with the criminal law'. So instead of arguing that all assailants are highly determined killers as he did in 1958, Wolfgang later argues that only five percent of assailants in the United States are likely to be premeditated and highly determined to kill. This statement demonstrates that Wolfgang later favoured Zimring's (1968) 'proportional logic' over his own weapon substitution hypothesis.

[A]ll parties to the debate seem to have accepted the validity of the weapon instrumentality effect. Thus there is a consensus among the researchers in this area that the type of weapon matters, not just as a signal of the intent....of the assailant, but as a distinct causal factor.

In other words, there is a consensus from both sides of the debate that, more often than not, ‘guns kill people’ and, not as Wolfgang (1958) had argued ‘people kill people’.

However, it is important to note that evidence only *suggests* that Wolfgang’s hypothesis is unlikely to be true<sup>13</sup>. To date, evidence has not been able to irrefutably discredit it and as a result Wolfgang’s argument still surfaces occasionally in the latest literature. For example, Sherman (2000: 1193) has pointed out in the Journal of the American Medical Association that ‘it is still unclear how much substitution of guns from other sources has occurred to mitigate the effect of the blocked purchases on gun violence.’ Nevertheless, it would appear that the modern academic gun control debate is finally free from the shackles of Wolfgang’s (1958) weapon substitution hypothesis which has arguably inhibited the debate from experiencing much greater progress (particularly throughout the 1970s and 1980s).

Nevertheless, although the debate surrounding the availability of guns and homicide in the 1990s and beyond would appear to be free from the effects of Wolfgang’s hypothesis, as demonstrated earlier this area of the modern debate is still highly controversial (see

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<sup>13</sup> As pointed out by Zimring (1995: 7) in regards to the suggestive nature of the evidence: ‘While the affirmative answer most published research produced to this question did not satisfy all social science critics,.....*most* of the work.....is premised on the theory that gun use in .....assault elevates the rate of death and injury from that which would result if the same assailants had used other weapons.’ Also, Zimring and Hawkins (1997: 199) argue ‘The *circumstantial* indications that implicate gun use as a contributing cause to American lethal violence are overwhelming.’ (emphasis added).



Cook and Moore, 1995). Although most of the academics whose research had a consistent ‘anti-control’ theme throughout the 1970s and 1980s eventually had to concede that Zimring’s weapon instrumentality effect was probably correct, these academics have not suddenly decided to side with the ‘pro-control’ perspective. Interestingly, these anti-control researchers have used the weapon instrumentality effect to enhance their original perspectives. That is, they have conceded that guns *are* highly lethal instruments. However, academics like Gary Kleck and Daniel Polsby are *now* arguing that the highly lethal nature of firearms, in the right ‘law abiding’ hands, are excellent tools for providing protection. In other words, the anti-controllers are using the conclusions that developed out of a pro-control argument to support a new anti-control argument (further complicating the debate).

More generally speaking, the modern debate surrounding the availability of firearms and homicide now centres on whether or not the cost of having guns in American society outweighs their benefits (see Polsby, 1995). It seems the debate has returned to the original question of interest to this thesis – would fewer guns reduce, increase or result in no change to the current rate of homicide? As mentioned, some have argued that more guns in the right hands may reduce the current rate of homicide (see Kleck, 1988; Polsby, 1995; Lott, 1998), or may be inhibiting it from experiencing a significant increase (Kleck and Gertz, 1995). However, the latest literature suggests that an overall reduction in the availability of handguns (the most commonly used firearm in lethal violence), would significantly reduce the current rate of homicide in the United States (Zimring and Hawkins, 1997).

It seems the current methods for ascertaining whether or not the cost of having guns in American society outweighs the benefits are based on fairly subjective indicators. For example, Kleck and Gertz's (1995) research was based on the beliefs of defensive gun users that the intervention of their firearm 'almost certainly' saved a life. Zimring and Hawkin's (1997) conclusion is based on international comparisons that, while statistically convincing, can only *suggest* that reducing the general availability of firearms would reduce the rate of homicide in the United States. In short, the modern debate, in terms of solid and irrefutable evidence, has barely experienced any significant progress. This point is reinforced by Morgan (1999: 315) who argues that:

[T]he US is enmired in a gun culture resistant to practically all attempts to restrict the liberty to own them. Lethal violence spirals, but academic researchers seeking practical solutions must disentangle causal relationships if they are to have any hope of undermining the one-line slogans ('It is not guns that kill, but people') that dominate public debate.

However, although the modern debate may believe itself to be free from Wolfgang (1958), the following argument will demonstrate that the weapon substitution hypothesis may play an important role in why the modern debate has been unable to disentangle the causal relationship between guns and homicide. It is suggested here that unbeknown to academia, effects originating from Wolfgang's hypothesis may be, *in part*, implicitly responsible for the continued absence of more solid evidence surrounding the probable effects that guns have on the rate of homicide in the United States. The reasoning behind this assertion will be revealed in the argument below.

*The Continued Influence Of Wolfgang's (1958) Weapon Substitution Hypothesis On The Modern Gun Control Debate*

As outlined earlier, Wolfgang (1958) believed that all firearm assailants were determined to kill their victims. And because they were determined, Wolfgang (1958: 83) argued that 'if a firearm were not immediately present.....the assailant would select some other weapon to achieve their destructive goal.' Zimring (1968) disagreed with Wolfgang that *all* firearm assailants were determined, believing only a proportion of assailants have this destructive goal to kill. However, what Zimring (1968: 721-722) *did* agree with Wolfgang on was that 'prohibiting [the proportion who were determined to kill from accessing] firearms would not have a substantial effect on homicide.....[because].....they would resort to other weapons.....to achieve their intention'. Initiated by Wolfgang and passed on to Zimring – the belief that all determined firearm assailants would be capable of lethal weapon substitution then seems to have spread to all the other major contributors to this area of the firearms debate. For example, although they spent almost half a chapter of their book critiquing Zimring's (1968) research, Wright et al. (1983: 191) would seem to have agreed with the above quotes by both Wolfgang and Zimring when they suggested:

People with a single-minded, thoroughly premeditated intention to kill will always find the means to do so, and if an efficient weapon such as a firearm is not around, the victim can always be poisoned, burned, stabbed, or, if all else fails, beaten to death with a stick. It is obvious that homicides of this sort will not be prevented or even modestly deterred by any kind of firearms legislation, or, for that matter, any other kind of legislation. There are simply too many objects in the world that can serve the purpose of destroying another human being.

Kopel (1992: 415) has also argued that: 'Attempting to change the tool of determined criminals is likely [to be] an unproductive and dangerous enterprise.' Kleck (1991: 197) demonstrated an opinion consistent with all of the above when he said:

If every gun killer had, even for just a few minutes, a very strong aggressive drive and a single-minded intent to kill regardless of the risks and effort needed, then it would do no good to deprive them of guns - they would do whatever was necessary to kill their victims by other means in those few minutes.

Although more carefully stated, Cook (1981: 74) maintained a similar perspective when he suggested that: 'My conclusions can be briefly stated. The likelihood of death from a serious assault is determined, inter alia, by the assailant's intent and the lethal nature of the weapon he uses. The type of weapon is especially important when the intent is [impulsive].' It could be argued that the reverse interpretation of Cook's statement would be that when the intent of the assailant is unambiguous (or determined), the type of weapon would not be especially important.

Despite their frequently conflicting opinions surrounding the firearms debate, the above authors provide an explicit consensus on one point - *determined firearm killers would be more than capable of engaging in lethal weapon substitution*. Furthermore, the catalyst to this *consensually held belief* (as it will be described from this point onwards) can be traced back to Wolfgang's (1958) influential hypothesis. As mentioned earlier, due to an insurmountable methodological limitation, it was not possible to objectively identify the exact proportion of determined assailants<sup>14</sup>. With the proportion of determined

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<sup>14</sup> That is, precise objective data does not exist on whether or not an assailant was determined to kill their victim or only intended to injure them.

assailants not being able to be identified, the consensually held belief (that all determined firearm assailants would be capable of lethal weapon substitution), has been able to remain undisputed<sup>15</sup>. The following section will explore the probable validity this consensually held belief.

*Are All Determined Firearm Assailants Likely To Be Capable Of Lethal Weapon Substitution?*

There are a number of factors that are likely to make firearms both physically and/or psychologically easier to kill with in comparison to the other commonly used non-firearm weapons of homicide. Eggers and Peters (1993: 199) capture the majority of these factors when they stated that: '[t]he use of a gun requires considerable less proximity, strength, agility, skill and squeamishness, and offers less opportunity for self-defence, than does the use of a knife or other [commonly used] weapon.' Therefore, in the absence of guns, a determined assailant who would have preferred using a gun is likely to find it physically and/or psychologically more difficult to kill with one of the common non-firearm weapons of homicide (like a knife or bludgeoning object). Interestingly, Wolfgang was familiar with this argument. For example, Wolfgang (1958: 79) was aware that: 'the small physical size of the assailant relative to that of his potential victim, or the assailant's physical repugnance to engaging in direct physical assault by cutting or stabbing his adversary may mean that in the absence of a firearm no homicide occurs.'

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<sup>15</sup> The consensually held belief differs from Wolfgang's weapon substitution hypothesis in that Wolfgang believed all firearm assailants were determined. In the consensually held belief some proportion of assailants were believed to be determined. The proportion depended on a particular author's subjective definition of who was and who was not likely to be determined to kill their victim/s.

However, Wolfgang discounted the validity of this argument due to his stronger belief that if a firearm assailant was determined to kill their victim, then their 'destructive goal' would enable them to overcome any potential physical and/or psychological barriers. For example: 'It is probably safe to contend that many homicides occur only because there is sufficient motivation.....and that the type of method used to kill is merely an accident of availability' (Wolfgang, 1958: 79).

Consequently, although Wolfgang (1958) agrees that killing someone physically bigger and/or using a common alternative weapon to a firearm, like a knife, is likely to be more *difficult*, he maintained that the assailant's determination to kill would still result in a fatality. In addition, depending on their personal subjective definitions of who is and is not likely to be a determined firearm assailant, all of the other authors would appear to have based their aforementioned opinions on a similar line of logic.

However, the validity of this logic must be questioned because what Wolfgang is suggesting is that being highly determined is all that is required to achieve something considered difficult. This logic is equivalent to arguing that all that is required of a local soccer player to gain selection to a professional international team is for them to be highly determined. More importantly, what Wolfgang has failed to recognise is that in anything considered to be a difficult achievement, regardless of whether it is a good or bad activity, there are always likely to be a greater number of people determined to succeed than there are actually capable of succeeding. For example, playing soccer for a professional international team is obviously more *difficult* than playing for a local club

side. Therefore, there are always a greater number of local players who are *determined* than there is actually *capable* of playing competitive international soccer. The reason for there being more determined people than capable is that more is required of a person than mere *determination* to achieve something that is considered more *difficult*.

How exactly does this soccer analogy relate to the firearms debate in the United States? Wolfgang (1958) admitted that killing with a physically and psychologically more demanding non-firearm weapon, such as a knife, is likely to be more *difficult* than killing with a gun. And when this argument is combined with the logic that with anything considered difficult there are always more determined people than actually capable – then *not all* ‘determined’ and capable firearm assailants will necessarily be capable of killing with the more difficult commonly used non-firearm weapons. In sum, more than mere determination is required of a firearm killer if they are to be capable of killing with the common non-firearm alternative weapons of homicide. This is because such weapons are likely to be physically and/or psychologically more *difficult* to kill with. It could be argued that *if* using a non-firearm weapon is only slightly more difficult than using a firearm, then most determined assailants who would prefer using a gun would still be capable of lethal weapon substitution. This is true, however the point is – using one of the common non-firearm weapons is still likely to be *more* difficult. Therefore, in conflict with the assertions from both Wolfgang’s hypothesis and the consensually held belief, not all determined firearm assailants would be capable of killing in the absence of guns. As a result, Wolfgang’s hypothesis and the consensually held belief, which have

both proposed that all determined firearm assailants would be capable of lethal weapon substitution, is believed by the writer to be logically flawed.

However, if the modern gun control debate has freed itself from Wolfgang's (1958) study and the 'determined' assailant terminology that accompanied it, would this not suggest that the consensually held belief, although interesting, is now obsolete and irrelevant? In other words, what is so important about a logically flawed consensually held belief when the concept of determination is no longer an important part of the modern gun control debate? The following argument will demonstrate why the logically flawed consensually held belief is of fundamental importance to the lack of progress affecting the modern gun control debate.

As mentioned previously, the consensually held belief suggested that all determined firearm assailants would be capable of lethal weapon substitution. *Importantly*, this consensually held belief *implies* that the best predictor of lethal weapon substitution is if an assailant is determined to kill their victim. With the consensually held belief having never been disputed, what also remained undisputed was the implied belief that the best predictor of lethal weapon substitution was if an assailant was determined to kill. With the validity of the consensually held belief having been seriously cast in doubt, is it also possible that a firearm assailant's determination to kill may not be the best predictor of lethal weapon substitution? This writer believes so. If a better predictor of whether or not a firearm assailant is likely to be capable of killing with a non-firearm weapon does



exist, what is it? The answer to this question is probably easiest to explain by returning to the soccer analogy.

Exactly how do professional soccer scouts predict which individuals are most likely to be capable of successfully undertaking the difficult task of playing professional soccer?

Obviously, they base their selection on how capable the person is at playing soccer, and to do this they will review how the person has played soccer in the *past*. In fact, using a person's past behaviour to predict what they are likely to be capable of in the future is the most commonly used predictor in any selection process – it is the most commonly used because it tends to be the best predictor of future behaviour. This method was explicitly promoted in academic circles as the most accurate measure of predicting future behaviour in a highly influential psychology book written by Mischel (1968: 135) who argued: 'A person's relevant past behaviours tend to be the best predictors of his future behaviour in similar situations.' Furthermore, this method is not new to criminological discourse and has frequently been applied. For example, Farrington (1989) used it to predict future violent behaviour in his sample of delinquent males (also see Glueck and Glueck, 1960; Tracey et al., 1990; Greenburg, 1991; Wintemute, Drake, Beaumont, Wright and Parham, 1998). Adapting Mischel's predictor to fit this area of the gun control debate would produce the following previously untested question: before they killed their victims, were determined firearm assailants as capable as determined non-firearm assailants at killing with non-firearm weapons? The following chapter on methodological issues will further develop this question.

To conclude this chapter, the logically flawed consensually held belief is of fundamental importance to the modern gun control debate, because, over the last 40 years it would seem to have inhibited the introduction of what this writer believes to be the best probable predictor of lethal weapon substitution. If the best possible method for predicting future behaviour has never been applied to a research area where one would think that predicting behaviour is of the utmost importance, it becomes more understandable why this area of research may not have experienced greater academic progress. Therefore, the aim of this thesis is to demonstrate the potential that Mischel's (1968) logic has to offer this area of the gun control debate.

This thesis intends to achieve this aim by applying Mischel's predictor to directly and thoroughly testing both the validity of Wolfgang's (1958) weapon substitution hypothesis<sup>16</sup> and the consensually held belief that it initiated. Assuming that the evidence which eventually eliminated Wolfgang's hypothesis from the modern literature is correct, this thesis intends to more conclusively eliminate and inhibit the weapon substitution hypothesis and the consensually held belief from further exerting their historically confounding influence on the modern gun control debate. The following chapter will describe all aspects of the methodology that will integrate Mischel's predictor so it is able to test the validity of both Wolfgang's weapon substitution hypothesis and the consensually held belief that grew out of it.

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<sup>16</sup> It will be recalled that Wolfgang's weapon substitution hypothesis was only removed from the modern gun control debate by evidence that *suggested* that it was *unlikely* to be correct (see Zimring, 1995).

## CHAPTER TWO

### METHODOLOGY

As discussed in chapter one, several authors have argued that all determined firearm assailants would, in the absence of guns, be capable of engaging in lethal weapon substitution. This belief implied that the best predictor of lethal weapon substitution is if an assailant is determined to kill their victim. However, Mischel (1968:135) has argued that ‘a person’s relevant past behaviour tends to be the best predictors of his future behaviour in similar situations’. Therefore, based on their relevant past, an important question for this thesis was to identify whether determined firearm killers are as capable as determined non-firearm killers at killing with non-firearm weapons? If we further adapt Mischel's predictor to better fit this question, the following could be argued. That is, *the best possible way to identify whether or not determined firearm killers were likely to be as capable of lethal weapon substitution using non-firearm weapons as determined non-firearm killers would be to compare the two types of assailants’ previous capabilities to kill with non-firearm weapons.* In short, this thesis intends to establish whether or not determined firearm killers are the same or different types of people as determined non-firearm killers, similar in the most important way – a *proven* ability to have previously killed with non-firearm weapons.

Although the above comparison would theoretically appear to be the most logical to undertake, as the following will demonstrate, it is not pragmatically possible. Firstly,

before it is possible to undertake a comparison between determined firearm and non-firearm assailants it is necessary to be able to identify *determined* assailants. As previously mentioned, due to ambiguities surrounding the assailant's intentions at the time of the attack, it is impossible to identify exactly who was, and who was not, a determined firearm killer. As a result, there is a consensus in the literature that it is not possible to identify the exact proportion of determined versus impulsive assailants. However, as the following will demonstrate, there is an implicit agreement in the literature that it is possible to identify those who are *most likely* to have been determined killers.

As mentioned earlier, Zimring (1968) reasoned that if an assailant was highly determined to kill, surely they would have inflicted more than one wound to ensure their victim did not survive. Furthermore, Zimring reasoned that if an assailant only shot their victim once it would suggest that they were impulsively motivated. These assumptions were criticised by Wright et al. (1983) who argued that it would have underestimated the exact proportion of highly determined firearm killers. Importantly, this criticism by Wright and others implies that they believed Zimring's method to be an accurate way of identifying those *most likely* to be determined firearm killers. However, what they were critical about was that it would underestimate the exact proportion of determined firearm killers because some determined firearm assailants may have only required one bullet to cause the intended fatality.

However, for a methodology to be able to test whether or not ‘determined’ and capable firearm assailants are likely to have been as capable of killing with non-firearm weapons as determined non-firearm assailants, it must first be able to accurately identify determined firearm and non-firearm assailants. Although Zimring’s method was incapable of identifying the exact proportion of determined firearm assailants, it was likely to have been capable of accurately identifying those *most likely* to have been determined firearm assailants. Therefore, this writer believes Zimring’s method for identifying those most likely to being determined killers meets the requirements of the proposed methodology. As a result, the proposed comparison will use the infliction of two or more wounds to identify those firearm and non-firearm assailants who were *most likely* to have been determined to kill their victims.

Unfortunately, although Zimring’s (1968) method enables the identification of those most likely to be determined assailants, his multiple wound criterion may force the proposed comparison between firearm and *non-firearm* assailants to change. To clarify, Zimring’s method requires that all *non-firearm* assailants used weapons or methods that involved the infliction of one or more *wounds*. However, not all non-firearm weapons or methods of attack involve the infliction of one or more wounds. For example, poisoning, suffocation and strangulation do not involve the infliction of one or more wounds. With the identification of determined assailants being of critical importance to the comparison, it is therefore suggested that the proposed comparison be between firearm assailants and the most frequently used non-firearm weapon that is compatible with Zimring’s ‘wound’ based methodology for identifying those most likely to be determined assailants. The

knife appears to best meet the above criteria given that it is the most commonly used non-firearm weapon in the developed world<sup>17</sup> and, as required by Zimring's methodology, the knife involves the infliction of multiple wounds. As a result, this thesis now intends to compare those most likely to be determined firearm assailants to those most likely to be determined *knife* assailants. The two types of assailants will be compared on their previous capabilities to kill with non-firearm weapons.

Again, there is another reason why the above comparison could not practically be undertaken in this thesis. This relates to what Mischel has termed the 'relevant past behaviour' to the future behaviour attempting to be predicted. Using 'previously having killed with a non-firearm weapon' as the relevant past behaviour would, from a statistical perspective, require having previously killed with a non-firearm weapon to be a reasonably common behaviour. However, even for murderers, having previously killed another person with any type of weapon is fairly unusual. This thesis simply would not have access to a sample that was large enough to detect a difference between firearm and knife assailants for the fairly unusual behaviour of having previous killed with non-firearm weapons<sup>18</sup>. Therefore, a more frequent yet relatively similar relevant past behaviour to having killed with a non-firearm weapon needed to be identified before the proposed comparison can be undertaken.

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<sup>17</sup> See Vinson (1974) for Australia, Miller and Russell (1996) for New Zealand, Hedeboe et al. (1985) for Denmark, and Zimring (1968) or Wolfgang (1958) for the United States.

<sup>18</sup> Other researchers possibly interested in undertaking a replication of this study may have access to a sample that *is* large enough to undertake the more powerful comparison between those most likely to be determined firearm and knife assailants regarding their previous capabilities to *kill* with non-firearm weapons.

Arguably, a 'relevant past behaviour' that is much more frequent yet relatively similar to having previously killed with a non-firearm weapon may be found in an assailant's *previous violent criminal conviction history* relating to serious to fatal non-firearm assaults. It could be argued that the most serious of previous convictions for violent crimes involving non-firearm weapons would be a more frequently occurring measure of whether someone was likely to have been capable of inflicting serious injuries with non-firearm weapons. Take for example a person most likely to be a determined firearm killer who had a previous criminal conviction for, say, 'grievous bodily harm using a knife'. This conviction would strongly suggest that if a firearm had not been present when they later committed their homicide, such a person was *likely* to have been capable of engaging in lethal weapon substitution with a non-firearm weapon.

As a result of the above qualifications this thesis will compare those most likely to be determined firearm assailants to those most likely to be determined knife assailants. The two types of assailants will be compared on their previous abilities to engage in acts of violence involving non-firearm weapons that are likely to have resulted in serious to fatal injuries to the victim/s. More specifically, this measure of serious non-firearm capabilities will be based on the assailants' non-firearm related serious violent criminal conviction histories.

Although this comparison could potentially be undertaken, there is a confounding variable that affects the use of criminal conviction histories as a measure of violent non-

firearm capabilities. This confounding variable is likely to *unfairly* reduce the chances of the proposed comparison finding a statistically significant difference. That is, criminal conviction histories typically do not start recording an assailant's violent past until they are 17 years old. Therefore, if an assailant was in their early teens when they killed their victim they may have been too young to have had their violent criminal past officially recorded. Take for example one of the events in this thesis where a 15 year-old assailant stabbed an 11 year old child. Although the assailant was well known to the local police as being a violent person, his official adult criminal conviction printout did not reveal such a violently capable person.

Furthermore, using criminal conviction histories as a measure of violent non-firearm capabilities is unlikely to be an accurate measure for assailants in their late teens. This is because such assailants are unlikely to have had the time to accumulate enough previous non-firearm convictions that would be representative of their actual non-firearm capabilities. To further illustrate this point, a 25 year-old assailant will have had nearly a decade to accumulate enough previous non-firearm convictions to accurately demonstrate their non-firearm capabilities. However, an 18-year-old assailant will only have had a year to demonstrate their non-firearm capabilities. In short, using criminal conviction histories as a measure of violent non-firearm capabilities is only likely to be accurate for older assailants. This writer would argue that an assailant would probably be old enough to have developed a criminal conviction history that would be representative of their non-firearm weapon capabilities if they were *over* 19 years old of age.



Therefore, this thesis now intends to compare those most likely to be determined firearm assailants (over 19 years old) with those most likely to be determined knife assailants (over 19 years old). The two types of assailants will be compared on their previous capabilities to engage in acts of violence involving non-firearm weapons that are likely to have resulted in serious to fatal injuries to the victim. The measure of serious non-firearm capabilities will be based on the assailants' non-firearm related serious violent criminal histories.

Undertaking this comparison between those most likely to be determined firearm and knife assailants (over 19 years old), in terms of their previous serious to fatal violent non-firearm convictions, would result in three possible outcomes. As described below, each outcome would have different implications on the rate of homicide.

- i) The first possible outcome of the proposed comparison would be if those most likely to be determined firearm assailants were found to have *very similar* levels of past criminal convictions for serious non-firearm assaults in comparison to those most likely to be determined knife assailants. This result would suggest that determined firearm assailants, in terms of being capable of undertaking very violent non-firearm attacks, are similar types of people to determined knife assailants. Such a finding would indicate that removing guns from society would result in *no change* to the homicide rate because determined firearm assailants are likely to be similar types of people as determined knife assailants. They would be

similar in terms of being capable of inflicting serious injuries using non-firearm weapons.

- ii) The second possible outcome of the proposed comparison would be if those most likely to be determined firearm assailants were found to have significantly *more* past criminal convictions for serious non-firearm assaults in comparison to those most likely to be determined knife assailants. Such a finding would suggest that determined firearm assailants, in terms of being capable of undertaking violent non-firearm attacks, are likely to be even more capable than determined knife assailants of engaging in serious acts of non-firearm violence. As a result, removing guns from society would result in *no change* to the homicide rate because determined firearm assailants are likely to be as, if not more, capable than determined knife assailants at inflicting serious injuries with non-firearm weapons.
- iii) The third possible outcome would be if those most likely to be determined firearm assailants were found to have significantly *less* past criminal convictions for serious non-firearm assaults in comparison to those most likely to be determined knife assailants. Such a finding would suggest that determined firearm assailants were unlikely to be as capable as determined knife assailants at inflicting serious injuries with non-firearm weapons. As a result, removing guns from society would result in the rate of homicide decreasing. The rate of homicide would be expected to *decrease* because determined firearm assailants would not be as

capable as determined knife assailants at inflicting serious injuries with non-firearm weapons.

Now that the reader has been presented with the three potential outcomes and their implications on the homicide rate, Hypothesis 1 will be presented below.

### *Hypothesis 1*

Based on Eggers and Peters' (1993) argument that non-firearm weapons are likely to be physically and/or psychologically more *difficult* to injure a victim with, the following is hypothesised. This author hypothesises that those most likely to be determined knife assailants (over 19 years old) will be more likely to have previous serious violent non-firearm convictions in comparison to those most likely to be determined firearm assailants (over 19 years old). Furthermore, this difference in previous serious violent non-firearm convictions will be statistically significant.

### *Sample Selection Process*

Since 1988 the Criminal Investigation Branch of the New Zealand Police have collected annual demographic information and an overall outline on every homicide where the police charged an assailant/s with committing murder. These books, called C.I.B. Murder Books<sup>19</sup> were used by this thesis to identify each event where the police charged

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<sup>19</sup> A more detailed description of the C.I.B Murder Books will be presented following the sample selection process.

a person/s with murder. Also included in the C.I.B Murder Books were events where the assailant had committed a homicide/suicide or, as yet, had not been apprehended by the police. Between 1988 and 1998 these books identified that the New Zealand Police had investigated 584 homicides<sup>20</sup>. However, one major obstacle in undertaking research into homicide is that quantitative analysis is made difficult due to the existence of multiple assailants and/or victims and/or weapons. In an attempt to keep the proposed comparison simple while also trying to maintain a low exclusion rate, the current study dealt with each of these obstacles in the following ways:

*Events Involving Multiple Assailants:* In such events all the assailant information was based on the single assailant that was identified as being most responsible for delivering the lethal blow/s. Identifying this single assailant was based on the ‘case summary’ section in the C.I.B Murder Books or, if this failed, information from the Coroner's Files recorded in the Miller Survey Sheet was consulted (an internal police study undertaken in 1996<sup>21</sup>). If these two sources were incapable of identifying a single assailant who was most responsible for delivering the lethal blow/s, the event was excluded from the proposed comparison.

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<sup>20</sup> Although great effort is put into ensuring that the all homicides investigated by the police are included in the C.I.B. Murder Books, the current writer is concerned with the *way* these events are identified. It is understood that the initial identification of a homicide by the compilers of the C.I.B. Murder Books is based on a media database search. Once identified, then a survey form is sent to the officer in charge. Therefore, the accuracy of the C.I.B. Murder Books is totally dependent on a homicide being published in the media. As long as homicide continues to be highly newsworthy in New Zealand, then the media based search will probably remain accurate. Nevertheless, due to the susceptibility of an event not being identified by the media, this media based method of identification is highly questionable. Considering the statistics collected have been used to provide the United Nations with information on homicide in New Zealand, this method of identifying homicides is in need of improvement. It is suggested that a standardised form is developed and kept in all police stations that, as part of procedures, is filled out and sent to the Office of the Commissioner.

<sup>21</sup> A more detailed description of the Miller Survey will be presented following the sample selection process.

*Events Involving Multiple Victims:* In such events all victim specific information (for example, number of wounds inflicted and weapon used), was solely based on the *first* victim killed. Identifying the first victim killed was based on the ‘case summary’ section in the C.I.B Murder Books. If this source of information was incapable of supplying the required data, then the event was excluded from the proposed comparison.

*Events Involving Multiple Weapons:* In such events all weapon information was based on the weapon identified as being most responsible for killing the first or only victim. Identifying this weapon was based on the information in the C.I.B Murder Books or the Coroner's Files information in the Miller Survey Sheet. If these two sources of information were incapable of identifying what this weapon was then the event was excluded from the proposed comparison.

The 584 events were then separated into 13 different weapon/method categories. These included Firearm, Knife, Bludgeon, Manual Beating, Strangulation, Suffocation, Drowning, Poison, Fire, Carbon Monoxide, Motor Vehicle, Other and Unknown<sup>22</sup>. Table 1 demonstrates the results obtained when the 584 events were separated by the principal weapon judged to be most responsible for killing the first victim.

Table 1: The type of weapons/methods used in all events investigated as murder by the New Zealand Police between 1988 and 1998.

ALL EVENTS INVESTIGATED AS
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<sup>22</sup> For the definitions of each of these weapons or methods of homicide refer to Appendix 1.

MURDER														
Year	Firearm	Knife	Bludgeon	Manual Beating	Strangulation	Suffocation	Drowning	Poison	Fire	Carbon Monoxide	Motor Vehicle <sup>23</sup>	Other	Unknown	Total
1988	22	17	8	9	2	1	0	0	0	0	1	0	0	60
1989	13	27	5	3	2	2	2	0	2	0	1	1	0	58
1990	11	24	9	8	1	0	0	0	0	0	0	0	0	53
1991	11	30	4	6	1	6	1	1	0	0	0	0	0	60
1992	11	16	8	13	3	2	0	0	1	0	1	0	3	58
1993	6	19	9	4	2	1	0	2	0	0	0	0	3	46
1994	9	17	11	8	1	2	0	1	0	1	0	0	1	51
1995	6	17	6	7	1	1	0	0	1	1	0	1	1	42
1996	9	16	5	12	2	3	0	0	0	2	1	1	0	51
1997	7	20	3	8	6	4	3	2	1	0	2	0	0	56
1998	4	18	11	6	3	0	0	0	4	1	0	0	2	49
Total	109	221	79	84	24	22	6	6	9	5	6	3	10	584

Table 1 demonstrates that firearms and knives were the principal weapons used to kill the first victim in 330 out of 584 events, making up 56.5 percent of all homicides. This included 109 and 221 events involving firearms and knives (respectively). From all events involving firearms and knives, 13 had to be excluded from further analysis. This related to 5 of the 109 events involving firearms and 8 of the 221 events involving knives. That is, for reasons that will follow, 13 out of 330 events were removed from the proposed comparison, giving an exclusion rate of 3.94 percent<sup>24</sup>. This left 317 events to undergo final analysis. The general reason for exclusion was that this study was only concerned with the assailant who was most responsible for inflicting the lethal injuries on the first or only victim. However, in a small proportion of events it was not or could not

<sup>23</sup> That is, physically struck by a moving motor vehicle (includes one jet-ski).

<sup>24</sup> Table One demonstrates there were 10 events between 1988 and 1998 where the actual weapon was 'unknown'. With knives and guns being the most common weapons of homicides in New Zealand (respectively), it would be fair to say that, statistically, it was likely that some unknowable proportion would have involved knives or guns. Therefore, the exclusion rate pertaining to knife and firearm homicides is likely to be slightly higher than this figure of 3.94 percent.

be established by police who this exact person was. More specific reasons for exclusion included:

- Victim shot but assailant unknown (n=3)
- Victim stabbed but assailant unknown (n=3)
- Multiple assailants all using knives (assailant most responsible for killing the victim was not or could not be established) (n= 5)
- Multiple assailants all using guns (assailant most responsible for killing the victim was not or could not be established) (n=2)

The most distinguishing characteristic of the 13 excluded events was that a large proportion were likely to have been gang-related. In three of the 13 events the victims and assailants were definitely gang members. Furthermore, in another two events the victims were gang members and the police suspected but could not sufficiently demonstrate that the assailant/s were gang members. The reason for a large proportion of excluded events being gang-related is that gang members are less willing to communicate with the police in comparison to non-gang-related assailants. When gang members do communicate, the police tend to be apprehensive regarding the reliability of the information received. Furthermore, in fear of their own safety, non-gang-related witnesses to gang-related homicides are often apprehensive in supplying the police with information. Regardless of this lack of witness information, the police frequently charged a group of assailants who attacked a victim. However, sometimes the police (or Coroner's files) did not or could not identify which assailant was most responsible for

delivering the lethal blows. Such events had to be excluded because as mentioned, this study is only concerned with the principal assailant. In short, a large proportion of the excluded events were gang-related because the police typically have less information with which to establish who exactly killed the victim<sup>25</sup>.

In conjunction with this low exclusion rate of 3.94 percent, another powerful aspect of the current study is that it is actually based on a population (and not a sample). Where possible, this thesis includes all homicides involving guns or knives occurring in New Zealand between 1988 and 1998. However, there do exist a number of other reasons that may slightly inhibit the current study from being a *true* statistical population. For example, Kapardis (1993) has identified that the misclassification of suicides that are actually homicides; unreported missing people; unidentified skeletons and missing people never found are all likely to affect the accuracy of any homicide statistics. Therefore, this thesis is unlikely to be based on a true statistical population. Nevertheless, all avenues to secure as true a statistical population as possible have been explored.

In conclusion of the sample selection process section, between the 1<sup>st</sup> of January 1988 and the 31<sup>st</sup> of December 1998 the New Zealand Police investigated 584 homicide events.

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<sup>25</sup> One anticipated potential methodological criticism of the proposed comparison is that a significant proportion of the homicides excluded from analysis were gang-related homicides. Although the author feels justified in excluding these events from the comparison, this exclusion potentially may have increased the chances of finding a statistically significant difference in support of Hypothesis 1. The reason being was that it could be argued that gang members often have a preference to kill with firearms, yet due to their violent social lives, they are more likely than other types of assailants to have serious violent non-firearm related convictions. Although this would be a valid criticism, this author does not believe it to have distorted the results. This is because of the five events *likely* to have been purely gang-related, only two of them involved guns. Therefore, even if the police were able to establish the actual assailant responsible for the two events involving guns and both assailants had serious non-firearm related convictions – two events would have little statistical impact on a sample size of 317 events.



With the current study only intending to compare events involving firearms and knives as the principal lethal weapon, all other weapons/methods were excluded. Of these 584 events, 109 and 221 involved a firearm or a knife as the principal lethal weapon (respectively) (n=330). After 13 events had to be excluded, the proposed comparison was based on 104 firearm and 213 knife events (n=317).

### *Sources Of Data*

With Hypothesis 1 requiring a variety of questions to be answered, multiple sources of police data were often required. Each of these sources of data will be briefly described in the following.

I. *C.I.B Murder Books*<sup>26</sup>: As mentioned earlier, since 1988 the Criminal Investigation Branch of the New Zealand Police have collected annual demographic information and an overall outline on every homicide where the police charged an assailant/s with committing murder<sup>27</sup>. Since their first publication in 1988, the C.I.B Murder Books have continuously improved in terms of the quantity of information supplied - this was particularly noticeable from the 1993 publication onwards. This source of information included accurate demographic characteristics of both assailants and victims. Also, from 1993 onwards, the 'case summary' section, provided an excellent overview of events leading up to and during the actual attack. Its weaknesses included a

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<sup>26</sup> Furthermore, for an actual example of the information given in the C.I.B Murder Books see Appendix 2.

<sup>27</sup> Included in the books were events where the assailant had committed a 'homicide suicide' or had not yet been apprehended by the police.

lack of detailed information before the 1993 publication, particularly in 1988 and 1989. However, the accurate demographic information (for example, names, birth dates, file numbers and personal reference numbers), overcame the weaknesses of the earlier publications because this data enabled access to other information sources (presented below), that were capable of answering any questions of interest.

II. *Miller Survey Sheet*: In 1996, Dr. Ian Miller (who at the time was the New Zealand Police Psychologist) collected data across a wide variety of variables on all homicides occurring between 1988 and 1995. The sample was based on all events published in the C.I.B Murder Books and used all of the sources of information mentioned below (except the last two). However, for one variable this research obtained information from a source outside the police. For the 'Cause of Victim's Death' variable, the Miller Survey Sheet has the exact 'cause of death' quote taken from the Coroner's Files<sup>28</sup>. This information was not always mentioned in sufficient detail in the C.I.B. Murder Books before 1993. Having these quotes by the Coroner were also valuable in multiple weapon attacks for identifying the actual lethal weapon. Furthermore, these quotes typically provided detailed information on the number of wounds inflicted, which was vital for identifying those most likely to be determined assailants.

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<sup>28</sup> For an actual example of the information taken from the Coroner's Files as found in the Miller Survey Sheet see Appendix 3.

III. *The Wanganui Computer*<sup>29</sup>: This source of information is the New Zealand Police's national crime database. By entering an assailant's personal reference number or their name and birth date (obtained from the C.I.B Murder Books), an assailant's previous criminal conviction history, if they had one, could be accessed. As well as previous conviction information, this source also provided highly reliable demographic information that may have been missing from the C.I.B Murder Books. If the assailant did have a previous criminal record, on the printout of this record was a 'dossier number' (see Appendix 4). A 'dossier number' enabled access to the 'Dossier Microfiche System' (discussed below).

IV. *Dossier Microfiche System*: Contained within each assailants' criminal conviction history was a 'dossier number'. This number enabled access to the local police reports relating to an assailant's criminal convictions (often including in-depth information like the actual police interviews with the assailant). This information source often included a more in-depth case summary than that provided in the C.I.B Murder Books for events occurring before 1993. The main weakness of the Dossier Microfiche System was that some police officers in charge of a case did not submit this information to the Office of the Commissioner so it was not entered onto the microfiche system. If a homicide had occurred before 1993 and no paperwork had been submitted to the Office of the Commissioner to be placed on the Dossier Microfiche System, this typically meant there was an insufficient amount of information to cover all the questions of interest. In such a

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<sup>29</sup> During the completion of this thesis the name and location of the Wanganui Computer changed. It is now called the Law Enforcement System (L.E.S) and it is located in Auckland. For simplicities sake the former term will be used. Furthermore, for an actual example of the criminal conviction information given in the Wanganui Computer see Appendix 4.

scenario, a phone interview was conducted with the 'first officer in charge' of a particular murder investigation (discussed below).

V. *Phone Interview*: If the above sources of information did not prove to be sufficient in providing answers to the questions of interest, a phone interview was conducted with the 'first officer in charge' of a case. If the first officer in charge had left the police, then the second officer in charge was contacted. Phone calls proved to be a highly reliable (although time consuming) source of information. Officers involved in such events typically spent a whole year preparing for the ensuing court case and were able to readily recall relevant information. The main weakness in the phone interviews was if the event was a homicide/suicide. Typically in homicide/suicides the scene examination undertaken by the police establishes that an assailant killed the victim and then themselves and the case is quickly closed. Because there is no ensuing court case, few officers interviewed by phone were totally confident in their answers to many of the questions posed. Furthermore, no paper work was sent to the Office of the Commissioner to be put on the Dossier Microfiche System in homicide/suicides because the assailant was no longer alive. Therefore, the only way to gain complete and reliable information on the homicide/suicides (particularly before 1993 when the C.I.B Murder Books were sometimes lacking in detail), was to order the Official Murder File from national or local archives (see below).

VI. *Official Murder File*: This source of information is a highly detailed account of all aspects of the police investigation into a homicide. These files include all of the data

obtainable from the above sources of information conveniently stored in one place. Ordering all of the Official Murder Files would have been the quickest and most reliable way to collect the required data (especially considering that from 1989 the Official Murder File numbers were published in the C.I.B Murder Books). Unfortunately, it was not financially viable to order several hundred Official Murder Files. However, for the few homicides where there were large gaps in the previous five sources of data, the Official Murder Files were ordered. The most common type of homicides that produced gaps in the data were homicide/suicides occurring before 1993 (when the C.I.B Murder Books were sometimes lacking in detail). As a result, the Official Murder File was ordered for all the homicide/suicides that occurred before 1993.

#### *Specific Data Collected For Hypothesis 1.*

The reader will recall that in Hypothesis 1 it was predicted that those most likely to be determined knife assailants (over 19 years old) would be more likely to have previous serious violent non-firearm convictions in comparison to those most likely to be determined firearm assailants (over 19 years old). To enable Hypothesis 1 to be tested it was necessary to isolate which firearm and knife assailants were *most* likely to be determined killers. Then it was necessary to isolate those assailants who were over the age of 19 years old. Once this had been achieved, it was then necessary to identify which of these firearm and knife assailants had previous serious violent non-firearm conviction histories. The following will describe the *definitions* and *data collection processes* used

to identify those most likely to be determined firearm and knife assailants both over the age of 19 who had serious non-firearm convictions before they killed their victims.

1. *Most likely to be a determined assailant:* The definition used to identify those assailants who were *most* likely to have been determined to kill their victims was based on the method used by Zimring (1968). That is, the definition of an assailant who was most likely to have been a determined killer was when a firearm or knife assailant inflicted two or more wounds with their respective weapons. The data collection process used to obtain this information was typically based on what the C.I.B Murder Books stated as being the number of wounds inflicted. If this source did not clearly state the required information then the Coroner's File information in the Miller Survey Sheet was consulted. If both of the above sources proved to be fruitless, the Dossier Microfiche System, if available, was often capable of providing the required data. If all the above sources failed to provide reliable data on the number of wounds inflicted, then the event was categorised as 'unknown' on the Data Collection Survey Sheet (see Appendix 5).

2. *Assailant was old enough to have developed a representative criminal history:* As mentioned earlier, an assailant was considered old enough to have developed a criminal conviction history that was representative of their non-firearm weapon capabilities if they were over 19 years of age. Therefore, the definition of an assailant having had a reasonable amount of exposure to the criminal justice system was any assailant over 19 years old. As a result, all assailants under the age of 20 were removed from the proposed comparison.

The data collection process used to obtain this information was typically taken from the C.I.B Murder Books. Other equally reliable sources for the assailant's age included the Dossier Microfiche System and the Wanganui Computer criminal conviction histories. If these sources failed to provide an answer then the event was categorised as 'unknown' on the Data Collection Survey Sheet (see Appendix 5).

3. *Previous serious non-firearm convictions*: The definition of when an assailant had a previous serious non-firearm conviction was any violent conviction *not* involving a firearm that was judged by two experienced police prosecutors to have been likely to have resulted in serious to fatal injuries to the victim *before* they committed their homicide. A 'serious' injury was defined as any physical injury likely to have required at *least* two days treatment at a hospital, up to fatal injuries. After being presented with 82 different types of violent non-firearm related crimes committed by all the firearm and knife assailants, the two prosecutors specifically identified 33 of which they believed were most likely to have resulted in serious injuries to the victim (see Appendix 6) – (this process is explained in greater detail below). If an assailant was found to have committed one or more of these 33 violent crimes that was likely to have resulted in serious injuries to the victim before they committed their homicides, then they were identified as having a previous violent serious non-firearm conviction.

The data collection process for identifying which assailants did, and did not, have serious non-firearm convictions was initiated by firstly establishing whether or not the assailant

had a previous criminal conviction history on the Wanganui Computer. If so, this history was printed out and every specific type of violent non-firearm related crime and the number of times it had been committed by the assailant before they committed their homicide was recorded (see Appendix 4). This information was then recorded on a separate survey sheet for each individual assailant and was called the 'Actual Assailant's Previous Violent Convictions sheet (non-firearm only)'. Each time this writer came across a previously un-encountered non-firearm related violent crime on a previous criminal conviction history, the title of the crime was added to the bottom of both the individual assailant's 'Actual Assailant's Violent Conviction Sheet (non-firearm only)' *and* to a *master copy* of the 'Actual Assailant's Violent Conviction Sheet (non-firearm only)'. So, as the data collection process progressed further through the population of assailants, the larger the master copy became. After about *half* the population of the assailants had had their violent criminal histories processed, the master copy of the 'Actual Assailant's Previous Violent Conviction Sheet (non-firearm only)' looked like the sheet presented in Appendix 7. At the end of this data collection process the master copy of the 'Actual Assailant's Previous Violent Convictions Sheet (non-firearm only)' was in the form shown below in Table 2.



Table 2: The master copy of the completed 'Actual Assailant's Previous Violent Conviction Sheet (Non-Firearm Offences Only)'.

ACTUAL OFFENDER'S PREVIOUS VIOLENT CONVICTION SHEET (NON-FIREARM ONLY)					
Event Number:		Serious?	Offenders name:		Serious?
<i>Offense as written in Wanganui computer</i>	No.	1=yes, 2=no	<i>Offense as written in Wanganui computer</i>	No.	1=yes, 2=no
Agg Rob			Com Asslt (Domestic) Cr Act (Manually)		
Aggravated Assault (Manual)			Common Assault		
Aggravated Assault (Other Weapon)			Common Assault - Domestic (Manually)		
Aggravated Assault Stabbing/Cutting Weap			Common Assault (Crimes Act) Manually		
Aggravated Assaults			Common Assault (Crimes Act) Other Wpn		
Aggravated Injury (Other Weapon)			Common Assault (Domestic Cr Act)(Manually)		
Aggravated Robbery			Common Assault (Domestic) Oth Wpn		
Aggravated Robbery (Manually)			Common Assault (Manually)		
Aggravated Robbery (Other Weapon)			Common Assault-Taxi Driver (Manually)		
Aggravated Robbery (Stab/Cut Weapon)			Demands To Steal Verbal/Letter Ect)		
Aggravated Wounding (Other Weapon)			Demands With Intent		
Asl Int Com Sexual Violation (No Weapon)			Disorderly Behaviour Likely To Cause Viol		
Asl Int Com Sexual Violation (Weapon)			Fighting in a Public Place		
Assault			Incite Violence/Disorder/Lawlessness		
Assault (Other) Crimes Act			Infanticide (Manually)		
Assault Beat And Illtreat			Injures - Intent To GBH (Manually)		
Assault By Male On Female			Injures - Intent To GBH (Other Weapon)		
Assault Child (Manually)			Injures - Intent To Injure Other Weapon		
Assault Intent Commit/Facil/Crime			Injuring With Intent		
Assault On Enforcement Officer			Injures Intent To Injure (Manually)		
Assault On Female Intent Avoid Arrest			Kidnaps (For Gain)		
Assault on Female Using Knife			Kidnaps (No Gain)		
Assault Person Show Intent To Use Weapon			Lik/Cau Viol Unlawfl Intmdt/Thrt (Oth Wpn)		
Assault Person With Stab/cutting Instumnt			Male Assaults Female (Manually)		
Assault Police - (Manual)			Manslaughter (Other Means) No Legal Duty		
Assault Traffic Officer			Manslaughter (Weapon) Legal Duty		
Assault W/Intent to Facil Escape			Non Agg Robbery (Threats To Person)		
Assault With Intent To Injure			Offensive Behaviour - (Likely to Cause Viol)		
Assaults Intent To Rob (Manually)			Other Manslaughter		
Assaults Intent To Rob (Other Weapon)			Other Wounding With Intent		
Assaults Person With Blunt Instrument			Resist Police		
Assaults Police - (Other Weapon)			Robbery		
Assaults Police (Crimes Act)			Robbery (By Assault)		
Assaults Police (Crimes Act) Manually			Robbery (By Threats to Property)		
Assaults Prison Officer			Threatening Behaviour		
Assaults With Intent To Injure (Manually)			Threatening Behaviour - Lke Cause Viol		
Assaults With Intent To Injure (Other Wpn)			Threatens To Kill/Do GBH (Manually)		
Attempted Agg Robbery			Threatens To Kill/Do GBH (Other Weapon)		
Attempted Aggravated Robbery			Threatens to Kill/Do GBH (Verbally)		
Attempts To Murder (Other Weapon)			Unlawful Intimidate Threat (Oth Wpn)		
Behave Threateningly (Other Weapon)			Unlawful Intimidate/Threat (Verbal)		

The next step in the process was to identify which of the above violent crimes were *likely* to have resulted in serious injuries to the victim. However, the Wanganui criminal conviction printouts do not indicate the probable seriousness of the injuries received by the victim. A previous conviction for 'Manslaughter Stab/Cut Weapon (Legal Duty)' demonstrated an obvious ability of an assailant to inflict serious injuries to a victim with a non-firearm weapon. However, with regards to the more frequent non-fatal previous violent conviction, this assessment of probable seriousness of injuries was not as obvious. For example, it was impossible for the author to understand the seriousness of injuries that were likely to have been received by the victims of crimes like 'Common Assault (Domestic) Crimes Act (Manually)'.

Therefore, this writer had to seek out an alternative way of identifying the probable seriousness of injuries that were *likely* to be associated with the different types of violent crimes. The most suitable way of resolving this problem was to identify people who are not only *directly* involved in the legal processes associated with such violent crimes, but are also confronted with the evidence surrounding the physical injuries received by the victims of such crimes. Arguably, the most suitable such people would be police officers with substantial experience working in front-line prosecutions.

Therefore, in December 1999 this writer contacted Wellington Central Police Station and organised to have a meeting with the Manager of the Prosecutions Section and his most experienced front-line prosecutor. Before attending the meeting, all the violent crimes collected on the completed master copy of the 'Actual Assailant's Previous Violent

Conviction sheet non-firearm only' (see Table 2 above), were individually separated with scissors. This resulted in a small pile of strips with every individual type of violent crime committed by assailants in the comparison. Present at the meeting was the Manager of Prosecutions for the Central District, Inspector Grant Middlemiss. Inspector Middlemiss had been a police officer for 23 years (with 13 of these years spent as a front-line prosecutor). His colleague was Sergeant Colin McGillivray (with 11 years front-line prosecuting experience).

During this meeting the small pile of strips was presented on the meeting table and it was explained to the officers what was written on each of the strips of paper. They were then asked: "I would like you to read each of the strips, and based on your extensive experience in prosecutions, *on average*, what kind of physical injuries, whether they be 'serious' or 'not serious' injuries do you think the victims of these crimes were most likely to have received". Then they were presented with the following definitions of 'serious' and 'not serious' injuries:

1. Serious Injuries Received: Physical injury likely to have required at *least* two days treatment at a hospital, up to fatal injuries.
2. Not Serious Injuries Received: No physical injury received up to a physical injury resulting in no more than one days treatment at a hospital.

After agreeing that their assessment would be based solely on their subjective but experienced opinions, they quickly started to divide the pile of strips into two separate piles. When one officer was not sure which pile to put a certain strip of paper, they consulted with each other and eventually came to an agreement on the most appropriate pile. After they completed this task, both piles were placed into separate envelopes labelled Serious Injuries Received and Not Serious Injuries Received. There were 33 individual previous violent convictions placed in the Serious Injuries Received envelope and 49 individual previous violent conviction placed in the Not Serious Injuries Received envelope (see Appendix 6).

Based on the two new categories ('serious' and 'not serious' injuries received), each assailant's 'Actual Assailant's Previous Violent Convictions non-firearm only' sheet was updated. Updating these sheets involved coding each assailants' previous violent non-firearm convictions as likely to have or have not resulted in serious injuries to the victim (see the columns titled 'serious?' in Table 2 above). Importantly, this process enabled the identification of those gun and knife assailants who, before they killed their victim, had a previous violent conviction that involved a non-firearm weapon and was likely to have resulted in serious injuries to the victim.

All data collected for the variables of interest in Hypothesis 1 were recorded on each assailants' survey questionnaire sheet (see Appendix 5). The data collected on this survey questionnaire was later transferred to an Excel data spreadsheet for analysis, which produced the results presented in Chapter Three.

## CHAPTER THREE

### RESULTS AND INITIAL IMPLICATIONS

In the previous chapter Hypothesis 1 predicted that those most likely to be determined knife assailants (over 19 years old) would be more likely to have previous convictions for serious violent non-firearm offences in comparison to those most likely to be determined firearm assailants.

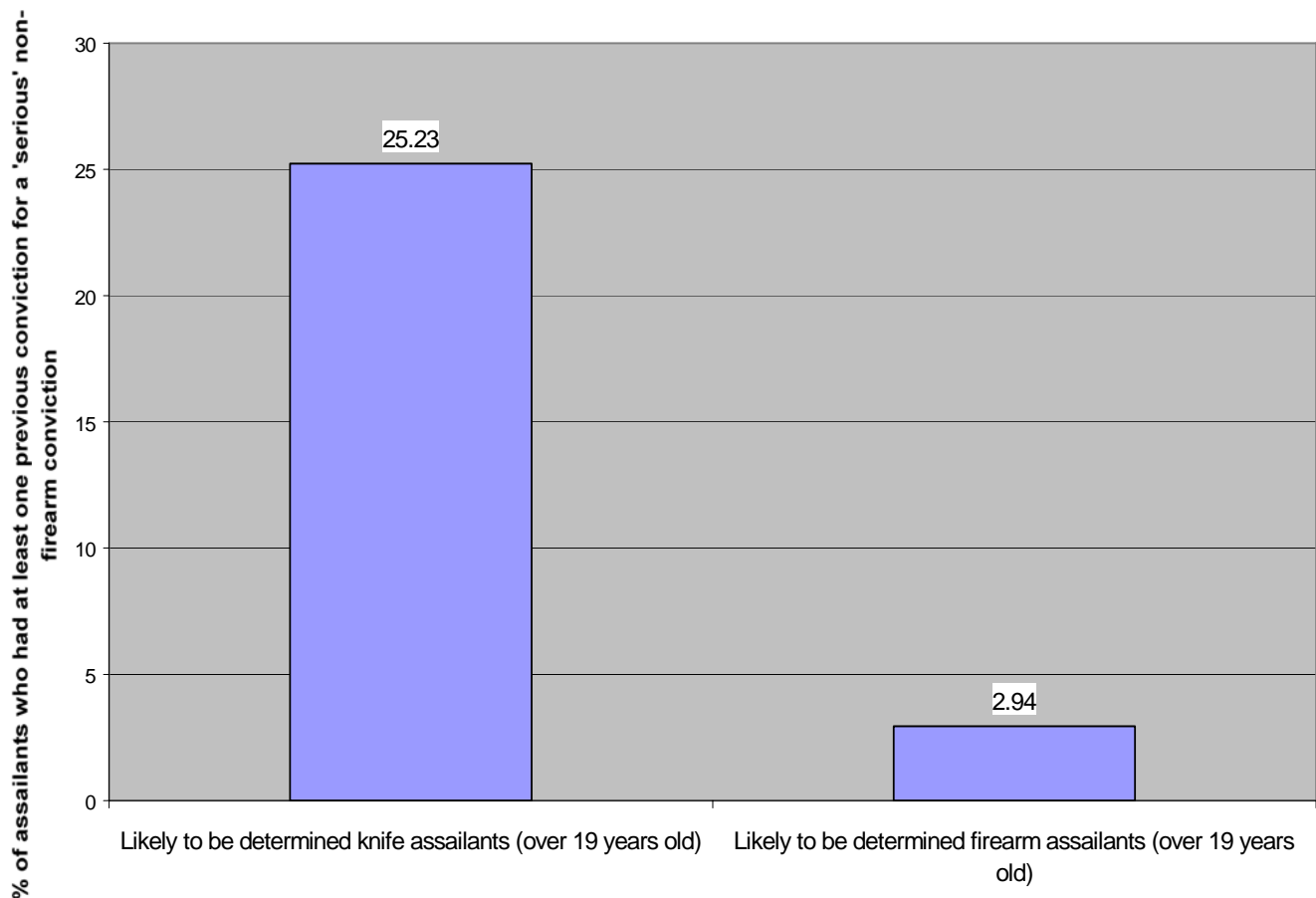


Figure 1: A comparison of previous 'serious' non-firearm convictions between those most likely to be determined knife and firearm assailants.

Figure 1 demonstrates that 25.23 percent of those most likely to be determined knife assailants (over 19 years old) and only 2.94 percent of those most likely to be determined firearm assailants (over 19 years old) had previous serious violent non-firearm convictions. Therefore, these results are in support of the prediction made in Hypothesis 1. That is, those most likely to be determined knife assailants over the age of 19 were more likely to have serious violent non-firearm convictions than those most likely to be determined firearm assailants over the age of 19. Furthermore, the difference of 22.29 percent was statistically significant to the  $p < 0.005$  (Z score = 2.84). For an insight into exactly how these percentage differences presented in Figure 1 were calculated refer to Appendix 8.

### *Initial Implications*

What are the important implications that stem from the above results surrounding Hypothesis 1? Earlier it was mentioned that depending on the results obtained from the proposed comparison, there were three potential outcomes that a significant reduction in the availability of firearms would be likely to have on a society's rate of homicide. Due to the results surrounding Hypothesis 1 demonstrating that those most likely to be determined firearm assailants were significantly less likely to have serious violent non-firearm convictions in comparison to those most likely to be determined knife assailants, this finding suggests that the third outcome and its subsequent effects on the homicide rate would be most applicable. That is, these results suggest that determined firearm

assailants are unlikely to be as capable as determined knife assailants at inflicting serious injuries with non-firearm weapons. Therefore, restricting determined firearm assailants from accessing firearms would result in the homicide rate decreasing. The rate of homicide would be expected to decrease because determined firearm assailants would not appear to be as capable as determined knife assailants at inflicting serious injuries with non-firearm weapons. In short, determined firearm assailants are unlikely to be as capable as determined knife assailants at seriously hurting people in the absence of guns<sup>30</sup>.

This writer would argue that the results surrounding Hypothesis 1 are likely to be due to non-firearm weapons being both physically and/or psychologically more *difficult* to use in comparison to a firearm (as previously mentioned by Eggers and Peters, 1993). As a result of this increased difficulty, some proportion of ‘determined’ assailants who were capable of killing with a gun will not necessarily be capable of successfully killing someone with one of the common non-firearm alternative weapons of homicide.

However, irrespective of the above conclusion surrounding the homicide rate and the statistically significant evidence that it is based on, there still exist reasons to believe that determined firearm assailants *may still* be as capable as determined knife assailants of engaging in lethal weapon substitution. If these reasons proved to be valid this would open up the possibility that, in the absence of guns, the rate of homicide *may still* remain the same. As a result of these possibilities, the following chapter will test the validity of any possible alternative reasons to believe that, in the absence of guns, determined firearm assailants might, irrespective of the results surrounding Hypothesis 1, still

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<sup>30</sup>Interestingly, it is important to note that this writer believes there exists some variables that once taken into consideration, are likely to increase the 22.29 percent difference in serious violent non-firearm convictions obtained in the results surrounding Hypothesis 1. Two of these variables are identified and thoroughly tested in Hypothesis 2 in Appendix 9 for the interested reader.

engage in lethal weapon substitution.



## CHAPTER FOUR

### WEAPON AVAILABILITY AND WEAPON SUBSTITUTION TO 'EASIER'

#### WEAPONS/METHODS OF HOMICIDE

In the previous chapter the results surrounding Hypothesis 1 demonstrated that those most likely to be determined firearm assailants were significantly less likely to have previous serious violent convictions for non-firearm assaults in comparison to those most likely to be determined knife assailants. This result was initially interpreted as demonstrating that determined firearm assailants are unlikely to be as capable as determined knife assailants at inflicting serious injuries with non-firearm weapons. Therefore, it was concluded that inhibiting determined firearm assailants from accessing firearms would be likely to reduce the overall rate of homicide. However, there may be *other* possible interpretations as to why those most likely to be determined firearm assailants had significantly less previous serious violent non-firearm convictions in comparison to those most likely to be determined knife assailants. Importantly, if these other possible interpretations to the results obtained in the previous chapter *are* valid, then inhibiting determined firearm assailants from accessing guns *may not* reduce the overall rate of homicide.

This chapter will explore the validity of two other possible interpretations as to why those most likely to be determined firearm assailants had significantly less serious violent non-firearm convictions in comparison to those most likely to be determined knife assailants.

These two other alternative interpretations to the results obtained focus on weapon availability and weapons substitution to physically and/or psychologically easier weapons/methods of homicide.

*First Alternative Interpretation To The Results Obtained For Hypothesis 1: Determined Firearm Assailants Have Access To Guns To Use In Violent Situations*

The first other possible interpretation as to why the firearm assailants had significantly fewer previous serious violent non-firearm convictions than their counterparts who used knives may have been because they had *access* to firearms to settle any of their violent encounters. This possible interpretation to the results obtained would suggest that, in terms of violent non-firearm capabilities, determined firearm and knife assailants are equally capable. However, because determined firearm assailants had access to firearms, they did not need to engage in previous acts of non-firearms violence. However, if access to firearms *is* why those most likely to be determined firearm assailants had significantly fewer previous convictions for serious non-firearm related assaults, then evidence should be able to support the following assertions:

- i) Those most likely to be determined firearm assailants should have greater access to firearms in comparison to those most likely to be determined knife assailants.
- ii) Due to not having access to firearms, those most likely to be determined knife assailants should have a greater dependency on non-firearm weapons.

In relation to the first point, assuming that when a person has been granted legal access to firearms they would have the easiest and most convenient means of acquiring such weapons, it is obvious that determined firearm assailants *with firearm licenses* were likely to have greater access to firearms than the determined knife assailants *without* firearm licenses. However, the accessibility of firearms to determined firearm assailants without such licenses is not so obvious. One potential measure of such peoples' access to firearms in comparison to determined knife assailants (without firearm licenses) may be found in both groups' previous convictions for the illegal possession and carrying of firearms. If the argument that having access to firearms explains why the firearm assailants had significantly fewer serious violent non-firearm offences is *true*, then determined firearm assailants (without licenses) should have significantly more previous convictions for the illegal possession and carrying of firearms in comparison to determined knife assailants (without licenses).

In relation to the second point, if determined knife assailants do not have access to guns, this alternative interpretation would also suggest that determined knife assailants (without licenses) should have had a greater dependency on non-firearm weapons than determined firearm assailants (without licenses). A potential measure that may demonstrate a determined knife assailant's apparent greater dependency on non-firearm weapons in comparison to determined firearm assailants might be found in their previous convictions for the illegal possession and carrying of non-firearm weapons. If the argument that having access to firearms explains why the firearm assailants had significantly fewer serious violent non-firearm offences is true, then determined knife assailants, unable to

access firearms, should have significantly more previous convictions for the illegal possession and carrying of non-firearm weapons.

Therefore, if this first possible alternative interpretation to the results obtained from Hypothesis 1 relating to issues of weapon access is likely to be *correct*, then evidence should be found in support of the following two hypotheses:

*Hypothesis 3<sup>31</sup>*: Those most likely to be determined firearm assailants (without firearm licenses) will be more likely to have previous convictions for *the illegal possession and carrying of firearm weapons* in comparison to those most likely to be determined knife assailants (without firearms licenses).

*Hypothesis 4*: Those most likely to be determined knife assailants (without firearm licenses) will be more likely to have previous convictions for *the illegal possession and carrying of non-firearm weapons* in comparison to those most likely to be determined firearm assailants (without firearm licenses).

### *Method*

The following method will be used to test the validity of Hypotheses 3 and 4. The specific data collected for each of the hypotheses will be described. These descriptions will include the definitions of any key variables and the actual sources of information used in the data collection process.

### *Specific Data Collected For Hypothesis 3*

In Hypothesis 3 the first possible alternative interpretation predicted that those most likely to be determined firearm assailants (without licenses) will be more likely to have previous convictions for the illegal possession and carrying of firearm weapons in comparison to those most likely to be determined knife assailants (without licenses). To enable Hypothesis 3 to be tested it was necessary to isolate which firearm and knife assailants did not hold a current firearms license, which were determined to kill, and if the two types of assailants had at least one previous conviction for the illegal possession or carrying of a firearm. The following will describe the definitions and data collection process used to identify each of the above mentioned variables.

*1. Firearm and knife assailants without firearm licenses:* The definition of an assailant without a firearm license was all the assailants left in the population when all the assailants with firearm licenses had been removed. Therefore, those assailants with firearm licenses had to be ascertained first. An assailant with a firearm license was defined as any assailants who held a current New Zealand firearms license (of any type) at the time they killed their victim.

The data collection process used to obtain this firearm license information for events occurring *after 1992* was based on searches using the Wanganui Computer which accurately indicated an assailant's firearm license history. However, for events occurring

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<sup>31</sup> If the reader is wondering what happened to Hypothesis 2, refer to Footnote 30.

from 1988 until the end of 1992, occasionally all traces indicating that an assailant held a firearm license were wiped from the Wanganui Computer. This 'purging from the system' as it is referred to by the police, typically occurred when local Arms Officers revoked an assailant's license because they had shot somebody. Therefore, the firearm license status of all assailants responsible for events occurring *before 1993* had to be ascertained by using alternative sources of information to those events occurring after 1992. The first alternative source of firearm license status information was to search the Dossier Microfiche System. If this failed to reveal the assailant's license status then a personal phone call was made to the Arms Officer where the event took place. The Arms Officers were asked to manually research their own records to ascertain the firearm license status of the assailant. If this failed then the assailant's firearm license status was categorised as unknown. Once the firearm license status of all the assailants had been clarified, those who held such licenses or those whose firearm license status was unknown were removed from the comparison leaving only assailants who did not hold a firearm license.

2. *Most likely to be a determined assailant*: The definition and data collection process used to ascertain whether an assailant was most likely to have been a determined killer was based on the same as that used in Hypothesis 1 (presented earlier on page 62).

3. *Previous conviction for the illegal possession or carrying of a firearm*: An assailant was defined as having had a previous conviction for the illegal possession or carrying of firearms when an assailant had one or more criminal conviction for possessing or

carrying a firearm on their criminal conviction history before they killed their victim. More specifically, these crimes, as spelt in the Wanganui Computer included; 'Possess F'arm W/out License (16 Or Over)'; 'Possess Offensive Weapon (Firearm)'; 'Possess Pistol Unlawfully'; 'Possess/Carry F/arm Ect - No Lawful Purp'; 'Unlawful Possession Of Firearm'; 'Unlawful Possession Of Pistol'. If an assailant had one or more of these convictions, then they met the criteria of having a previous criminal conviction for the illegal possession or carrying of a firearm.

The data collection process used to obtain this information was solely based on the Wanganui Computer criminal conviction history printouts.

#### *Specific Data Collected For Hypothesis 4*

In Hypothesis 4 the first alternative interpretation predicted that those most likely to be determined knife assailants (without licenses) will be more likely to have previous convictions for the illegal possession and carrying of non-firearm weapons in comparison to those most likely to be determined firearm assailants (without licenses). To enable Hypothesis 4 to be tested it was necessary to isolate which firearm and knife assailants did not hold a current firearms license, which were most likely to be determined to kill and if the two types of assailants had at least one previous conviction for the illegal possession or carrying of a non-firearm weapon. The following will describe the definitions and data collection process used to identify each of the above mentioned variables.

1. *Firearm and knife assailants without firearm licenses*: The definition and data collection process used to ascertain whether an assailant did not hold a firearms license was the same as that used in Hypothesis 3 (as mentioned above).
2. *Most likely to be a determined assailant*: The definition and data collection process used to ascertain whether an assailant was most likely to have been a determined killer was based on the same as that used in Hypothesis 1 (presented earlier on page 62).
3. *Previous conviction for the illegal possession or carrying of a non-firearm weapon*: An assailant was defined as having had a previous conviction for the illegal possession or carrying of a non-firearm weapon when they had one or more criminal conviction for possessing or carrying a non-firearm weapon on their criminal conviction history before they killed their victim. More specifically, these crimes, as spelt in the Wanganui Computer, included; 'Possess Offensive Weapon (Other)'; 'Carry Offensive Weapon (Other Weapon)'; 'Offensive Weapon'; 'Possess Knife In Public Place (Summ Off)'. If an assailant had one or more of these convictions, then they met the criteria of having a previous criminal conviction for the illegal possession or carrying of a non-firearm weapon.

The data collection process used to obtain this information was based solely on the Wanganui Computer criminal conviction history printouts.



All data collected for the variables of interest in Hypothesis 3 and 4 were recorded on each assailant's survey questionnaire sheet (see Appendix 5). The data collected on this survey questionnaire was later transferred to an Excel data spreadsheet for analysis which produced the following results.

### *Results*

As mentioned previously, it was thirdly hypothesised that those most likely to be determined firearm assailants (without firearm licenses) would be more likely to have previous convictions for the illegal possession and carrying of firearm weapons in comparison to those most likely to be determined knife assailants (without firearm licenses).

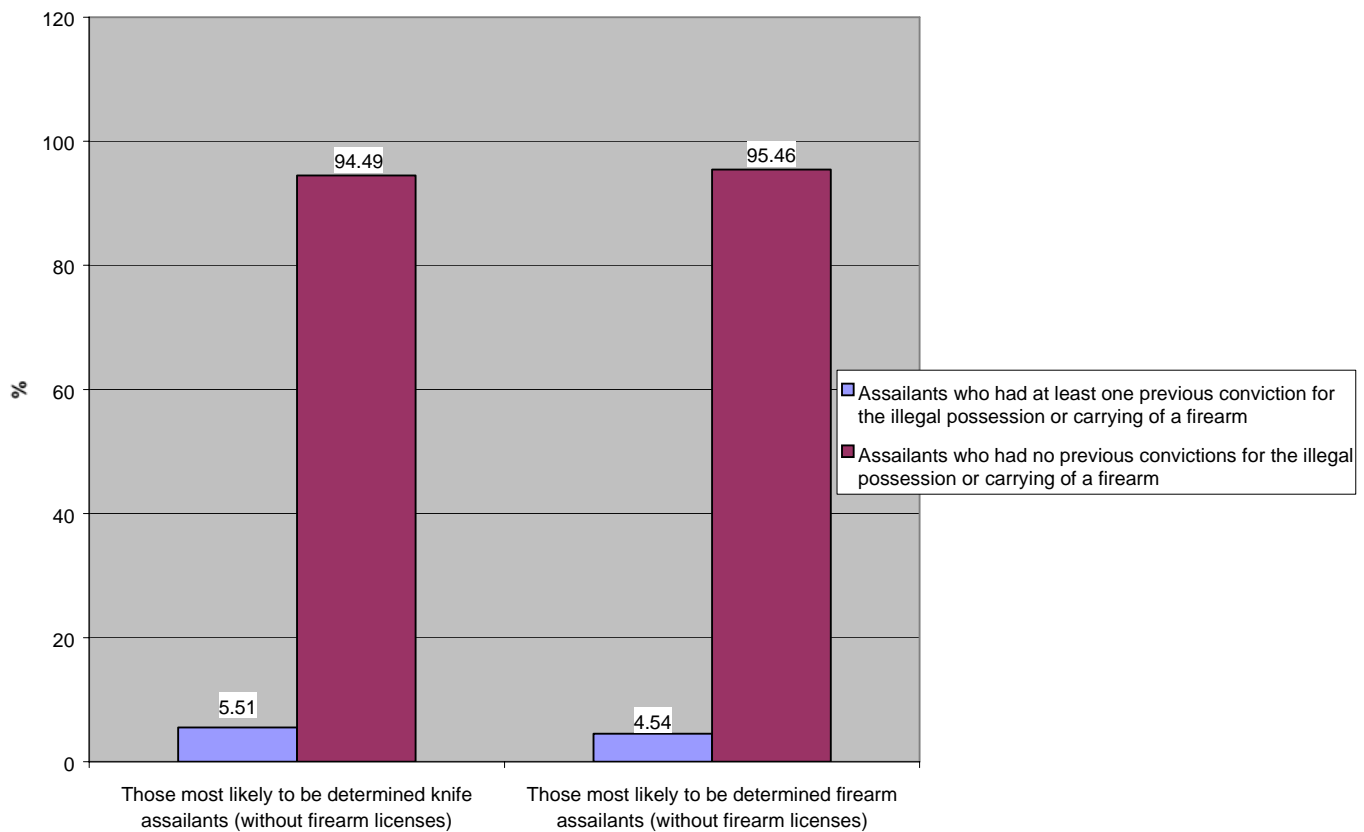


Figure 3: Those most likely to be determined knife and firearm assailants (both without firearm licenses) who did and did not have at least one previous conviction for the illegal possession or carrying of a firearm.

The results presented in Figure 3 demonstrate that 4.54 percent of those most likely to be determined firearm assailants (without licenses) and 5.51 percent of those most likely to be determined knife assailants (without licenses) had previous convictions for the illegal possession and carrying of firearms<sup>32</sup>. This finding is not consistent with the direction of Hypothesis 3 and the difference of 0.97 percent was not statistically significant to the  $p > 0.06$  (Z score = 0.0022). Therefore, the results do not support hypothesis 3. The implications stemming from this result will be discussed following the presentation of the results surrounding Hypothesis 4.

<sup>32</sup> For an insight into exactly how these percentage differences presented in Figure 3 were calculated, refer to Appendix 11.

As mentioned earlier, it was fourthly hypothesised that those most likely to be determined knife assailants (without firearm licenses) would be more likely to have previous convictions for the illegal possession and carrying of non-firearm weapons in comparison to those most likely to be determined firearm assailants (without firearms licenses).

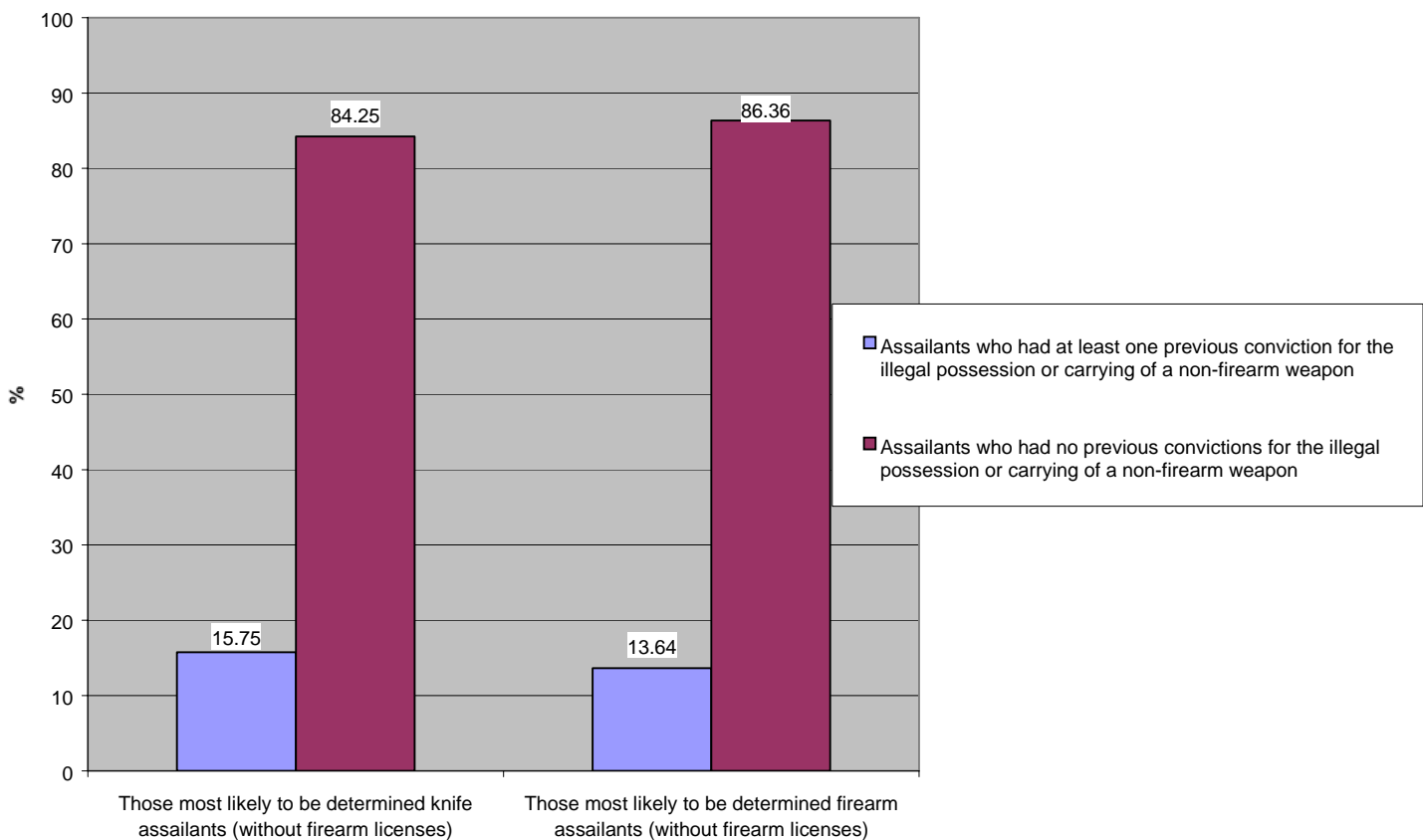


Figure 4: Those most likely to be determined knife and firearm assailants (both without firearm licenses) who did and did not have at least one previous conviction for the illegal possession or carrying of a non-firearm weapon.

The results presented in Figure 4 demonstrate that 13.64 percent of those most likely to be determined firearm assailants (without licenses) and 15.75 percent of those most likely to be determined knife assailants (without licenses) had previous convictions for the

illegal possession and carrying of non-firearm weapons<sup>33</sup>. Although this finding is consistent with the direction of the hypothesis, the difference of 2.11 percent was not statistically significant to the  $p > 0.05$  (Z score = 0.0041). Therefore, the results do not support Hypothesis 4.

So what do the results surrounding both Hypothesis 3 and 4 mean? As discussed earlier, the first possible alternative interpretation suggested that determined firearm assailants had less previous serious violent non-firearm convictions because they had *access* to guns to be violent with. Furthermore, it was asserted that knife assailants did not have similar access to firearms and therefore would have to rely on non-firearm weapons to be violent with. The above results would appear to refute this first possible alternative interpretation of the results surrounding Hypothesis 1. This is because those most likely to be determined knife and firearm assailants (both without firearm licenses) would appear to have remarkably similar access to firearms (see Figure 3).

However, particularly damning of the first possible alternative interpretation is the finding that those most likely to be determined firearm assailants (without licenses) were just as likely to carry or possess non-firearm weapons as determined knife assailants (without licenses). Yet, as demonstrated in Figure 1 (presented earlier), those most likely to be determined firearm assailants are much less likely to have used such weapons to inflict serious injuries in comparison to those most likely to be determined knife assailants. In short, the firearm assailants were just as likely to carry non-firearm

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<sup>33</sup> For an insight into exactly how these percentage differences presented in Figure 4 were calculated, refer to Appendix 12.

weapons as the knife assailants, except they were much less likely to have used such weapons on victims to inflict serious injuries. Interestingly, this observation would appear to further strengthen this writer's initial interpretation regarding the results surrounding Hypothesis 1. That is, determined knife assailants are more likely to be capable of inflicting serious injuries with non-firearm weapons in comparison to determined firearm assailants.

Therefore, this observation is in conflict with one of the prominent historical arguments in this area of the firearms debate. That is, the mere availability of any lethal weapon is apparently an important factor in an attack ending fatally. For example, Topping (1952, cited in Wolfgang, 1958: 79) points out that in 70 years of homicide in Canada 'the most significant factor was the presence of a suitable weapon' – whether it be a firearm or non-firearm weapon. However, if those most likely to be determined firearm assailants (without firearm licenses) are just as likely to carry non-firearm weapons as those most likely to be determined knife assailants (without licenses) – why are they much less likely to use them to seriously hurt anybody? This observation would suggest that factors far more powerful than the mere possession and availability of non-firearm weapons are involved in homicide.

In sum, the above results demonstrate that those most likely to be determined firearm assailants are unlikely to have significantly fewer previous serious *non-firearm* violent convictions in comparison to those most likely to be determined knife assailants because they had *access* to guns to use in any violent confrontations they might encounter. This

is because those most likely to be determined firearm assailants (without firearm licenses) seem to have remarkably similar access to firearms to those most likely to be determined knife assailants (without firearm licenses). Furthermore, those most likely to be determined firearm assailants are just as likely to carry and possess non-firearm weapons as assailants who actually killed with such weapons – however, the firearm assailants are much less likely to have previously used such weapons to seriously hurt anybody with them. As a result, this writer discredits the validity of the first possible alternative conclusion that could be drawn from the results surrounding Hypothesis 1.

*Second Alternative Interpretation To The Results Obtained For Hypothesis 1: Engaging In Physically And/Or Psychologically Easier Methods Of Lethal Weapon Substitution*

If it is assumed that determined firearm assailants are unlikely to be as capable as determined knife assailants at inflicting serious injuries with the *commonly* used close-contact non-firearm weapons of homicide, is it possible that in the absence of guns determined firearm assailants would seek out physically and/or psychologically easier ways of killing? The following will explore the validity of this second possible alternative interpretation that could be drawn from the results surrounding Hypothesis 1. For example, in the absence of guns, would assailants who are incapable of stabbing, bludgeoning or beating their victims to death just substitute guns with physically and/or psychologically less demanding methods, like, poisoning or committing an act of arson on their victim's house? If this is how those with a preference for using firearms would

act in the absence of guns, irrespective of the results surrounding Hypothesis 1, the rate of homicide may not decrease but remain the same.

However, for the following reasons, this second possible alternative interpretation would be unlikely to occur. As pointed out by Wolfgang (1958:80): ‘Our cultural prescriptions dictate a relatively narrow range of weapons from which an individual assailant makes his choice.’ In other words, there are a small variety of weapons that the vast majority of assailants will make their selection from and it is unusual for assailants to consider weapons and methods of homicide outside this narrow range. In developed nations this narrow range of culturally prescribed weapons predominantly involves knives, guns, bludgeoning objects and manual beating (see Wolfgang (1958) for the United States; Chapdelaine, Samson, Kimberley and Viau (1991) for Canada, and Vinson (1974) and Strang (1993) for Australia). Even in the current study Table 1 (presented earlier) demonstrates that 86 percent (or 493 out of 574) of all events where the weapon type was known involved a knife, gun, manual beating or bludgeoning object (respectively). Of importance is that in the absence of guns, none of the three remaining commonly used *close contact* weapons of homicide are the type that would be associated with being physically and/or psychologically *easier* to use in comparison to a firearm.

Further reinforcing the above argument is an observation earlier presented by Lester (1991) and Killias (1993). That is, both authors noticed that countries with low rates of firearm homicide did not experience a compensatory increase in *any types* of non-firearm homicide. If there was any form of weapon substitution towards what might be thought

to be physically and/or psychologically *harder* or *easier* methods of homicide - they were obviously not ending in fatalities. Reinforcing this observation, but using a time-series approach (as opposed to the cross-sectional methods employed by Lester and Killias), is the data from Table 1 (presented earlier).

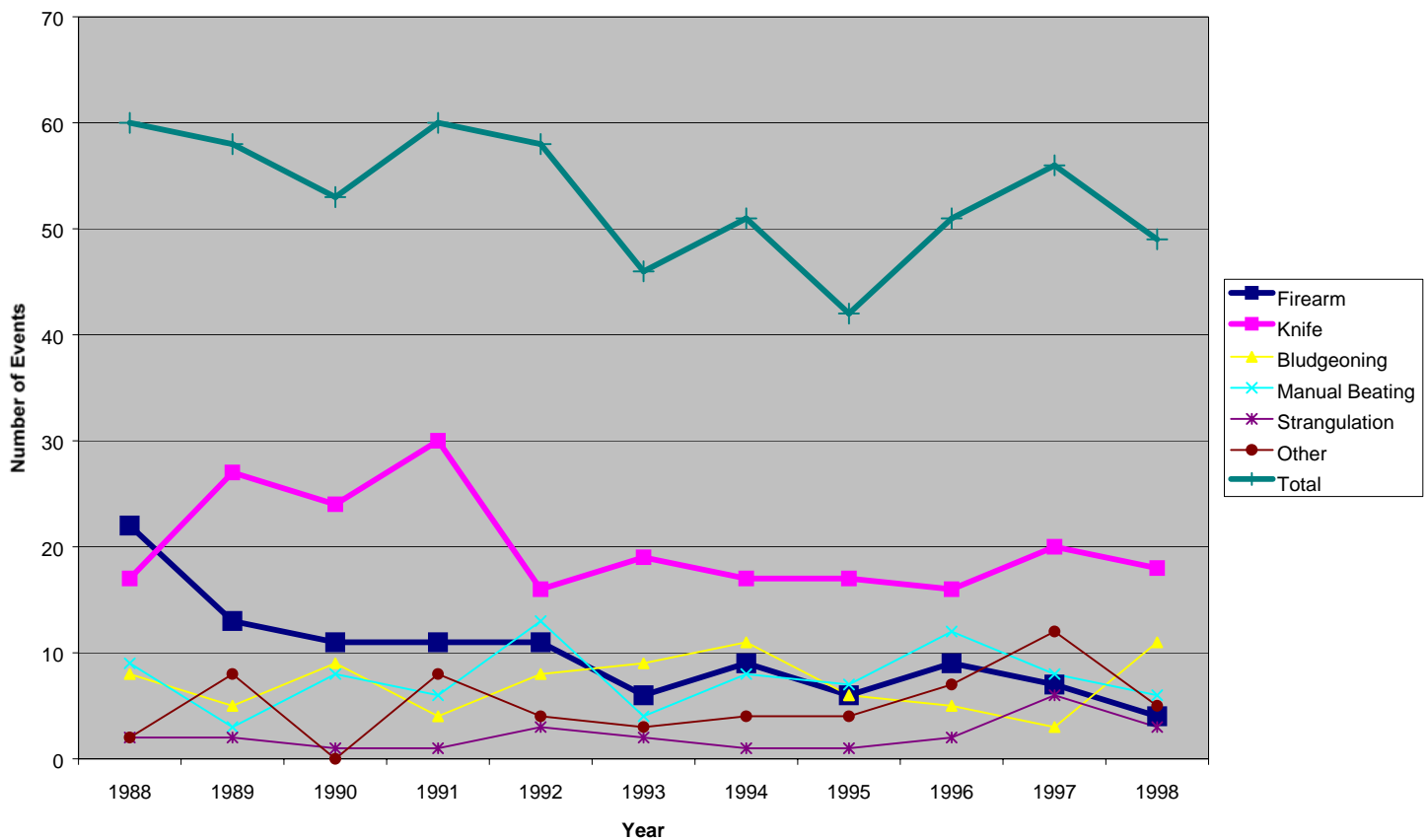


Figure 5: Homicide by weapon/method in New Zealand between 1988-1998 ( $n=574^{34}{}^{35}$ ).

<sup>34</sup> Excludes 'weapon unknown' category from Table One ( $n=10$ ). Furthermore, the Suffocation, Drowning, Poison, Fire, Carbon Monoxide, Motor Vehicle and Other categories presented in Table 1 have collectively been termed as 'Other' in Figure 5.

<sup>35</sup> This graph demonstrates an obvious decrease in the rate of firearm related criminal homicide. However, it should be kept in mind that this graph is based on single 'events' and not the number of victims killed per event. Because firearm related criminal homicides are much more likely to result in multiple fatalities in comparison to non-firearm related events - if the graph was based on the number of actual victims killed, the above decrease would not be as pronounced.



Figure 5 demonstrates that between 1988 and 1998 there has been a gradual and consistent decrease in firearm homicide in New Zealand. More specifically, out of the six different weapons/methods of attack presented in Figure 5, the firearm was the most commonly used weapon in 1988 (with 22 events involving firearms), yet by 1998 it had dropped to second to last place (with only 4 such events). Regardless of its probable cause, the above graph reinforces the earlier conclusion made by Lester (1991) and Killias (1993). That is, as the rate of firearm homicide has experienced a rapid decrease, there has not been an obvious compensatory increase in both common and/or uncommon methods of homicide. This relative absence of a compensatory increase in non-firearm methods of criminal homicide is reflected in the gradual overall decrease in the total number of events from 60 in 1988 to 49 in 1998 (see Figure 5 above) <sup>36</sup>. As a result of the above information, this writer discredits the validity of the second possible alternative conclusion that could be drawn from the results surrounding Hypothesis 1. That is, in the absence of guns assailants with a preference for firearms are unlikely to substitute to physically and/or psychologically easier weapons or methods of homicide.

To conclude this chapter, determined firearm assailants are unlikely to have significantly fewer serious violent non-firearm convictions in comparison to those most likely to be determined knife assailants because they had *access* to guns to use in any violent confrontations they encountered. Furthermore, the above information demonstrates that in the absence of guns, determined firearm assailants are unlikely to lethally substitute

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<sup>36</sup> This decrease predominantly appears to be due to the decline in firearm related criminal homicides. Although there only seems to be about 10 less events it is important to remember that because firearm homicides are more likely to result in multiple victim homicides (Zimring and Hawkins, 1997), the actual number of victims killed is likely to be greater than the number of events.

guns with physically and/or psychologically less demanding weapons or methods of homicide. The following chapter will discuss the implications that the elimination of the above two possible alternative interpretations has on the results obtained surrounding Hypothesis 1.

## CHAPTER FIVE

### DISCUSSION

With the elimination of the only two possible alternative interpretations that could be identified surrounding the results obtained for Hypothesis 1, this author favours the original interpretation of these results. That is, based on arguably the most reliable predictor of future violent non-firearm capabilities, determined firearm assailants are unlikely to be as capable as determined knife assailants at inflicting serious injuries with the commonly used non-firearm weapons of homicide. As a result, *in the absence of guns, this writer is persuaded that a proportion of determined firearm assailants would not be capable of lethal weapon substitution.* Therefore, this thesis concludes that inhibiting determined firearm assailants from accessing guns in the future would be likely to reduce the overall rate of homicide.

Firstly, this conclusion has important implications regarding the validity of Wolfgang's (1958) weapon substitution hypothesis. For example, if determined firearm assailants are, as the results surrounding Hypothesis 1 suggest, unlikely to be as capable of lethal weapon substitution as determined knife assailants, then it would not matter if *all* firearm assailants are, as Wolfgang had argued, 'determined to kill'. It would not matter because as these results demonstrate, in the absence of guns, not all determined firearm assailants are likely to be as capable of lethal weapon substitution as their counterparts who used knives. Therefore, inhibiting determined firearm assailants from accessing firearms

would still be likely to reduce the rate of homicide. Therefore, the results surrounding Hypothesis 1 would appear to discredit the validity of Wolfgang's weapon substitution hypothesis. By more directly discrediting the validity of Wolfgang's hypothesis, this thesis has (assuming it is correct) achieved its main aim.

Secondly, if Wolfgang's hypothesis has been discredited, then the consensually held belief that Wolfgang's study initiated will also have been discredited<sup>37</sup>. Therefore, in conflict with the consensually held belief formed by authors including Wolfgang (1958), Zimring (1968), Cook (1981), Kleck (1991) and Kopel (1992) – not all determined firearm assailants are likely to be capable of lethal substitution. Therefore, the results from this thesis, which demonstrate that not all determined firearm assailants are likely to be capable of lethal weapon substitution, conflict with both Wolfgang's weapon substitution hypothesis and the consensually held belief.

Subsequently, if some proportion of determined firearm assailants are unlikely to be capable of lethal weapon substitution, what effect would inhibiting access to guns have on those firearm assailants not so determined to ensure their victims died? Obviously the answer to this question is that if some proportion of determined firearm assailants are unlikely to be capable of killing in the absence of guns, the remaining proportion of those not so determined to kill are likely to be even less capable. Therefore, the above conclusion that suggested inhibiting determined firearm assailants from accessing guns in

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<sup>37</sup> As mentioned earlier, the consensually held belief differs from Wolfgang's weapon substitution hypothesis in that Wolfgang believed all firearm assailants were determined. In the consensually held belief some proportion of assailants were believed to be determined. The proportion depended on a

the future would be likely to reduce the overall rate of homicide requires updating. That is, this thesis now concludes that restricting firearm access to *all* potential firearm assailants would be likely to reduce the overall rate of homicide. Based on this conclusion it is therefore recommended that those people most at risk of committing homicide with guns need to be identified and such people must be inhibited from accessing these deadly weapons.

Importantly, is this thesis able to generalise this conclusion and its corresponding recommendation onto the focus of this thesis – the United States? This possibility will be explored later. However, what is more certain is that this conclusion is *most* applicable to the country that the evidence in this thesis is based on. Due to the data in this thesis being based on a New Zealand population, the strongest possible conclusion is that restricting firearm access to *all* potential firearm assailants is likely to reduce the overall rate of homicide in *New Zealand*. Therefore, it is recommended that those most at risk of committing homicide with guns in New Zealand need to be identified and such people need to be inhibited from accessing firearms. However, as the following will demonstrate, reflected in a number of policies introduced throughout the early 1990s, it would appear the New Zealand Government has already seriously attempted to move in the direction of this recommendation.

#### *New Zealand And Gun Control In The 1990s*

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particular author's subjective definition of who was and who was not likely to be determined to kill their victim/s.

Due to the mass murder of 13 people in Aramoana in 1990 and a number of similar overseas tragedies, mounting public pressure was placed on the New Zealand Government to introduce more effective and restrictive gun control measures. By the end of 1992 this pressure had materialised into legislation with the Arms Amendment Act 1992. This legislation aimed to ensure that those who were to have the easiest and most convenient access to firearms (that is, those to be granted firearm licenses), were both fit and proper. Fit and proper meant that they were unlikely to use their firearms to hurt themselves and/or others and that they were likely to be responsible with their weapons and prevent them from falling into unfit and/or irresponsible hands. More specifically the Amendment resulted in the previous lifetime license being changed to a 10-year license system (where a more rigorous selective vetting process would screen out those people believed to be unsuitable). In addition, military style semi-automatics rifles had to be registered. The new legislation introduced policies aimed at restricting firearm access to those believed to be at highest risk of using such weapons to hurt themselves and/or others. The high-risk groups targeted tended to be those with violent tendencies and mental health histories. By attempting to eliminate gun access to those believed to be most at risk of using guns to hurt others, the Arms Amendment Act was already aiming to achieve the above recommendation made by this thesis.

Indicators suggest that some policies evolving out of the new legislation have been successful in restricting gun access to such high-risk groups. For example, and as mentioned, one of the policies that aimed to restrict such people from having easy access

to firearms was by developing a more systematic, selective and rigorous police vetting system for re-applying licensees and new applicants. This thesis has identified that the new police vetting system seems to have been successful in meeting this aim of the legislation because high-risk groups, like people with violent criminal histories, became even less likely than before the legislation to receive a firearms license. For example, before the legislation was introduced, eight out of the 24 licensees who committed a firearm homicide between 1988 and 1992 had one or more violent non-firearm related convictions (all of which were in the ‘not serious’ injuries received category). However, after the new legislation became law in mid-December 1992, none out of the 10 licensees who committed a firearm homicide between 1993 and 1998 had such convictions. This observation demonstrates both that the required standard had increased and that the New Zealand Government (via the New Zealand Police) had become much more careful in who they granted the easiest means of accessing firearms<sup>38</sup>. Interestingly, other indicators suggest that the legislation may have been successful in keeping guns out of the hands of people at ‘high-risk’ of using guns to hurt others. Take for example data taken from this thesis in Figure 6 (below).

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<sup>38</sup> Thorp’s (1997: 115) independent firearms review also found the vetting system to be rigorous, describing it as ‘outstandingly the most useful feature of the present system.’

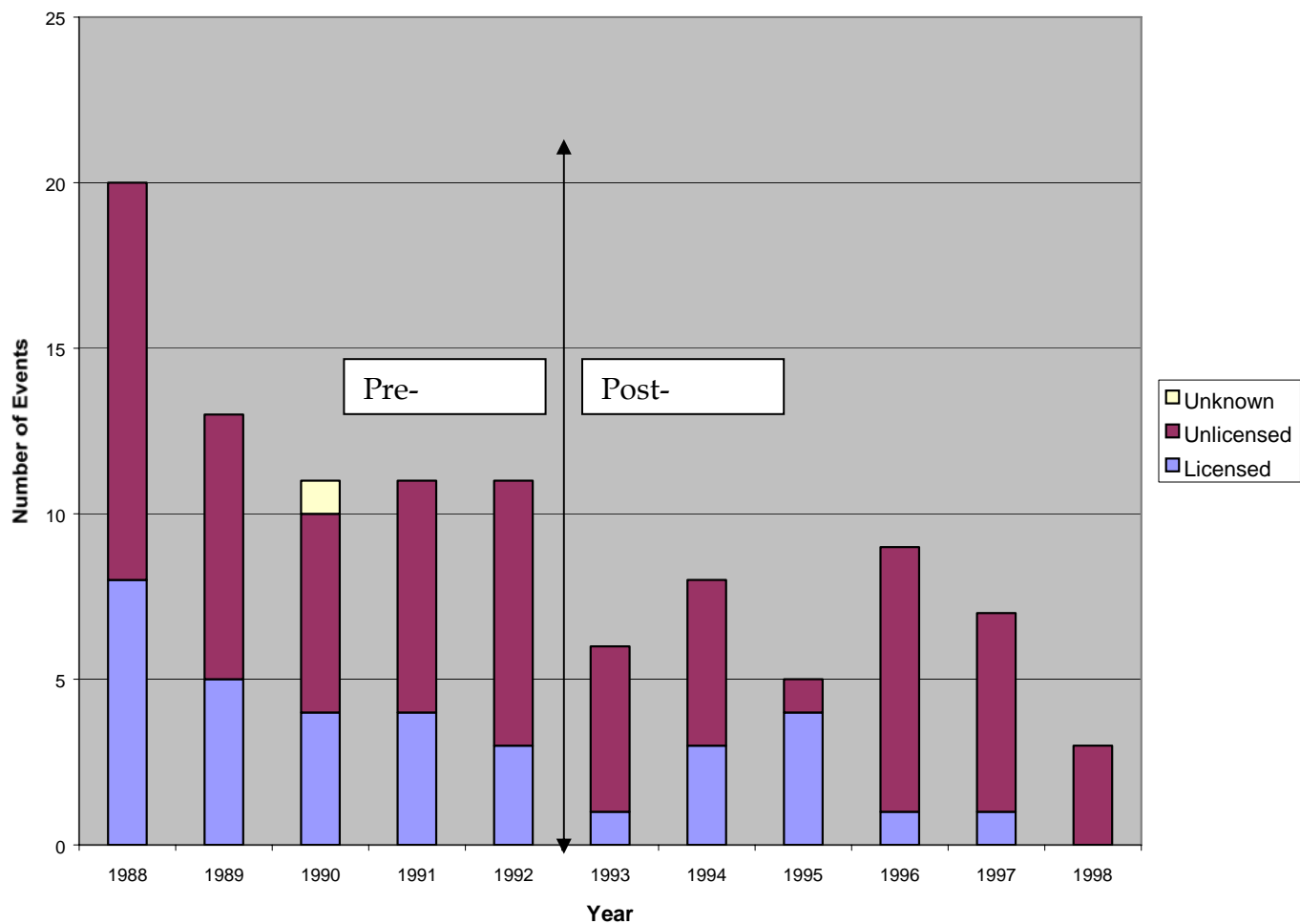


Figure 6: Firearm assailants with and without firearm licenses who committed a homicide (n=104).

Excluding the most obvious feature of Figure 6 – that firearm homicide in New Zealand has decreased, also noticeable is the sudden difference in the rate of firearm homicide before and after the legislation became law. Another indicator possibly demonstrating the success of the legislation is that firearm assailants were much more likely to hold a current firearms license *before* rather than *after* the introduction of the legislation. However, this observation should be viewed with caution because this reduction in firearm assailants with licenses appeared to be declining before the legislation was introduced. Furthermore, this pattern could also be due to the declining licensee population. For example, according to Thorp (1997), in 1991 there were 327,000



licensed firearm owners, however by 1997 this number had reduced to 210,000 (a 36 percent decrease).

Irrespective of what may have caused the proportion of firearm assailants with firearm licenses to diminish, the proportion of firearm assailants without licenses has, except for 1995 and 1998, remained relatively constant (see Figure 6 above). One possible explanation for this constant pattern is that irresponsible storage and handling practice by licensed owners has directly or indirectly enabled unlicensed users to access firearms. Support for the ‘irresponsible storage’ possibility is provided by Alpers and Walters (1998: 93) who found that out of the 88 incidents of incidents of firearms theft they investigated, 52 percent of the weapons were insecurely stored by the licensed owner. As a result, the authors concluded that: ‘[licensed] New Zealand gun owners, either accidentally or intentionally, continue to leave firearms unsecured.’ And in relation to irresponsible handling practices, Thorp (1997) discovered that a significant proportion of a small sample of licensees were willing to sell their firearms to a buyer who *said* they held a firearm license<sup>39</sup>. Based on the above information it is of little surprise that Alpers (1996) identified that a large proportion of assailants who committed firearm homicides who did not have firearm licenses unlawfully acquired their guns from the collections of licensed owners. This observation is reinforced by Newbold’s (1999: 75) survey on the acquisition of illegal firearms by prison inmates when he said ‘It appears that the bulk of

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<sup>39</sup> More specifically, three out of 14 licensees who had advertised their firearms for sale in a local newspaper were prepared to sell their weapons to a person who said they held a firearms license.

sporting guns available on the black market have originally been stolen from legitimate owners<sup>40</sup>.

Therefore, although indicators suggest that the Arms Amendment Act has possibly improved the 'fitness' of those who have the easiest access to firearms, other indicators suggest it may be failing to ensure licensees are as 'responsible' as they could be in regards to the storage and handling of their firearms.

Importantly, with the identification of this potential deficiency in the legislation regarding irresponsible storage and handling practices by some licensees, independent advisors have already provided the New Zealand Government with potential solutions to these problems, (which are currently being debated in Parliament)<sup>41</sup>.

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<sup>40</sup> It is important to note that Newbold does not totally blame illegal firearm access on licensed owners. Newbold (1999: 76) points out that even if licensees were abiding by the 1992 amendments by securely storing their weapons, the guns were still at risk of falling into the hands of unlicensed users. This, Newbold argues, is because 'much of the time these [gun] cabinets are easily broken into and the locks on them may serve as an advertisement that guns are contained within.' As a result, Newbold supports Thorp's (1997) recommendation to the New Zealand Government that the firearm storage provision in the 1992 Amendment be tightened (for example, guns should be stored in a strong room or safe).

<sup>41</sup> To encourage licensees to be more responsible in regards to their firearm storage and handling practices, Thorp (1997) has recommended that every legally owned firearm be individually registered with the New Zealand Government. This is believed to encourage more responsible storage and handling practices of licensed owners because should their firearms irresponsibly fall into the hands of an unlicensed user and the police obtain the weapon, it is highly likely that the firearm will be traced back to a possibly negligent legal owner. The probable effectiveness of introducing a national registration system appears to be supported by the main academic contributors in New Zealand (see Alpers and Walters, 1998; Newbold, 1999). However, Newbold has questioned whether the benefit would justify the expense. This is an important point considering there were only four firearm homicide events in New Zealand in 1998 (see Table One). If registering all legally owned firearms in

Importantly, what the above information demonstrates is that for the past decade the New Zealand Government has already undertaken measures that are consistent with the principal recommendation stemming from this thesis. That is, over the past decade the New Zealand Government has introduced a number of gun control measures in an attempt to restrict firearm access to those believed to be most at risk of hurting others with guns. This point is reinforced by Newbold (1999: 77) who said ‘Although access to firearms has been restricted in this country for many years, it is more restricted now than ever’. Furthermore, where research and independent inquiries have identified potential deficiencies in the 1992 legislation, the New Zealand Government has at least been willing to consider introducing the most effective potential solutions. Therefore, with the main recommendation of this thesis already being considered by the nation for which it is most applicable, can the results, conclusion and recommendation stemming from this thesis be generalised to the focus of this thesis – the United States?

*Generalising And Applying The Results, Conclusion And Recommendations Of This Thesis To The United States Of America*

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New Zealand is very expensive, the money spent may be better utilised in other areas where there may be a greater potential to save more lives. For example, the money spent might save more lives if utilised on road safety. However, if registration is relatively inexpensive, then it may be well worth introducing such policies (especially considering that, irrespective of there only being four events in 1998, there will always be the risk that the rate of firearm homicide by assailants without licenses in New Zealand could significantly increase in the future).

Due to this thesis being based on a population of New Zealand homicides, its results, conclusion and recommendation *cannot* simply be generalised onto other nations like the United States. This will not be possible until the methodology used in this thesis is undertaken on an American sample. However, due to the focus of this thesis being on the American gun control debate, what kind of results do any present indicators suggest would be found if the current study was undertaken on an American sample? More specifically, would an American sample of those most likely to be determined firearm assailants have significantly less previous serious violent non-firearm convictions in comparison to those most likely to be determined knife assailants (as they did with the New Zealand population in Hypothesis 1)? Or is it possible they could have the same or even more such convictions?

One present indicator suggests that, per-capita, Americans are likely to be more capable of inflicting serious non-firearm injuries than New Zealanders because their rate of non-firearm homicide is more than twice that of New Zealand's rate (2.71 versus 1.13 per 100,000 respectively) (United Nations International Study of Firearm Regulations, 1998). Therefore, with or without guns, this statistic demonstrates that Americans are more likely to be capable than New Zealanders of engaging in lethal weapon substitution with non-firearm weapons. However, this difference in non-firearm homicide between New Zealand and the United States appears less impressive when one considers that the rate of firearm homicide in the United States is over 28 times higher than that in New Zealand. More specifically, the rate of firearm homicide in the United States and New Zealand is 6.24 versus 0.22 per 100,000 (respectively) (United Nations International Study of

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Firearm Regulations, 1998). Therefore, based on the *relatively* similar rates of non-firearm homicide between New Zealand and the United States, this writer is persuaded that undertaking a similar study to this thesis using an American sample would be likely to reveal fairly similar results to those found in support of Hypothesis 1.

Based on the likelihood of an American sample producing similar results to those found in this thesis, it is suggested that inhibiting all potential firearm assailants from accessing guns would be likely to reduce the rate of homicide in the United States. Therefore, it is recommended that those most at risk of killing with firearms in the United States need to be identified and inhibited from accessing these weapons.

Based on the above recommendation, it is important to identify who is most at risk of killing with firearms in the United States. As in New Zealand, the United States Government has already introduced policies aimed at identifying and inhibiting firearm access to those believed to be most at risk of killing with firearms. For example, according to Jacobs and Potter (1995: 93) 'Keeping firearms out of the hands of dangerous and irresponsible persons is one of, if not *the* primary goal of the United States gun control policy.' So who is targeted as being dangerous and irresponsible?

Wintemute, Wright, Parham, Drake and Beaumont (1999) research on a Californian sample reinforced other American studies when it demonstrated that the vast majority of applicants denied legal firearm access were declined because of previous criminal convictions (mostly for violence). Therefore, it would seem the United States

Government has identified people with prior criminal convictions (particularly for violence) as being the most heavily targeted dangerous and irresponsible risk group. According to Wintemute and others, with 80,000 ineligible applicants per year, the federal screening process appears to be somewhat successful in identifying and denying legal firearm access to this targeted high-risk group. Therefore, employing a similar logic to that used in New Zealand, the United States has attempted to restrict the legal supply of firearms to the group they have identified as being those most likely to hurt others with guns<sup>42</sup>.

However, irrespective of these measures, Morgan (1997) has argued that Americans with prior criminal convictions still have easy illegal access to firearms. This statement is reinforced by prison inmate surveys investigating criminal access to firearms (Wright and Rossi, 1986; Zawitz, 1995). Considering that 13 percent of those surveyed in Zawitz's inmate study were in possession of a firearm for the crime that they were presently in prison for – these assertions of easy firearm access cannot be discounted as mere exaggerations by the inmates. Furthermore, with 94.5 percent of gang-related homicides in Los Angeles in 1994 involving firearms and most of these assailants being too young to legally own the most common type of firearm used in such events (handguns) – this

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<sup>42</sup> However, the American federal vetting system does not appear to be as strict as the New Zealand system. For example, Wintemute et al. (1998: 22) points out that 'No jurisdiction denies firearms purchase to all persons having a history of prior criminal activity, and many thousands of persons with such histories pass background checks and purchase firearms legally.' In New Zealand such people would be strictly deemed ineligible to obtain a handgun license (a common type of firearm purchased in the United States). In fact, having such a past would *significantly* reduce the chances of a prospective licensee getting a long-gun license. Furthermore, the American federal vetting system does not involve a reference check with a close associate of the prospective licensees (a pre-requisite for any type of firearm license in New Zealand) (Thorp, 1997). Finally, it is not unusual for the vetting system in the United States to fail in identifying all ineligible applicants due to deficiencies with the criminal conviction databases (Jacobs and Potter, 1995).

high risk group obviously has easy access to firearms (Hutson, Anglin, Kyriacou, Hart and Spears, 1995).

If measures have been put in place to inhibit people with prior criminal convictions from legally accessing guns in the United States, then how is this high-risk group able to access firearms? As in New Zealand, evidence suggests that this high-risk group is directly and indirectly illegally accessing the weapons of legal owners (Cook, Molliconi and Cole, 1995). Again, like New Zealand, it appears the American system *may* have improved the fitness of those who legally own firearms, but is failing to reduce or inhibit *irresponsible handling* and *poor storage* practices by legal owners. For example, in relation to *irresponsible handling* practices, legal firearm owners in America are able to give or sell their weapons on to ineligible people (Cook et al., 1995). Because legally owned weapons can be passed on to ineligible people with little chance of reprimand or accountability this creates a great opportunity for the highest risk group (particularly ineligible violent criminals), to obtain guns. Exacerbating this potential source of weapons supply to high-risk ineligible groups in the United States is that in many states eligible owners are able to buy more than one firearm per purchase. In the Multinational Monitor (1998: 17), Professor David Kairys highlighted this common source of weapons supply when he stated that law enforcement officials had discovered:

[T]hat 30 percent of the handguns purchased in the Philadelphia area were purchased by someone who bought three or more in that period and averaged over five..... What are people doing with three cheap, rapid-firing, quite lethal, small handguns? These are not collectors' items.

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In a small country like New Zealand, this 'slipping through the cracks' is, relatively speaking, much less likely to occur.

Furthermore, Kairys (1998) has argued that lax gun laws are enabling gun manufacturers to indirectly supply weapons to ineligible ‘high-risk’ owners<sup>43</sup>. When typically ineligible owners use these weapons in violent crimes the resulting fear of lethal violence further promotes legitimate and illegitimate gun sales. And more guns means more violent crimes (a perpetuating cycle) (see Harding (1983) and Zimring & Hawkins (1997) for a similar argument). Interestingly, supporting the validity of Kairys’ (1998: 7) argument was an affidavit made by Robert Hass, a former Senior Vice President of Marketing and Sales for Smith and Wesson (the largest handgun manufacturer in the world), when he said:

The company and industry as a whole are fully aware of the extent of the criminal misuse of firearms. The company and the industry are also aware that the black market in firearms is not simply the result of stolen guns but is due to the seepage of guns into the illicit market from multiple thousands of unsupervised federal firearms licensees. In spite of their knowledge, however, the industry’s position has consistently been to take no independent action to insure responsible distribution practices.

In relation to *poor storage*, Weil and Hemenway (1992) found that one-third of legal firearm owners kept their weapons insecurely stored. This statistic makes Wright and Rossi’s (1986) discovery, that the bulk of guns stolen by prison inmates came from the collections of private residents, unsurprising. Importantly, the legally owned weapons in Weil and Hemenway’s sample were stored insecurely so they could be readily accessed to provide protection. This is because for a firearm to be effective in the provision of

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<sup>43</sup> Kairys (1998) has even argued that the advertising and marketing campaigns have specifically targeted the high-risk violent criminal. For example, it is quite obvious which market is being targeted when a poster explicitly promotes one of the key features of a particular brand of firearm as having ‘excellent resistance to finger prints’ (see Appendix 13 for this poster).



protection is must be, by definition, insecurely stored (for example in a bedside cabinet). However, having guns for protection creates a dilemma because insecure storage creates a great opportunity for the highest risk group of hurting others with guns (ineligible criminals) to directly gain access to firearms (or indirectly by the stolen guns feed into the black market (see Cook et al. (1995)).

Irrespective of the latest research that has been used to condemn the usefulness of nationally registering all firearms<sup>44</sup>, such gun control measures are an internationally popular way to reduce irresponsible handling and poor storage habits by licensees is to introduce a national firearm register (see Zimring and Hawkins, 1987; Thorp, 1997, United Nations International Study of Firearm Regulations, 1998). As mentioned, this is because a legal owner's irresponsible handling and storage practices can be identified and they can therefore potentially be held accountable for their negligence. However, unlike in New Zealand, at this stage, the United States Government is unwilling to even consider a gun control measure such as a national firearms registration system. This is due to a public perception that enabling the introduction of one significant gun control measure will enable the introduction of others until guns are prohibited and are no longer available for their most popular use - protection<sup>45</sup>. Since most Americans obtain guns mainly for

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<sup>44</sup> Mouzos (2000: 1) has written what has been described as a 'path-breaking' study which investigates the licensing and registration status of firearms used in homicide. This study may have been interpreted by some gun control critics as evidence that Australia's recently implemented national firearm registration system has had little effect on reducing the rate of homicide. Appendix 14 provides a critique of this study that identifies a fundamental flaw that should inhibit this study from being misused in the gun control debate in the future.

<sup>45</sup> 'In the case of registration, the principal potential villain is public and gun-owner perception that accountability measures are merely one further step towards prohibition.' (Zimring, 1981: 4).

the purpose of protection<sup>46</sup>, insecure storage is a much greater problem in the United States than in New Zealand. This is because in New Zealand it is illegal to own guns for the explicit purpose of protection, therefore when guns are not being used (predominantly for hunting), legal owners are aware that by law their guns *must* be securely stored.

Although Cook and Moore (1995: 286) have argued that the key to successfully restricting firearm access involves finding a way ‘to keep guns out of the hands of “bad guys” without denying access to the “good guys”, the gun crimes would fall without infringing on legitimate uses of guns’. However, this appears to be impossible because the most popular legitimate purpose of guns for the ‘good guys’ in the United States is to provide protection, and for reasons just mentioned, having guns for protection, by definition, often directly and indirectly results in putting guns in the hands of ‘bad guys’.

Therefore, building on the works of Kairys (1998), Zimring and Hawkins (1997) and Harding (1983), this writer would argue that an unwillingness to introduce a national gun registration system *and* enabling guns to be legitimately purchased for the purpose of protection, places the United States in a unique and perpetuating cycle of lethal violence. This is because without a national registration system and allowing guns to be legitimately purchased for protection directly and indirectly results in supplying firearms to those most likely to use them to kill others (violent criminals). This avenue of weapon supply results in a high rate of homicide, which promotes a national fear of lethal violence. A fear of lethal violence encourages an increase in the legal and illegal demand

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<sup>46</sup> Guns are typically purchased legally or illegally by both eligible and ineligible users for the use of protection (see Lott (1998) and Wright and Rossi (1986) respectively).

for firearms for the purpose of protection and when violent criminals are able to access guns, then they are able to use them to hurt others – completing the cycle. To more specifically demonstrate the *general* characteristics of this cycle, consider the theoretical diagram in Figure 7 (below).



Figure 7 demonstrates that there are two independent cycles; not having a national firearms register is likely to enable one cycle to perpetuate, and, enabling guns to be purchased for the legitimate purpose of providing protection perpetuates another. It could be argued that the carrying of concealed firearms would inhibit the above cycle from perpetuating because licensees carry their guns on themselves personally and therefore their weapons are securely stored. However, concealed firearm permit holders are unlikely to be willing and/or able to carry a concealed firearm when they are, for example, sleeping, bathing or playing sports. And unless *all* such people can be trusted to store these weapons in a secure environment when they are not being personally carried, then the weapons *are* susceptible to theft (as Weil and Hemenway (1992) found). Because these weapons are specifically used for protection, when they are not being carried on the owners' body, they are more likely to be insecurely stored near by and ready for action. For example, in the bedside table when sleeping or bathing and in a sports bag or the glove box of a car when playing sport.

In fact, encouraging greater numbers of people to carry guns for the purpose of protection (as the popular 'carry and conceal' handgun legislation has), only increases the statistical probability that these weapons will end up in the hands of those most likely to use them in lethal acts of violence. This is because more guns means the greater likelihood of an opportunistic burglar or thief stumbling across an insecurely stored weapon in, say a house or motor car. Consequently, in conflict with the title of Lott's (1998) book 'More Guns, Less Crime', from a statistical perspective a more accurate title might be 'More Guns, More Homicide'. Although the United States Government has undertaken some

measures to inhibit the highest risk groups from legally accessing guns, illegal avenues of weapons supply are still enabling such groups to obtain firearms. Due to a fear of restrictive gun control measures and an obsession with protection, these identified sources of weapons supply to high-risk groups is likely to continue. As a result, the United States is unlikely to experience the low rates of homicide maintained by *all* the other developed nations (and the majority of undeveloped ones too).

## CHAPTER SIX

### SUMMARY AND CONCLUSION

This thesis has argued that the lack of consensus that has continued to plague the homicide area of the gun control debate in the United States, in part, stems from Wolfgang's (1958) weapon substitution hypothesis. The weapon substitution hypothesis argued that in the absence of guns, all firearm killers would have lethally substituted guns with non-firearm alternatives. Firstly, this thesis demonstrated how the weapons substitution hypothesis inhibited both academic and political progress from the 1960s through to the early 1990s. The hypothesis inhibited progress in the academic debate because it could not be directly discredited. If it could not be discredited then restricting firearm access could still potentially result in all assailants who would prefer to use a gun to engage in lethal weapon substitution. This possibility flowed over into the political gun control debate inhibiting progress via the political slogan 'guns don't kill people, people kill people'. By the early 1990s the majority of academic evidence suggested that after 30 years of inhibiting academic and political progress, Wolfgang's hypothesis was unlikely to be true. However, because research was incapable of directly and irrefutably discrediting the hypothesis, although declining in strength, it could still be found exerting its influence in the political/public debate (and occasionally in the academic literature<sup>47</sup>).

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<sup>47</sup> For example, Cook and Moore (1995) make reference to the possible, although unlikely, validity of Wolfgang's (1958) weapon substitution hypothesis.

Although, by the 1990s, firearm researchers were finally freed of the confounding effects of the weapon substitution hypothesis, academic progress has still not been able to irrefutably clarify whether less guns in the United States would increase, decrease or have no effect on the current rate of homicide. This thesis asserts that the weapon substitution hypothesis may still be having an influence on the modern debate and could, *in part*, be implicitly responsible for the continued lack of progress in this research area. Initiated by Wolfgang (1958), most of the main contributors to this area of the gun debate formed a ‘consensually held belief’: assailants who *are* determined to kill with firearms would be more than capable of killing with non-firearm weapons. Interestingly, the consensually held belief implies that the best predictor of lethal weapon substitution is whether a person was determined to kill their victim.

However, based on Mischel’s (1968) logic, it was argued that the best possible predictor of lethal weapon substitution was more likely to be whether or not firearm assailants were as capable of killing as non-firearm assailants using non-firearm weapons. With the intention of thoroughly and directly testing the validity of Wolfgang’s weapon substitution hypothesis and the consensually held belief it initiated, a workable methodology was developed which eventually produced the following comparison. The thesis intended to undertake a comparison between those most likely to be determined firearm assailants to those most likely to be determined knife assailants both over 19 years old. These two types of assailants were to be compared on their previous abilities to engage in acts of violence involving non-firearm weapons that were likely to have



resulted in serious injuries to the victims (based on the assailants' previous violent criminal convictions).

Based on the above proposed comparison, Hypothesis 1 predicted that those most likely to be determined knife assailants (over 19 years old) would be more likely to have previous serious violent non-firearm convictions in comparison to those most likely to be determined firearm assailants (over 19 years old). The results demonstrate that 25.23 percent of those most likely to be determined knife assailants but only 2.94 percent of those most likely to be determined firearm assailants had previous serious non-firearm convictions<sup>48</sup>. Therefore, this statistically significant difference was clearly in support of Hypothesis 1.

So what conclusions were drawn from this result? After eliminating any possible alternative interpretations to the results surrounding Hypothesis 1<sup>49</sup>, the results indicated that determined firearm assailants were unlikely to be as experienced as determined knife

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<sup>48</sup>This result is in stark contrast to Zimring's (1968: 726) data that demonstrated that 'guns and knives are used by the same sorts of people'. The data in this thesis suggests that people who use guns and knives to kill with seem to differ in the most important way – an ability to inflict serious injuries with non-firearm weapons.

<sup>49</sup> Firstly, it was possible that the reason the determined firearm assailants were less likely to have previous serious non-firearm convictions in comparison to the determined knife assailants was because they had *access* to guns and therefore could use these weapons in any violent situation they encountered. However, this possibility was eliminated because firearm and knife assailants (both without licenses) seemed to have remarkably similar access to firearms (see Figure 3 presented earlier). Furthermore, the determined firearm assailants (without firearm licenses) were just as likely to carry non-firearm weapons as determined knife assailants (without licenses), however they were much less likely to use them to seriously hurt anybody. The second potential alternative conclusion to be explored was that even if determined firearm assailants were less likely to be capable of lethal weapon substitution with the physically and/or psychologically more demanding common alternative weapons – they may just substitute to less demanding alternative weapons. For example, those incapable of stabbing, bludgeoning or physically beating a victim to death, would just poison or set fire to their victim's house. This possibility was eliminated because replicated cross-sectional research has demonstrated that countries with low firearms availability do not experience compensatory increases in homicide involving *any* types of weapons or methods of attack. Furthermore, using a different

assailants at engaging in non-firearm related assaults causing serious injuries to the victim. Based on the assumption that a person's previous capability to cause serious injuries with non-firearm weapons would tend to be the best predictor of whether they were capable of engaging in lethal weapon substitution, the following conclusion was presented. The results surrounding Hypothesis 1 suggest that determined firearm assailants were unlikely to be as capable as determined knife assailants at engaging in lethal weapon substitution. In short, the results suggested that without guns, determined firearm assailants were less likely to be as capable of lethal weapon substitution in comparison to determined knife assailants. Therefore, it was initially concluded that inhibiting determined firearm assailants from accessing guns would be likely to reduce the rate of homicide.

Importantly, this initial conclusion implied that if determined firearm assailants were, as the results surrounding Hypothesis 1 suggested, unlikely to be as capable of lethal weapon substitution as determined knife assailants, then it would not matter if *all* firearm assailants are, as Wolfgang (1958) has argued, 'determined to kill'. It would not matter because as these results suggested, in the absence of guns, not all determined firearm assailants were likely to be as capable of lethal weapon substitution as their counterparts using knives. Therefore, preventing determined firearm assailants from accessing firearms would still be likely to reduce the rate of homicide. Therefore, the results surrounding Hypothesis 1 appeared to discredit the validity of Wolfgang's weapon

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research technique (time-series), results from this thesis have further reinforced the validity of this conclusion.

substitution hypothesis. By more directly discrediting the validity of Wolfgang's hypothesis this thesis, assuming it is correct, therefore achieved its main aim.

Furthermore, if Wolfgang's hypothesis has been discredited, then the consensually held belief that Wolfgang's hypothesis initiated will also have been discredited<sup>50</sup>. Therefore, in conflict with the consensually held belief formed by authors including Wolfgang (1958), Zimring (1968), Cook (1981), Kleck (1991) and Kopel (1992) – not *all* determined firearm assailants are likely to be capable of lethal substitution. Therefore, the results from of this thesis, which demonstrate that not all determined firearm assailants are likely to be capable of lethal weapon substitution, conflict with both Wolfgang's weapon substitution hypothesis and the consensually held belief.

Importantly, if some proportion of determined firearm assailants are unlikely to be capable of lethal weapon substitution, what effect would inhibiting firearm access have on those firearm assailants not so determined to ensure their victims died? This thesis concludes that if a proportion of determined firearm assailants are unlikely to be capable of killing in the absence of guns, the remaining proportion of those not so determined to kill are likely to be even less capable. As a result, this thesis updated its initial conclusion to the following: inhibiting *all* potential firearm assailants from accessing guns would be likely to reduce the overall rate of homicide. Based on this conclusion it was therefore recommended that those most at risk of committing homicide with guns

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<sup>50</sup> As mentioned earlier, the consensually held belief differs from Wolfgang's weapon substitution hypothesis in that Wolfgang believed all firearm assailants were determined. In the consensually held belief some proportion of assailants were believed to be determined. The proportion depended on a

need to be identified and such people must be prevented from accessing these deadly weapons.

Since this thesis was based on a New Zealand population, this recommendation was most applicable to the New Zealand gun control debate. However, due to the New Zealand Government currently debating the viability of a gun registration system, arguably, the most important final loop-hole that had previously prevented them from inhibiting gun-access to those most at risk of fatally using such weapons may be overcome.

However, were the results, conclusion and recommendation stemming from this thesis applicable to the focus of this thesis, the United States? Due to the United States having a relatively similar rate of non-firearm homicide, it was suggested that a replication of the methodology used in this thesis using an American sample would be likely to produce similar results. Therefore, this writer felt justified in generalising the results, conclusion and final recommendation of this thesis onto the United States. That is, inhibiting gun access to those most at risk of using such weapons is likely to reduce the rate of homicide in the United States.

Currently, the United States is unwilling to introduce those policies that would be most effective in inhibiting firearm access to those at greatest risk of hurting others with guns.

This is because the United States is not prepared to introduce a national firearms registration system or prohibit the ownership of firearms for the legitimate purpose of

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particular author's subjective definition of who was and who was not likely to be determined to kill their victim/s.

protection. Although some may view policies to reduce homicide that focus solely on firearms as being over-simplistic, other would not. For example, Zimring and Hawkins (1997: 200) have argued:

No program for the prevention of lethal violence can possess even superficial credibility without paying sustained attention to guns. Without strategies for the reduction of firearm use in assaults, no policy can be accurately characterized as directed at the reduction of American lethal violence.

With Americans currently unwilling to consider the recommended policies, irrespective of any recent decreases in the overall rate of homicide<sup>51</sup>, the United States looks likely to maintain a rate of homicide that most European nations have not had since some time between the fifteenth and sixteenth centuries (Spierenburg, 1994)<sup>52</sup>.

Therefore, to conclude this thesis with an answer to the quote at the beginning of Chapter One - would a 'no guns' condition in the United States increase, decrease or have no effect on the homicide rate? Based on the assumption that the similar results would be obtained for Hypothesis 1 if a similar study was undertaken on an American sample<sup>53</sup>, in conjunction with the argument that citizens using unregistered guns for the purpose of protection directly or indirectly supplies guns to those most likely to use such weapons in

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<sup>51</sup> See Blumstein & Rosenfeld (1998).

<sup>52</sup> Based on the collective findings of a number of research projects, the rate of homicide in England in the fifteenth and sixteenth centuries was 15 and 7 per 100,000 (respectively) (see Stone, 1983; Beattie, 1986; Robert-Gurr, 1981; all cited in Spierenburg, 1994). Since the early 1970s, the rate of homicide in the United States has typically hovered around the 10 per 100,000 mark (Zimring & Hawkins, 1997).

<sup>53</sup> Which would demonstrate that a proportion of firearm assailants in America are unlikely to be capable of lethal weapon substitution.

violent situations: Then, this thesis concludes that a ‘no-guns’ condition would reduce the rate of homicide in the United States<sup>54</sup>.

### *Recommendations For Future Research*

Based on the main limitation of this thesis being that it has used a New Zealand population to shed light on an American problem, the *first* recommendation for future research would be to replicate the methodology used in this thesis using an American sample. Such research would overcome the biggest limitation that has inhibited the current study from more confidently predicting what would happen to the rate of homicide in the United States if those most at risk of killing with firearms were inhibited from accessing such weapons. Furthermore, because American researchers are more likely to have access to much larger samples of homicide than the current study, the following more robust comparison to the one undertaken in this thesis is recommended<sup>55</sup>. A larger sample should undertake a comparison between those most likely to be determined firearm and knife assailants regarding their previous capabilities to *kill* with non-firearm weapons.

The second recommendation for future research relates to the wider application of Mischel’s (1968) predictor of future behaviour. Possibly the most important contribution

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<sup>54</sup>However, the strength of this final conclusion is weakened by the assumption that an American sample would produce similar results to this thesis. Although this writer has argued that this would be unlikely, it is still a possibility. As a result, this assumption is believed to be a major limitation of this thesis.

<sup>55</sup>This thesis originally intended to compare those most likely to be determined knife and firearm assailants in regards to their previous capabilities to kill with non-firearm weapons. However, as mentioned, this comparison could not be undertaken because this thesis did not have access to a big enough sample that

of this thesis is that it has introduced what tends to be the most accurate predictor of future behaviour to the American gun control debate. By applying Mischel's (1968) predictor to this highly controversial research area, this thesis was able to demonstrate how powerful it was in discrediting the validity of what this author would argue is likely to be the most resistant and influential pieces of literature affecting the homicide area of the gun debate in the United States – Wolfgang's (1958) weapon substitution hypothesis. With what this writer believes is a solid result from its first application to the gun control debate, the question begs – what potential does Mischel's predictor hold in contributing to other highly controversial areas of this research area? As the following will demonstrate, arguably, one such area is the highly controversial 'defensive use of firearm' research.

This thesis would argue that Mischel's (1968) predictor may have the potential to shed light on a currently un-testable aspect surrounding the 'defensive uses of firearms' research. As mentioned earlier, Kleck and Gertz (1995) have pointed out that 400,000 of the two and a half million defensive gun users believed that their guns 'almost certainly' saved a life. The difficulty in criticising the accuracy of these beliefs is that it is impossible to know if, in the absence of guns, whether or not these apparently thwarted 'criminal attacks' would have actually ended in a fatality. Or as Wolfgang (1995: 188) said in relation to Kleck and Gertz's (1995) study: 'it is hard to believe. Yet it is hard to challenge the data collected. We do not have contrary evidence.' It is possible that these beliefs are accurate or alternatively, as Cook and Moore (1995: 272) have argued 'It is

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could detect a difference in the fairly unusual behaviour of having previously killed with a non-firearm weapon.

quite possible that most “self-defense” uses occur in circumstances that are normatively ambiguous.....encounters with groups of young men who simply *appear* threatening.’ The point is, it is currently not known if defensive gun uses are saving the lives of innocent citizens or unnecessarily promoting and escalating the overall rate of homicide.

A potential way of shedding light on this dilemma would be to adapt the methodology used in this thesis by comparing the previous serious violent convictions of the ‘criminal predators’ who were killed in defensive firearm and non-firearm uses. This writer would hypothesise that the ‘criminal predators’ killed in defensive non-firearm uses would have significantly more previous serious violent convictions in comparison to ‘criminal predators’ killed in defensive firearm uses. The reasoning behind this hypothesis is that a defensive non-firearm user must really fear for their lives if they are prepared to overcome great physical and/or psychological barriers that would normally inhibit them from engaging in such a brutal and close-contact attack. Reinforcing the likelihood of evidence supporting this hypothesis is McDowall, Loftin and Wiersema’s (1992b, cited in Cook and Moore, 1995) research that demonstrated that defensive non-firearm uses would appear to differ in important ways to defensive firearm uses. For example, the defensive use of a non-firearm weapon typically occurs after an assailant attacks or threatens to attack. However, with the defensive use of a firearm, typically it is the defender who is first to threaten or attack. This finding would suggest that many defensive gun uses may have been against ‘criminal predators’ who had no intentions of attacking the ‘victims’ who used guns to protect themselves. However, McDowall and others research only demonstrated that people who use guns to protect themselves are



more likely to introduce a firearm at an earlier stage of their threatening situation than people who use non-firearm weapons to protect themselves. It is still possible that all defensive gun uses could have resulted in the defender being attacked if the defender introduced the gun at a later stage in the conflict. It is impossible to say one way or the other.

However, comparing the previous violent convictions between the ‘criminal predators’ killed in defensive firearm and non-firearm attacks may indicate whether the ones killed by guns were either more, less or of the same violent capabilities to those killed by non-firearm weapons. Therefore, the *second* recommendation for future research would be to compare the previous violent convictions between the ‘criminal predators’ killed in defensive firearm and non-firearm attacks. This comparison would identify whether or not defensive firearm users were likely to have been in as much danger of being seriously attacked as defensive non-firearm users were.

The final recommendation for future research relates to a question that may naturally stem from the conclusion reached regarding the results surrounding Hypothesis 1. That is, *why* are determined firearm assailants less likely to be as capable of lethal weapon substitution in comparison to determined knife assailants? With the general acceptance of Zimring’s (1968, 1972) weapon instrumentality effect<sup>56</sup>, the answer to this question is likely to relate to various instrumental characteristics unique to the firearm weapon. Zimring (1972) has

presented a variety of potential characteristics, mostly revolving around the 'power' instrumental characteristics. For example, probably an important factor is that unlike with other weapons or methods of homicide, one quick and light touch of a firearm's trigger can unleash a massive and incomparable blow. But since Zimring's study there has been a relative absence of further progress on more specifically and rigorously identifying what these characteristics might be. This is reflected in Cook's (1991: 18) statement: 'the various mechanisms that are responsible for the instrumentality effect have not been completely analyzed or documented.' This writer would argue that a probable reason for this lack of progress may be explained by an important point made by Wolfgang and Ferracuti (1982: 1) who said: 'as specialization increases, scholars reach the point where they begin to ask significant questions that cannot be answered satisfactorily within their own framework.' As a result, this writer would argue that the more scientific identification of the instrumental characteristics of firearms may lie in other academic disciplines. Therefore, the final recommendation for future research is to challenge other academic disciplines outside law and criminology to contribute ideas that may identify why some people may be able to kill with guns but be incapable of killing with non-firearm weapons<sup>57</sup>.

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<sup>56</sup> That is, becoming a victim of homicide is largely a matter of chance and the more lethal the weapon involved, the more likely an attack will end in a fatality.

<sup>57</sup> This writer has already taken up his own challenge. However, most of what has been found is work in progress. Nevertheless, Appendix 15 will present the work in progress from one of the three other academic disciplines that is currently being explored by this writer.

## REFERENCES

- Alpers, P. (1996). Locking up guns: foiling thieves, children and the momentarily suicidal. Wellington: New Zealand Police Association.
- Alpers, P., & Walters, R. (1998). Firearms theft in New Zealand – lessons for crime and injury prevention. *The Australian and New Zealand Journal of Criminology*, 31, 85-95.
- Bandura, A. (1973). Aggression: a social learning analysis. New Jersey: Prentice Hall.
- Blumstein, A. (1995). Youth violence, guns and the illicit-drug industry. *The Journal of Criminal Law and Criminology*, 86 (1), 10-36.
- Blumstein, A., & Rosenfeld, R. (1998). Explaining recent trends in U.S. homicide rates. *The Journal of Criminal Law and Criminology*, 88 (4), 1175-1216.
- Centerwall, B.S. (1991). Homicide and the prevalence of handguns: Canada and the United States, 1976-1980. *American Journal of Epidemiology*, 134, 1245-1260.
- Chapdelaine, A., Samson, E., Kimberley, D., & Viau, L. (1991). Firearm-related injuries in Canada. *Canadian Medical Association Journal*, 145 (10), 1217-1223.
- Cook, P.J. (1981). The effect of gun availability on violent crime patterns. *Annals of the American Academy of Political and Social Science*, 455, 63-79.
- Cook, P.J. (1982). The role of firearms in violent crime: an interpretative review of the literature, with some new findings and suggestions for future research. In M.E. Wolfgang & N. Weiner (Ed.), *Criminal violence* (pp. 236-291). Beverly Hills: Sage.
- Cook, P.J. (1983). The influence of gun availability on violent crime patterns. In M. Tonry & N. Morris (Ed.), *Crime and Justice: An Annual Review of Research* (Vol. 1), (pp. 49-89). Chicago: University of Chicago Press.
- Cook, P.J. (1987). Robbery violence. *Journal of Criminal Law and Criminology*, 78, 357-376.

Cook, P.J. (1991). The technology of personal Violence. In M Tonry (Ed.), *Crime and Justice: A Review of Research* (Vol. 14), (pp. 1-72). Chicago: The University of Chicago Press.

Cook, P.J., Molliconi, S., & Cole, T.B. (1995). Regulating gun markets. *The Journal of Criminal Law and Criminology*, 86 (1), 59-92.

Cook, P.J., & Moore, M.H. (1995). Gun Control. In J.Z. Wilson & J. Petersilia (Ed.), *Crime* (pp. 267-294). San Francisco: Institute of Contemporary Studies Press.

Curtis, L.A. (1974). *Criminal violence: national patterns and behaviour*. Lexington Mass.: Lexington.

Dansys Consultants Inc. (1992). *Domestic homicide involving the use of firearms*. Ottawa: Department of Justice Canada.

Easteal, P. (1993). Homicide between sexual intimates in Australia: a preliminary report. In H. Strang & S. Gerull (Ed.), *Homicide: patterns, prevention and control: conference proceedings* (pp. 77-92). Canberra, ACT: Australian Institute of Criminology.

Eggers, S. and Peters, R. (1993). Firearms Law Reform: the limitations of the national approach. In H. Strang & S. Gerull (Ed.), *Homicide: patterns, prevention and control: conference proceedings* (pp.197-204). Canberra, ACT: Australian Institute of Criminology.

Farrington, D.P. (1989). Early predictors of adolescent aggression and adult violence. *Violence and Victims*, 4, 79-100.

Gabor, T. (1994). *The impact of the availability of firearms on violent crime, suicide, and accidental death: a review of the literature with special reference to the Canadian situation*. Ottawa: Department of Justice Canada.

Glueck, S., & Glueck, E. (1960). *Predicting delinquency and crime*. Cambridge, Massachusetts: Harvard University Press.

Harding, R.W. (1983). An ounce of prevention: gun control and public health in Australia. *Australian and New Zealand Journal of Criminology*, 16, 1-19.

Hardy, D.T., & Stompoly, J. (1974). Of arms and the law. *Chicago-Kent Law Reform*, 51, 62-114.

Greenberg, D.F. (1991). Modeling criminal careers. *Criminology*, 29, 17-46.

Hedeboe, J., Charles, A.V., & Neilson, N.J. (1985). Interpersonal violence – patterns in a Danish community. *American Journal of Public Health*, 75, 651-653.

Hutson, H.R., Anglin, D., Kyriacou, D. N., Hart, J., & Spears, K. (1995). The epidemic of gang-related homicides in Los Angeles County from 1979 through 1994. *The Journal of the American Medical Association*, 274 (13), 1031-1037.

Jacobs, J.B., & Potter, K.A. (1995). Keeping guns out of the “wrong” hands: the Brady Law and the limits of regulation. *The Journal of Criminal Law and Criminology*, 86 (1), 93-120.

Kairys, D. (1998). Legal claims of cities against the manufacturers of handguns. *Temple Law Review*, 71 (1), 1-22.

Kapardis, A. (1993). Killed by a stranger in Victoria, January 1990 – April 1992: location, victims’ age and risk. In H. Strang & S. Gerull (Ed.), *Homicide: patterns, prevention and control: conference proceedings* (pp. 121-132). Canberra, ACT: Australian Institute of Criminology.

Kennett, L., & La Verne Anderson, J. (1975). *The gun in America: the origins of a national dilemma*. London: Greenwood Press.

Killias, M. (1990). Gun ownership and violent crime: the Swiss experience in an international perspective. *Security Journal*, 1 (3), 169-177.

Killias, M. (1993). International correlations between gun ownership and rates of homicide and suicide. *Canadian Medical Association Journal*, 148 (10), 1721-1725.

Kleck, G. (1988). Crime control through the private use of armed force. *Social Problems*, 35, 1-22.

Kleck, G. (1991). *Guns and violence in America*. New York: Aldine de Gruyter, Hawthorne.

Kleck, G., & Gertz, M. (1995). Armed resistance to crime: the prevalence and nature of self-defense with a gun. *Journal of Criminal Law and Criminology*, 86 (1), 150-187.

Kleck, G., & McElrath, K. (1991). The effects of weaponry on human violence. *Social Forces*, 69, 669-692.

Kopel, D.B. (1992). *The samurai, the mountie and the cowboy: should America adopt the gun controls of other democracies?* New York: Prometheus Books.

Lester, D. (1981). *Gun control: issues and answers*. Illinois: Charles C Thomas.

Lester, D. (1991). Crime as opportunity: a test of the hypothesis with European homicide rates. *British Journal of Criminology*, 31, 186-188.

- Levin, J., & Fox, J.A. (1985). *Mass murder: America's growing menace*. New York: Plenum Press.
- Lloyd, A. (1995). *Doubly deviant, doubly damned: society's treatment of violent women*. London: Penguin Books.
- Lott, J.R. jr., & Mustard, D.B. (1997). Crime, deterrence, and right-to-carry concealed handguns. *The Journal of Legal Studies*, 26, 1-68.
- Lott, J.R. jr. (1998). *More guns, less crime: understanding crime and gun control laws*. Chicago: The University of Chicago Press.
- Lunde, D.T. (1975). *Murder and madness*. Stanford, California: Stanford Alumni Association.
- McDowall, D., Loftin, C., & Wiersema, B. (1992). A comparative study of the preventative effects of mandatory sentencing laws for gun crimes. *Journal of Criminal Law and Criminology*, 83 (2), 378-394.
- McDowall, D., Loftin, C., & Wiersema, B. (1995). Easing concealed firearms laws: effects on homicide in three states. *Journal of Criminal Law and Criminology*, 86 (1), 193-206.
- Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal Psychology*, 67, 371-378.
- Milgram, S. (1974). *Obedience to authority: an experimental view*. New York: Harper and Row.
- Miller, I., & Russell, N.J.C. (1996). *Homicide in New Zealand 1988-1995: patterns and relationships. a paper presented at the 11<sup>th</sup> annual conference of the Australian and New Zealand society of criminology*. Victoria University of Wellington, New Zealand.
- Mischel, W. (1968). *Personality and assessment*. New York: John Wiley and Sons, Inc.
- Morgan, P.L. (1997). Firearms possession by convicted felons. In S. Pontonne (Ed.), *Gun control issues*. New York: Nova Science Publishers.
- Morgan, R. (1999). Book review of 'Crime is not the problem: lethal violence in America', by F. E. Zimring and G. Hawkins. *British Journal of Criminology*, 39 (2), 313-317.
- Mouzos, J. (2000). The licensing and registration status of firearms used in homicide. Canberra, ACT: Australian Institute of Criminology.

Multinational Monitor. (1998). Taking aim at the gun makers: an interview with David Kairys. *Multinational Monitor*, 19 (6), 16-20.

Myers, D.G. (1993). *Social Psychology* (4<sup>th</sup> ed.). New York: McGraw Hill.

Naylor, B. (1993). The law reform commission of Victoria homicide prosecution study: the importance of context. In H. Strang & S. Gerull (Ed.), *Homicide: patterns, prevention and control: conference proceedings* (pp. 93-120). Canberra, ACT: Australian Institute of Criminology.

Newbold, G. (1999). The criminal use of firearms in New Zealand. *The New Zealand and Australian Journal of Criminology*, 32 (1), 61-78.

Pierce, G.L., & Bowers, W.J. (1981). The Bartley-Fox gun laws short-term impact on crime in Boston. *Annals of the American Academy of Political and Social Science*, 455, 120-137.

Polsby, D.D. (1995). Firearms costs, firearms benefits and the limitation of knowledge. *The Journal of Criminal Law and Criminology*, 86 (1), 207-220.

Sherman, L.W. (2000). Gun carrying and homicide prevention. *The Journal of the American Medical Association*, 283, 1193-2002.

Sloan, J.H., Kellermann, A.L., Reay, D.T., Ferris, J.A., Koepsell, T., Rivara, F.P., Rice, C., Gray, L., & LoGerfo, J. (1988). Handgun regulations, crime, assaults, and homicide. A tale of two cities. *New England Journal of Medicine*, 319, 1256-1262.

Spierenburg, P. (1994). Faces of violence: homicide trends and cultural meanings in Amsterdam 1431-1816. *Journal of Social History*, 27 (4), 701-717.

Squires, P. (1999). Book review of 'More guns, less crime: understanding crime and gun control laws', by J.R. Lott. *British Journal of Criminology*, 39 (2), 318-320.

Strang, H. (1993). Characteristics of homicide in Australia 1990 – 91. In H. Strang & S. Gerull (Ed.), *Homicide: patterns, prevention and control: conference proceedings* (pp. 5-20). Canberra, ACT: Australian Institute of Criminology.

Thorp, T.M. (1997). *Review of firearms control in New Zealand: report of an independent inquiry commissioned by the Minister of Police*. Wellington: Government Printers.

Tracy, P.E., Wolfgang, M.E., & Figlio, R.M. (1990). *Delinquency careers in two birth cohorts*. New York: Plenum Press.

United Nations International Study of Firearm Regulations. (1998). *United Nations international study of firearm regulations*. New York: United Nations.

- Vinson, T. (1974). Gun and knife attacks. *Australian Journal of Forensic Science*, 7, 76 – 83.
- Weil, D., & Hemenway, D. (1992). Loaded guns in the home: analysis of a national random survey of gun owners. *Journal of the American Medical Association*, 267, 3033-3037.
- Wintemute, G.J., Drake, C.M., Beaumont, J.J., Wright, M.A., & Parham, C.A. (1998). Prior misdemeanour convictions as a risk factor for later violent and firearm related criminal activity among authorised purchasers of handguns. *Journal of the American Medical Association*, 280, 2083-2087.
- Wintemute, G.J., Wright, M.A., Parham, C.A., Drake, C.M., & Beaumont, J.J. (1999). Denial of handgun purchase: a description of the affected population and a controlled study of their handgun preferences. *Journal of Criminal Justice*, 27 (1), 22-31.
- Wolfgang, M.E. (1958). *Patterns of criminal homicide*. Philadelphia: University of Pennsylvania Press.
- Wolfgang, M.E. (1995). A tribute to a view I have opposed. *The Journal of Criminal Law and Criminology*, 86 (1), 188-192.
- Wolfgang, M.E., & Ferracuti, F. (1967). *The subculture of violence: towards an integrated theory in criminology*. London: Tavistock Publications.
- Wolfgang, M.E., & Ferracuti, F. (1982). *The subculture of violence: towards an integrated theory in criminology*. Beverly Hills: Sage.
- Wright, J.D., Rossi, P.H., & Daly, K. (1983). *Under the gun: weapons, crime and violence in America*. New York: Aldine.
- Wright, J.D., & Rossi, P.H. (1986). *Armed and considered dangerous: a survey of felons and their firearms*. New York: Aldine.
- Zimring, F.E. (1968). Is gun control likely to reduce violent killings? *University of Chicago Law Review*, 35, 721-737.
- Zimring, F.E. (1972). The medium is the message: firearm calibre as a determinant of death from assault. *Journal of Legal Studies* 1, 97-123.
- Zimring, F.E. (1981). Handguns in the twenty-first century: alternative policy futures. *Annals of the American Academy of Political and Social Sciences*, 455, 1-10.
- Zimring, F.E., & Hawkins, G. (1987). *The citizen's guide to gun control*. New York: MacMillian Publishing Company.



Zimring, F.E. (1995). Guns and violence symposium: reflections on firearms and the criminal law. *The Journal of Criminal Law and Criminology*, 86 (1), 1-9.

Zimring, F.E., & Hawkins, G. (1997). *Crime is not the problem: lethal violence in America*. New York: Oxford University Press.

Zawitz, M. (1995). *Guns Used in Crime*. Washington DC: National Institute of Justice.

## APPENDIX 1: The 13 Different Weapon Category Definitions

**FIREARM:** A firearm was defined as any weapon that was capable of expelling a projectile that was initiated by an explosive charge.

**KNIFE:** A knife was defined as any type of piercing or cutting instrument. For example, if used to pierce or cut, a machete, pencil, screwdriver, butchers knife, all meet the definition of what will, for simplicity's sake, from now on be generically termed 'knives'.

**BLUDGEON:** A bludgeoning weapon was defined as any hand-held blunt object that was external of the human body that was used to beat the victim with, for example, a softball bat, golf club, a brick.

**MANUAL BEATING:** A manual beating weapon was defined as any part of the assailant's body that was used in a punching, kicking and/or striking fashion.

**STRANGULATION:** Strangulation was defined as any technique, whether done manually or with some external object, that blocked the airway passages around the victim's neck area, for example, grabbing the victim around the throat and throttling them. Also included was tying panty hose around the victim's neck and squeezing tightly.

**SUFFOCATION:** Suffocation is defined as inhibiting the victim from breathing by covering the mouth and nose using any external object excluding water, for example, smothering somebody with a pillow.

**DROWNING:** Drowning was defined as inhibiting the victim from breathing through the mouth or nose by submerging their head in water.

**POISON:** Poison was defined as any gas (excluding carbon-monoxide poisoning or smoke inhalation), liquid or solid substance internally taken by the victim eventually resulting in death. for example, gas poisoning or drugs overdose.

**FIRE:** Fire was defined as being burnt to death or when the victim is killed due to smoke inhalation (as a result of a fire).

**CARBON MONOXIDE:** Carbon Monoxide poisoning is defined as being when a victim is forced to breath the carbon monoxide fumes that typically come from a motor vehicle.

**MOTOR VEHICLE:** Motor vehicle was defined as being physically struck by such an object. It did not include being poisoned by the carbon monoxide fumes generated by a motor vehicle.

**OTHER:** Other was defined as any other way a victim may have been killed excluding any of the above categories.

UNKNOWN: The weapon category of an event was termed 'Unknown' if the police or the Coroner did not know what kind of weapon was used or involved multiple weapons and the principal weapon most responsible for killing the first victim could not be established.

## APPENDIX 2: An Actual Example Of An Event Selected From The C.I.B Murder Books

APPENDIX 3: An Actual Example Of The Type of Information Given In The Coroner's  
Files As Found In The Miller Survey (Two Examples Given)

#### APPENDIX 4: An Actual Example Of The Type of Information Given In The Wanganui Computer (Two Examples Given)

# APPENDIX 5: Data Collection Survey Sheet For Variable Of Interest<sup>58</sup>

OFFENDER AND EVENT INFORMATION							
<i>Event Number:</i>							
Question	Codes	C.I.B Murder Books	Microfiche Dossier	Wanganui Computer	Miller Survey Sheet	Phone Interview	Official Murder File
Gun or Knife?	1=knife, 2=gun						
Multiple wounds?	1=yes, 2=no, 99=u/k						
Victim precipitated?	1=yes, 2=no, 99=u/k						
Offender over 19 years?	1=yes, 2=no, 99=u/k						
Mental health history mentioned?	1=yes, 2=no						
Firearm license?	1=yes, 2=no, 99=u/k		<1993	>1992		<1993	
Prev. convic. poss./carry firearm?	1=yes, 2=no						
Prev. convic. poss./carry non-firearm weap?	1=yes, 2=no						
Serious non-firearm conviction?	1=yes, 2=no						

<sup>58</sup> The black boxes basically mean that the corresponding source of data was unable to provide data on the particular question of interest. Also, the last two questions (the ‘serious non-firearm convictions’ had to undergo the data collection process mentioned in the first method sections before it could be answered.

APPENDIX 6: Previous Violent Non-Firearm Criminal Convictions Categorised As Likely To Have Resulted In Serious And Not Serious Injuries To The Victim<sup>59</sup>.

1. SERIOUS INJURY (n=33): Agg Rob; Aggravated Robbery; Aggravated Assault (Manual); Aggravated Assault (Other Weapon); Aggravated Assaults; Aggravated Injury (Other Weapon); Aggravated Robbery (Other Weapon); Aggravated Robbery (Stab/Cut Weapon); Aggravated Wounding (Other Weapon); Asl Int Com Sexual Violation (No Weapon); Asl Int Com Sexual Violation (Weapon); Assault on Female Using Knife; Assault Person With Stab/cutting Instrument; Assault With Intent To Injure; Assaults Intent To Rob (Manually); Assaults Intent To Rob (Other Weapon); Assaults Person With Blunt Instrument; Assaults Police - (Other Weapon); Assaults With Intent To Injure (Manually); Assaults With Intent To Injure (Other Wpn); Attempts To Murder (Other Weapon); Infanticide (Manually); Injures - Intent To GBH (Manually); Injures - Intent To GBH (Other Weapon); Injures - Intent To Injure Other Weapon; Injures Intent To Injure (Manually); Injuring With Intent; Manslaughter (Other Means) No Legal Duty; Manslaughter (Weapon) Legal Duty; Other Manslaughter; Other Wounding With Intent; Robbery (By Assault); Aggravated Assault Stabbing/Cutting Weap.
2. NOT SERIOUS (n=49): Behave Threateningly (Other Weapon); Demands With Intent; Disorderly Behaviour Likely To Cause Viol; Fighting in a Public Place; Incite Violence/Disorder/Lawlessness; Aggravated Robbery (Manually); Assault Intent Commit/Facil/Crime; Assault On Enforcement Officer; Assault On Female Intent Avoid Arrest; Assaults Police (Crimes Act); Assaults Prison Officer; Attempted Agg Robbery; Common Assault (Crimes Act) Other Wpn; Male Assaults Female (Manually); Assault Beat And Illtreat; Assault Child (Manually); Assaults Police (Crimes Act) Manually; Robbery; Assault (Other) Crimes Act; Assault By Male On Female; Kidnaps (For Gain); Kidnaps (No Gain); Lik/Cau Viol Unlawfl Intmdt/Thrt (Oth Wpn); Non Agg Robbery (Threats To Person); Offensive Behaviour - Likely to Cause Viol); Resist Police; Robbery (By Threats to Property); Threatening Behaviour; Threatens To Kill/Do GBH (Manually); Threatens To Kill/Do GBH (Other Weapon); Threatens to Kill/Do GBH (Verbally); Unlawful Intimidate Threat (Oth Wpn); Demands To Steal Verbal/Letter Ect); Threatening Behaviour - Lke Cause Viol; Unlawful Intimidate/Threat (Verbal); Assault W/Intent to Facil Escape; Assault Person Show Intent To Use Weapon; Assault Police - (Manual); Attempted Aggravated Robbery; Com Asslt (Domestic) Cr Act (Manually); Common Assault; Common Assault - Domestic (Manually); Common Assault-Taxi Driver (Manually); Common Assault (Crimes Act) Manually; Common Assault (Manually); Assault; Common Assault (Domestic) Oth Wpn; Common Assault (Domestic Cr Act) (Manually); Assault Traffic Officer.

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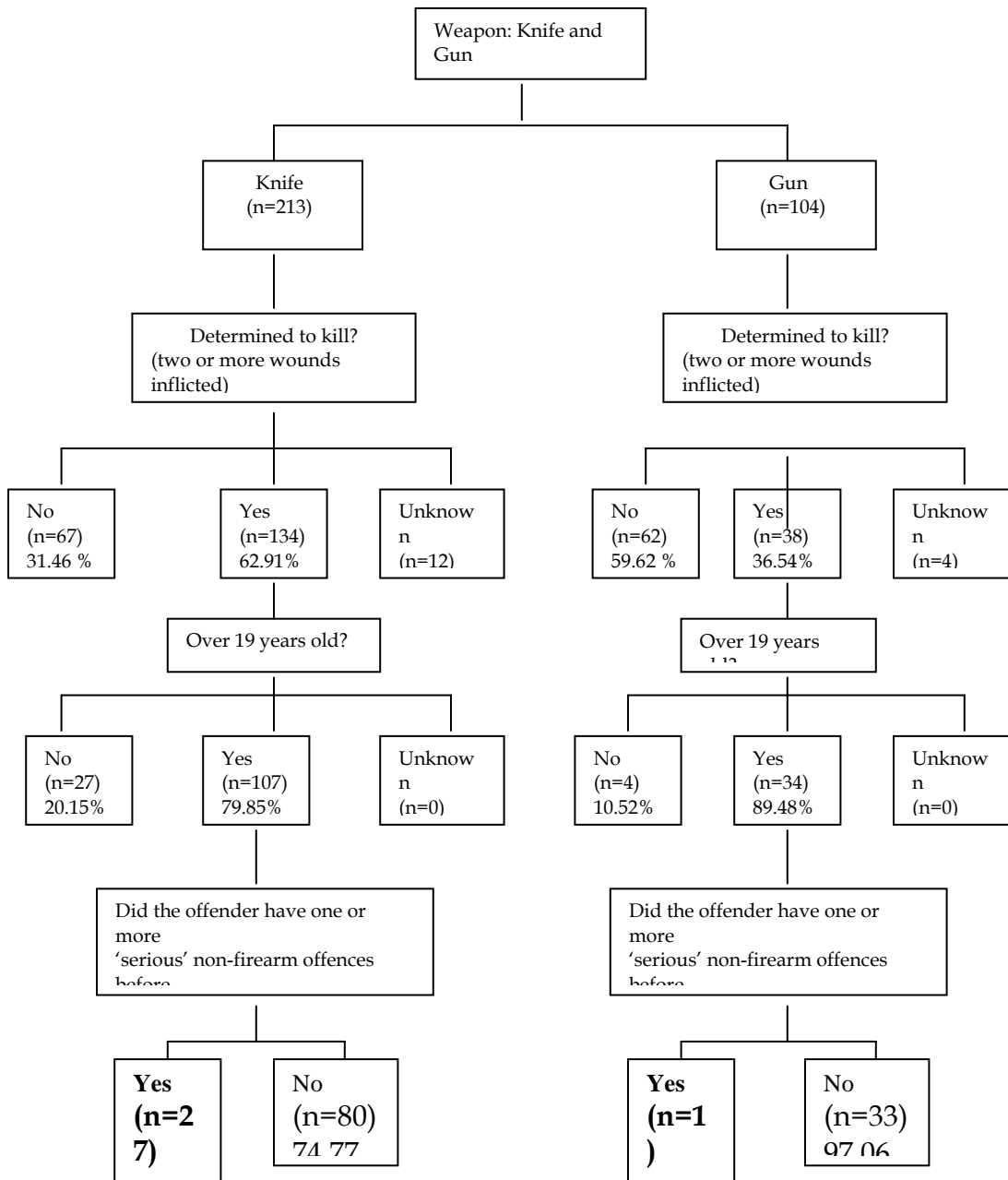
<sup>59</sup> The two envelopes contained the following individual violent convictions (spelt as they were in the criminal conviction histories taken from the Wanganui Computer).



**APPENDIX 7: Actual Assailants Previous Violent Conviction Sheet For Non-Firearm Offences Only (Halfway Through The Data Collection Process).**

<b>ACTUAL OFFENDER'S PREVIOUS VIOLENT CONVICTION SHEET (NON-FIREARM ONLY)</b>					
Event Number:		serious?	Offenders name:		serious?
<i>Offense as written in Wanganui computer</i>	<i>No.</i>	<i>1=yes, 2=no</i>	<i>Offense as written in Wanganui computer</i>	<i>No.</i>	<i>1=yes, 2=no</i>
Agg Rob			Resist Police		
Aggravated Assault Stabbing/Cutting Weap			Robbery		
Aggravated Assaults			Robbery (By Assault)		
Aggravated Robbery (Other Weapon)			Robbery (By Threats to Property)		
Aggravated Wounding (Other Weapon)			Threatening Behaviour		
Asl Int Com Sexual Violation (Weapon)			Threatening Behaviour - Lke Cause Viol		
Assault			Threatens To Kill/Do GBH (Manually)		
Assault By Male On Female			Threatens to Kill/Do GBH (Verbally)		
Assault on Female Using Knife			<del>Blac Threats/Off Wpn</del>		
Assault Person Show Intent To Use Weapon			<del>Threats To Kill/Do GBH (Off Wpn)</del>		
Assault Person With Stab/cutting Instumnt			<del>Assult Intent Comil/Fail Crime</del>		
Assault Police - (Manual)			<del>Injures Intent To GBH (Off Wpn)</del>		
Assault With Intent To Injure			<del>Assults Person With But Intent</del>		
Assaults Intent To Rob (Manually)					
Assaults Intent To Rob (Other Weapon)					
Assaults Police - (Other Weapon)					
Assaults Police (Crimes Act)					
Assaults With Intent To Injure (Manually)					
Assaults With Intent To Injure (Other Wpn)					
Attempts To Murder (Other Weapon)					
Com Asslt (Domestic) Cr Act (Manually)					
Common Assault					
Common Assault - Domestic (Manually)					
Common Assault (Crimes Act) Manually					
Common Assault (Domestic Cr Act) (Manually)					
Common Assault (Domestic) Oth Wpn					
Common Assault (Manually)					
Common Assault-Taxi Driver (Manually)					
Disorderly Behaviour Likely To Cause Viol					
Fighting in a Public Place					
Injures - Intent To GBH (Manually)					
Injuring With Intent					
Injures Intent To Injure (Manually)					
Lik/Cau Viol Unlawfl Intmdt/Thrt (Oth Wpn)					
Male Assaults Female (Manually)					
Manslaughter (Weapon) Legal Duty					
Non Agg Robbery (Threats To Person)					
Offensive Behaviour - Likely to Cause Viol					
Other Manslaughter					
Other Wounding With Intent					

## APPENDIX 8: How The Percentage Differences For Figure 1 Were Calculated



## APPENDIX 9: Other Potential Variables That Are Inhibiting The Statistically Significant Difference Surrounding Hypothesis 1 From Increasing Further

Although a statistically significant difference was found for Hypothesis 1, this writer would argue that there exists a number of other variables that were inhibiting this difference in previous serious non-firearm offences between those most likely to be determined firearm and knife assailants over 19 years old from increasing further. These variables are justifiable reasons for why a person with no previous serious non-firearm violent history may suddenly be capable of killing with the physically and/or psychologically more demanding knife. The main justifications are presented below.

The first reason why an assailant with no previous serious non-firearm violent convictions may suddenly kill using a knife is because the incident was what is termed 'victim-precipitated'. This is where the victim initiated then engaged in physically assaulting the assailant first (Lunde, 1975). As a result of being physically attacked, the assailant reaches for a knife and stabs the victim multiple times. Due to concerns they held surrounding their own safety, it could be argued that such assailants are likely to have been able to overcome their normal physical and/or psychological inhibitions to engaging in such an attack. It is this very scenario that may explain how a female with no official (or even unofficial) history of violence can suddenly brutally stab her male partner to death. This assertion is supported by the consistent research finding that the vast majority of the male victims of domestically related homicide had previously subjected the females who eventually killed them to repeated acts of domestic violence

(see Lloyd, 1995<sup>60</sup>; Naylor, 1993; Easteal, 1993). Further reinforcing this point is the finding that, based on previous criminal records for violent assault, the male victims of victim-precipitated homicide tend to resemble the assailants of non-victim-precipitated homicides (Lunde, 1975). Therefore, this writer would argue that the first reason why an assailant with no previous serious non-firearm violent convictions may suddenly kill using a knife is because they were involved in a victim precipitated attack.

The second reason why a person with no previous serious non-firearm violent convictions may suddenly kill using a knife is because they suddenly lose control of the normal restraints that inhibit them from reacting in such a way. A loss of one's normal restraints is often due to a sudden onset of psychosis. The typical scenario relating to this type of attack is where an assailant suddenly experiences a powerful urge to kill their parent or child using the nearest available weapon because they believe them to be, say, 'the devil'. Typically, when such assailants return to the frame of mind that predominates their lives, often by taking the right medication, such people are completely harmless and incapable of undertaking such an attack. Therefore, the reason why this type of assailant is unlikely to have any previous serious violent non-firearm related criminal convictions, but was still capable of lethally using a knife to kill, is due to a sudden onset of psychosis. Arguably, this onset of psychosis made them uncharacteristically lose control of the restraints that normally inhibit them from acting in such a way.

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<sup>60</sup> According to Lloyd (1995: 76) 'Angela Browne, an American social and forensic psychologist, quotes various researchers to show that around 70 per cent of women who killed their husbands had been physically abused by them....Research in Australia backs up Browne's contention. Bacon and Lansdowne investigated cases of women who had been convicted of killing their husbands and boyfriends. They found that in fourteen out of sixteen cases the women had been physically assaulted and subjected to repeated violence.'

By eliminating the above confounding variables from the comparison undertaken in Hypothesis 1, this writer proposes Hypothesis 2.

*Hypothesis 2:* When those most likely to be determined knife assailants (over 19 years old) who:

- physically initiated the attack (*non-victim precipitated*);
- were *unlikely* to be mentally ill;

are compared to those most likely to be determined firearm assailants (over 19 years old) who:

- physically initiated the attack (*non-victim precipitated*);
- were *unlikely* to be mentally ill;

This author would hypothesise that the actual percentage difference found in Hypothesis 1 for previous serious violent non-firearm convictions will increase further.

*Specific Data Collected For Hypothesis 2.*

To enable the testing of Hypothesis 2 it was necessary to identify those assailants who physically initiated the attack (non-victim precipitated) and were unlikely to be mentally ill. Then it was necessary to identify the firearm and knife assailants who were most likely to be determined to kill. Finally, those assailants who had previous serious violent non-firearm conviction histories had to be identified. In the order just presented, the following will describe the definitions and data collection process used to identify those assailants who met the above criteria.

1. *Non-victim precipitated assailants* (attacks physically initiated by the assailant): The definition of a 'non-victim precipitated assailant' was those assailants left in the population when all the victim precipitated assailants had been removed. Therefore, 'victim precipitated' events had to be ascertained first. An event was defined as being victim precipitated if the victim had initiated the event by physically attacking the assailant. It was also considered victim precipitated if the victim was physically attacking a third person intimately related to the assailant (a child, close relative or partner), who the assailant felt a desperate need to protect. Furthermore, for an attack to be defined as victim precipitated the assailant had to react to the victim's physical attack during or immediately after it had ceased (within a matter of seconds). Once the victim precipitated events had been identified, they were removed from the proposed comparison leaving the non-victim precipitated events.

The data collection process used to obtain this information was typically based on the 'case summary' section in the C.I.B Murder Books. If this information was missing then

the Dossier Microfiche System was searched. If both of these sources failed, then a Phone Interview was conducted. If this source failed to provide an answer then the event was categorised as 'unknown' on the Data Collection Survey Sheet (see Appendix 5).

*2. Assailant unlikely to be mentally ill:* The definition of an ‘assailant unlikely to be mentally ill’ was all the assailants who were left in the population when all those who were likely to have been mentally ill had been removed. Therefore, ‘assailants likely to be mentally ill’ had to be ascertained first. However, to eliminate subjective interpretations it was decided to base this variable on whether the principal assailant was likely to have had an official mental health history before they killed the victim. Due to time limitations, the current writer did not choose to access official mental health records through the Ministry of Health. However, it was not unusual to encounter information that strongly suggested that an assailant had a previous official mental health history. The criteria for an assailant to be defined as likely to have had an official mental health history was:

- i) If an assailant's close relative, intimate partner or a mental health professional stated in the Dossier Microfiche System that the assailant had, before the homicide, officially been diagnosed as having a mental health disability. Furthermore, this condition related to the serious end of mental health disabilities (that is, it was an Axis I disorder). An example taken from the current study that met this criteria was a woman, whose husband had been killed by her son. She

said in a statement later made to the police that her son "has been a diagnosed Schizophrenic for the last 6 years".

- ii) Having a "Health Alert" warning on the Wanganui Computer criminal conviction history. This is a warning to police that the assailant in question is well known or understood to have had regular contact with mental health services (see the second example given in Appendix 4).

Any mention of an Axis II mental health disorder (personality disorders), or any hindsight mental health diagnosis (after the event diagnosis), was not considered sufficient to meet the criteria of having a previous official mental health history. This methodology is not considered to be an accurate indicator of the exact proportion of assailants who had official mental health histories<sup>61</sup>, but it is considered to be a reasonable and conservative estimate.

The data collection process used to obtain this information was based on reviewing the Dossier Microfiche System (for statements by close relatives, intimate partners or mental health professionals) and the assailant's criminal history on the Wanganui Computer for a 'Health Alert' warning found at the top of the printout (see Appendix 4).

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<sup>61</sup> This is especially so considering that a 'Health Alert' warning does not indicate whether or not an assailant had an Axis I disorder.



3. *Most likely to be a determined assailant*: The definition and data collection process used to ascertain whether an assailant was most likely to have been a determined killer was based on the same as that used in Hypothesis 1 (mentioned earlier on page 62).
4. *Assailant was old enough to have developed a representative criminal history*: The definition and data collection process used ascertained that an assailant that an assailant was over 19 years old was the same as that used in Hypothesis 1 (mentioned earlier on page 63)
5. *Serious non-firearm conviction*: The definition and data collection process used to ascertain whether an assailant had a serious non-firearm conviction was the same as that used in Hypothesis 1 (mentioned earlier on page 63).

All data collected for the variables of interest in Hypothesis 2 were recorded on each assailants' survey questionnaire sheet (see Appendix 5). The data collected on this survey questionnaire was later transferred to an Excel data spreadsheet for analysis, producing the results presented below.

## *Results*

In Hypothesis 2 it was predicted that when those most likely to be determined knife assailants (over 19 years old) who physically initiated the attack (non-victim precipitated) and were unlikely to be mentally ill, were compared to their exact equivalent assailant

using a firearm, that the percentage difference for serious violent non-firearm convictions found in Hypothesis 1<sup>62</sup> would increase further. Furthermore, this increased gap would remain statistically significant.

GRAPH WOULD NOT SEND VIA EMAIL

Figure 2: A comparison of previous ‘serious’ violent non-firearm convictions between those most likely to be determined knife and firearm assailants (over 19 years old) who initiated the attack and were not likely to be mentally ill.

By eliminating the two aforementioned variables from the comparison in Hypothesis 1, the results in Figure 2 demonstrate that 31.5 percent of the knife assailants and 3.44 percent of the firearm assailants had previous serious non-firearm related violent convictions<sup>63</sup>. This comparison produced a difference of 28.06 percent. Because this percentage difference in Hypothesis 2 is greater than that found in Hypothesis 1 (28.06

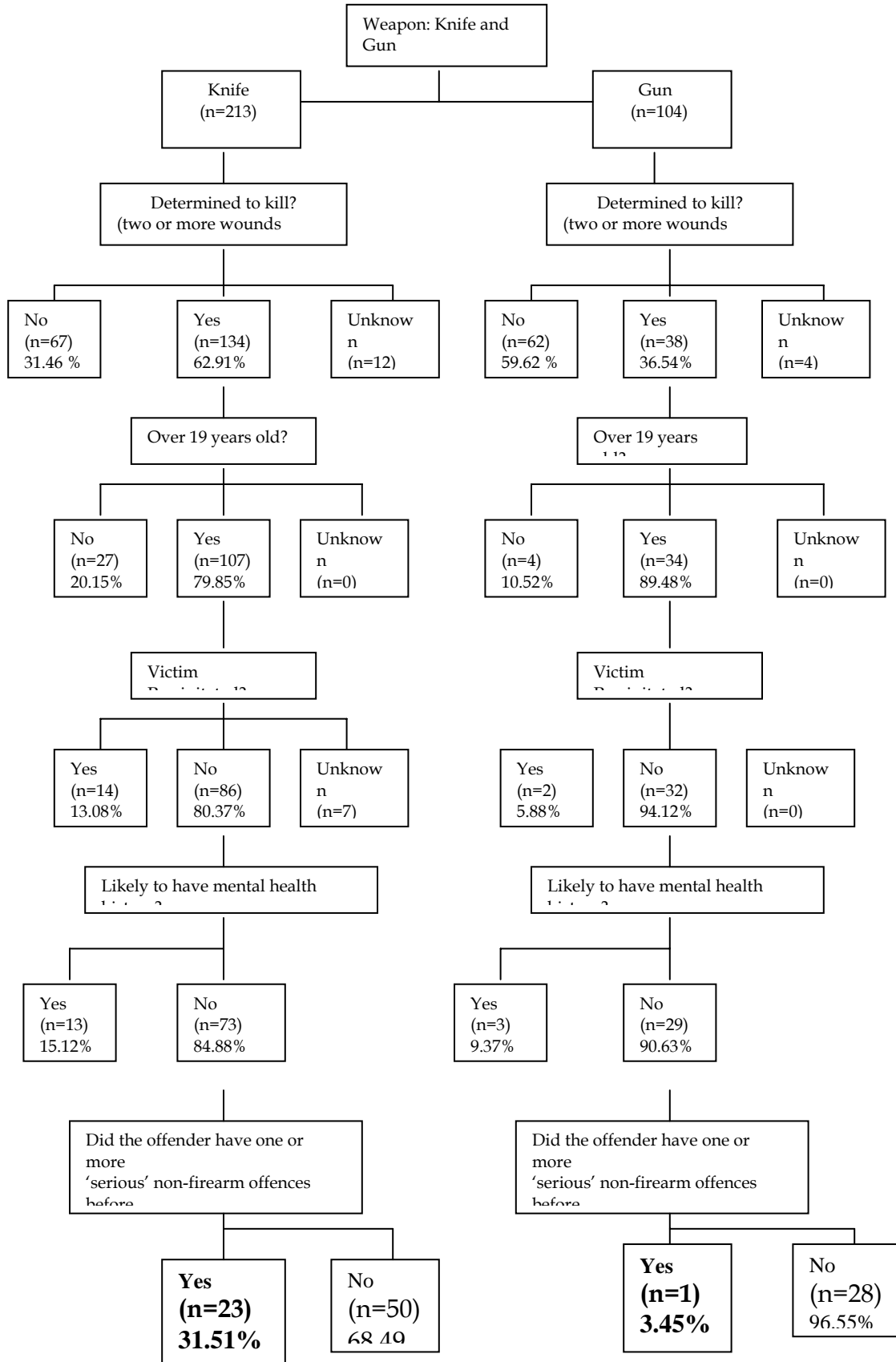
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<sup>62</sup> Which was 22.29 percent.

<sup>63</sup> For an insight into exactly how these percentage differences presented in Figure 2 were calculated refer to Appendix 10.

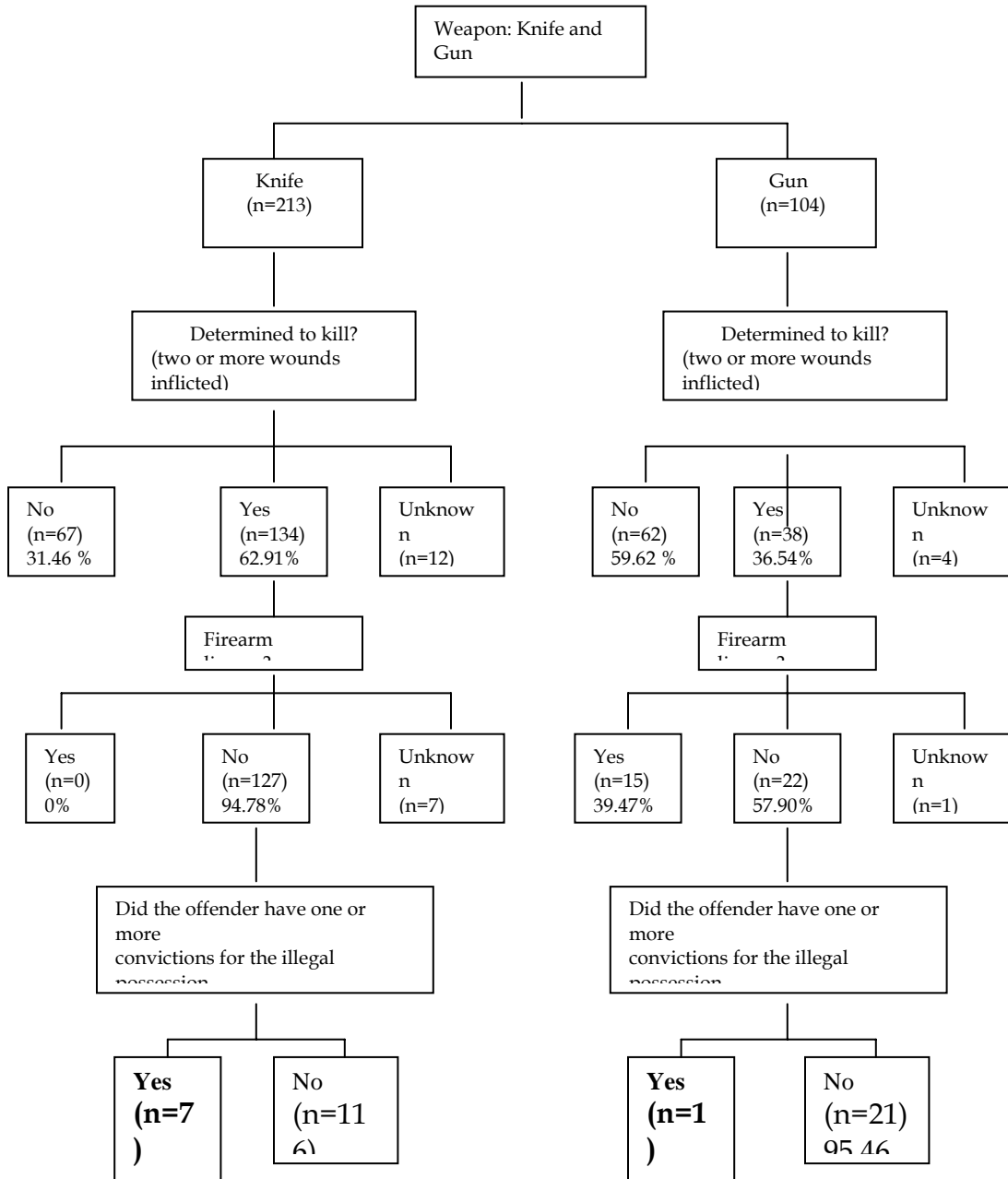
versus 22.29 percent, respectively) – the results support the prediction made in Hypothesis 2. Therefore, the results support Hypothesis 2.

## APPENDIX 10: How The Percentage Differences For Figure 2 Were Calculated



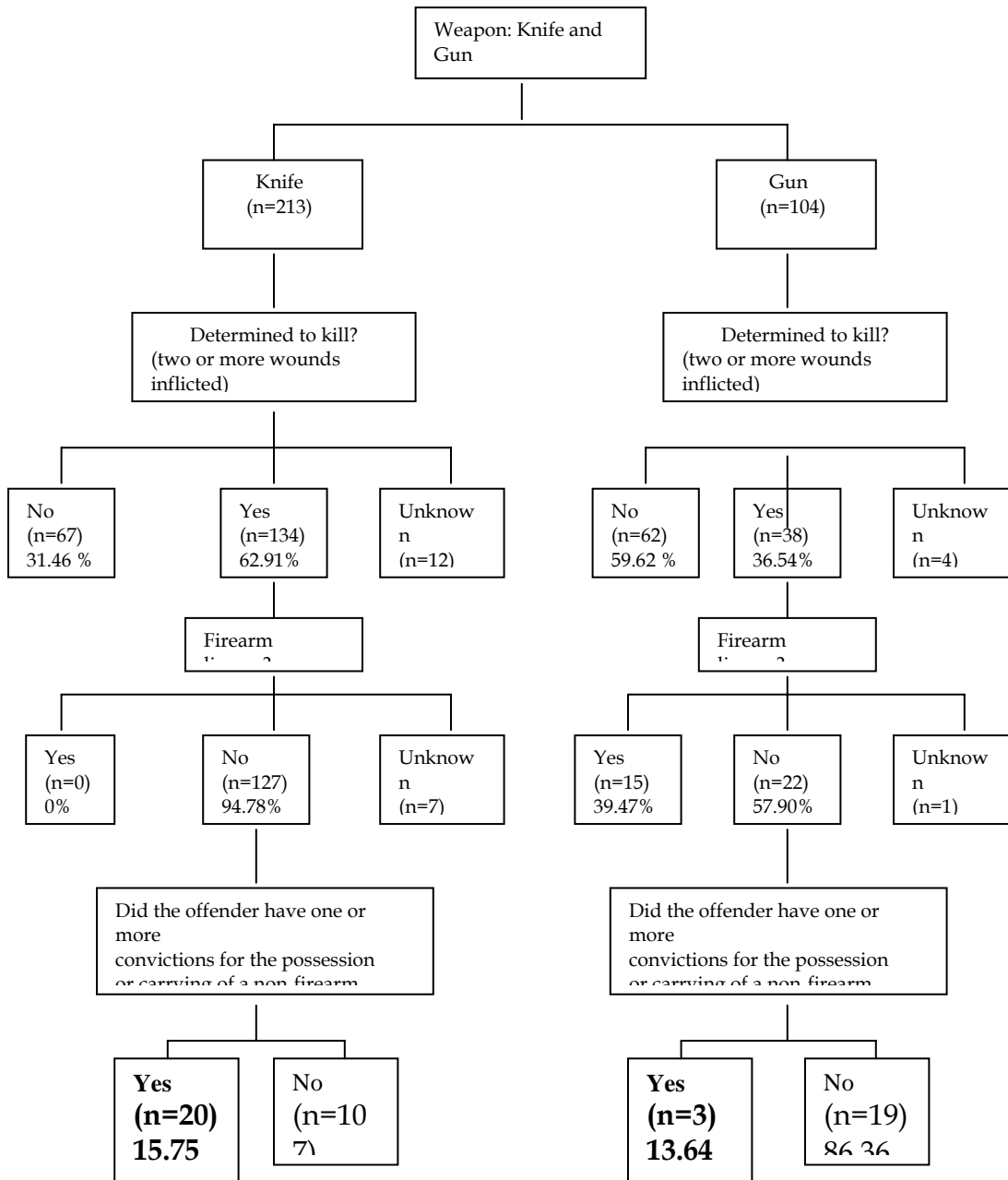


# APPENDIX 11: How The Percentage Differences For Figure 3 Were Calculated





## APPENDIX 12: How The Percentage Differences For Figure 4 Were Calculated







## APPENDIX 13: Kairys (1998) Example Of Gun Manufacturers Targeting Criminals



## APPENDIX 14: Critique Of Mouzos (2000): The Licensing And Registration Status Of Firearms Used In Homicide

By May of 1997 all jurisdictions in Australia had implemented the new firearm regulations which evolved out of the Nationwide Agreement on Firearms (NAF). One of these regulations was the introduction of a national firearm registration system. Due to the controversial nature and the scepticism surrounding the national registration of all legally owned Australian firearms, Mouzos (2000: 1) intended to identify whether or not 'those offenders who have committed firearm-related homicides in Australia [are] the [same] individuals who complied with legislation introduced as part of the NAF [by obtaining].....a firearms license, and [registering] their firearm(s)'. After reviewing all firearm related homicides occurring between 1 July 1997 and 30 June 1999, Mouzos (2000: 4) concluded that 'the overwhelming majority of these firearms [used in homicides] were not registered and the offenders were not licensed firearm owners'. More specifically, the abstract states that this study found that '[m]ost (over 90%) firearms used to commit homicides were not registered and their owners not licensed.' (Mouzos, 2000: 1). It would be quite understandable that some may have interpreted this conclusion to mean that gun control, which continue to solely impinge on the freedoms of licensed shooters, are having no impact on the real problem – unlicensed assailants.

For reasons that will follow, the current thesis will demonstrate that Mouzos (2000) is unlikely to be correct in her conclusion that most firearms used in Australia were not registered. In fact, using the same data, the following will demonstrate that Mouzos' has unintentionally misrepresented her own data which, in conflict with her above conclusions, will actually demonstrate most firearms used in homicide *were* likely to be registered. Furthermore, it will be argued that irresponsible storage and handling by the 'law abiding' licensed shooter may have contributed to the unlicensed assailants accessing firearms in the first place.

As evidence to the conclusion that the majority of firearms were not registered Mouzos (2000) refers the reader to a graph on page six of the article called 'Figure 6' (presented below).

An important piece of information absent from her conclusion but present in Figure 6 is the last two words in the statement under the graph 'Firearms

Registered to *Offender*'. What this graph demonstrates is that 90.6 percent of firearms used in homicides were not registered to the offender. However, is it possible that although this 90.6 percent of firearms were not registered to the offender - could these weapons have been registered to another person? As the following will demonstrate, there is reason to believe that a significant proportion of this 90.6 percent figure of 'unregistered guns' may have been registered to another person.

Earlier in this paper Mouzos (2000: 5) points out that 'this study did not specifically examine whether the firearms used to commit homicide had been stolen from licensed owners'. Then the reader is presented with her own research, 'Mouzos, 1999', and a New Zealand study which is used to imply that most of the unregistered guns used in firearm homicides in the Mouzos (2000) study probably *did* originate from the collections of licensed users. Implying that most unlicensed guns originated from the collections of licensed owners would explain why Mouzos (2000: 5) repeatedly recommends that 'it is important that firearms owners comply and store their firearms according to set regulations<sup>64</sup>. If it can be assumed that a gun originating from the collection of a licensed

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<sup>64</sup> If unlicensed assailants were *not* accessing the guns of licensed owners why would Mouzos continually need to recommend a greater need for enforcement and compliance in relation to the storage of legally owned firearms?

owner will have been registered, and this may be a safe assumption<sup>65</sup>, then it is therefore likely that *at least* a significant proportion of the guns that Mouzos has categorised as unregistered are actually likely to be registered. It is just that the guns are registered to a person other than the offender who did not hold a license.

So why is the above argument so important? Identifying that many of the guns in Mouzos' population were probably registered (just not registered to the unlicensed assailant) is important because this study is being promoted in the media and possibly in anti-gun control circles as evidence that the registering of firearms does not reduce homicide<sup>66</sup>. And, assuming the above argument is correct – Mouzos' study does not demonstrate this at all. If Mouzos (2000) does not demonstrate that registration is not reducing homicide, what does this study tell us?

What Mouzos' study *has* explicitly discovered is that *all* people who have illegally acquired firearms are not willing to register these weapons with the police before they used them to commit a homicide with. Is it at all surprising that people who acquire guns illegally (either directly stolen or indirectly

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<sup>65</sup> Figure 6 in Mouzos (2000), presented above demonstrates that of the 9.4 percent of assailants who held a firearms license – *all* the firearms used were registered. Therefore, it would seem *reasonable* to assume that guns originating from the collection of licensed owners are likely to be registered.

<sup>66</sup> For example, the title of one article was called 'Tougher arms laws don't work – report' (see The Dominion, 06/08/00).

obtained from the black market) are not willing to take their illegal firearms to the police to be registered?

In summary, what Mouzos' (2000) study *is* likely to have demonstrated is that, like in New Zealand and the United States, those most likely to use guns to kill with are unlicensed. Furthermore, these unlicensed assailants are typically able to access legally owned but irresponsibly stored firearms. Therefore, Mouzos' (2000: 5) interpretation of her results to mean that 'those who commit homicide in Australia are individuals who have circumvented legislation and will be least likely to be affect if further restrictions on firearms ownership are introduced. Any further restrictions will most likely affect individuals who are law-abiding shooters who have already "made significant sacrifices in furtherance of public safety"', is probably incorrect. It is likely to be incorrect because is likely to be poor storage and handling practices by licensees that is, in part, supplying the unlicensed assailants with firearms that are later used in homicides.

One question of interest to the current author is – if most guns used in homicides in Australia are in fact registered to *someone*, are the firearms used by unlicensed assailants being traced back to a potentially negligent legal owners? And, if not why not? If illegally possessed weapons obtained by police are not being traced back to a potentially negligent and irresponsible owners (which Mouzos has



implies that they may not be<sup>67</sup>) – what use is there in having a gun register in the first place?

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<sup>67</sup> Mouzos (2000: 5) has argued that ‘preventative efforts would need to be directed at curtailing the supply of firearms to.....[assailants without licenses]. In other words, policy would need to consider the following: Greater enforcement relating to the storage of legal firearms’.

## APPENDIX 15: Psychology And The Weapon Instrumentality Effect.

The following is a laboratory experiment that Myers (1993) has described as the most famous and controversial experiment ever undertaken in social psychology – Milgram's (1963) Obedience Experiments. The actual relevance of this experiment to the weapon instrumentality effect has been discounted by commentators in the gun control debate before (see Kleck, 1991). This is because the relevance of the experiment is not overtly obvious, that is until a closer inspection is undertaken. Therefore, it is imperative that Milgram's experiment be described in detail.

Milgram's (1963) experiment basically tested a subject's willingness to obey orders from an authority in the face of evidence which suggested that the subject's compliance to those orders was inflicting great pain or injury on another person. The experiment more specifically involved a confederate (an actor) and an unsuspecting subject, who enters a laboratory where a scientist-type person (another actor) wearing a white laboratory coat, meets them. The scientist informs both men that the experiment that they have volunteered to take part in is investigating the effects of punishment on learning. One person is required to be the teacher and the other the learner. Using deception, the confederate was always made the learner and the subject the teacher (from now onwards the confederate and the subject will be referred to as the learner and teacher respectively).

The teacher then watches as the scientist attaches an electrode to the learner's arm while the learner comments that he has a slight heart condition. Then the teacher is taken into an adjacent room and placed in front of a 'shock generator'. This device has a line of switches that range from 15 to 450 volts that increase in 15-volt increments. The switches have other labels indicating the probable shock intensity, for example, 'slight shock', 'very strong shock', 'danger: severe shock' with the last two switches (435 and 450 volts) having the labels 'XXX'. Starting from the lowest shock level, the teacher is instructed by the near-standing scientist to give the learner a shock each time they give an incorrect answer to the questions posed. And for each subsequent incorrect answer the teacher is encouraged to give the learner a shock from one level higher than before, thus increasing the shock intensity for the learner. As the shocks increase, the pain experienced by the subject can be heard to have intensified. For example, at 120 volts the subject is heard to say "Ugh! Hey this really hurts". Typically, early on in the experiment the teacher becomes stressed and informs the scientist of their discomfort to hurting the learner. The scientist continuously responds to these pleas by saying "It is absolutely essential that you continue" or "You have no other choice; you must go on". If the teacher obeys these commands, by 270 volts the learner, in obvious agony, is heard to scream "let me out of here. Let me out of here. Let me out of here. Let me out. Do you hear? Let me out of here". At 300 volts the learner states that he refuses to answer and is basically

only heard in the form of agonising screams. The scientist tells the teacher to treat any further unanswered questions as incorrect and to give the learner shock from the next shock intensity. After 330 volts the learner suddenly goes silent, giving the impression that the shocks have, at least, rendered him unconscious. Again the teacher is told to treat the unanswered questions as incorrect and to continue administering shocks of increasing intensity. The experiment is stopped after the teacher has administered *three 450-volt shocks in a row*.

Before it was undertaken, Milgram (1963) described the above experiment to 110 psychiatrists and asked how many 'teachers' did they think would proceed through to the 450-volt switch. The consensus was that may be one in 1000 teachers might complete the experiment. However, 25 out of his sample of 40 men (or 63 percent), obeyed the demands of the scientist by administering shocks to the last 450-volt switch. Disturbingly, only 15 of the subjects had the courage to defy the demands of the scientist and stop before the last switch was reached.

As a result of the above disturbing findings, Milgram (1974) became interested in the conditions that breed and inhibited obedience. Therefore, he repeated the above experiment with a number of variations. It was one of these variations that this writer would argue might have important implications into the possible greater psychological difficulty in using close contact weapons, like a knife, over a gun. The logic behind this variation stemmed back to observation that

occurred in the pilot studies of the original experiment. Milgram noticed in the pilot studies that if the teacher could *see* the learner in the adjacent room through a window, typically the teacher would awkwardly divert their eyes – yet still continue to administer the shocks. It appeared that clearly seeing the learner in agony caused obvious discomfort to the teacher. Explaining why they would not watch yet still continue to deliver shocks, one teacher later pointed out that he did not want to see the consequences of what he was doing.

This observation led Milgram (1974) to hypothesise that the level of obedience might be determined by how clearly the learner's suffering is perceptually communicated. For example, Milgram hypothesised that as the learner's suffering is perceptually made more obvious to the teacher (by making the learner's agony visually, auditorially and tactilely more difficult to ignore), the level of obedience would decrease. Or in his own words, Milgram (1974: 34) wondered: 'If the.....[learner].....were rendered increasingly more salient to the .....[teacher].....would obedience diminish?'

To test this hypothesis Milgram (1974) repeated the aforementioned experiment with three slight variations. In Experiment 1, called the 'remote' condition, the learner is placed in another room and could not be seen or heard at all. The learners' responses to the questions were transmitted silently to the teacher. However, at 300 volts a hand pounding in protest could be heard through the

wall, then at 315 volts the pounding suddenly stopped. Experiment 2, called the 'voice feedback' condition, is an exact replication of the original experiment. That is, the learner's agonising responses to the increasingly intense shocks could be clearly heard. Experiment 3, called the 'proximity' condition was the same as Experiment 2 except the learner was placed in the same room, and sitting only a few feet away from the teacher. So not only could the teacher hear the learner's agonising responses, they could see them too. Experiment 4, called the 'touch-proximity' condition, was similar to Experiment 3 except when the 150-volt switch was reached the learner took their hand off the shock plate and would refuse to continue. As a result the scientist would demand that the teacher force the learner's hand on the shock plate for each subsequent incorrect answer. Therefore, to remain obedient the teacher had to physically *touch* the learner. Taken from Milgram (1974: 35), the results from these four experiments are presented below in Table 3.

Milgram (1974: 35)					
		Experiment 1	Experiment 2	Experiment 3	
Experiment 4					
Shock Level	Verbal designation and voltage level	Remote (n=40)	Voice- (n=40)	Proximity Feedback (n=40)	Touch- (n=40)
Proximity (n=40)					
1	Slight Shock				
2	15				
3	30				
4	45				
	60				
5	Moderate Shock				
6	75				
7	90				
8	105			1	
	120				
9	Strong Shock				
10	135		1		1
11	150		5	10	16
12	165		1		
	180		1	2	3
13	Very Strong Shock				
14	195				
15	210				1
16	225			1	1
	240				
17	Intense Shock				
18	255				1
19	270			1	
20	285		1		1
	300	5*	1	5	1
21	Extreme Intensity Shock				
22	315	4	3	3	2
23	330	2			
24	345	1	1	1	
	360	1	1		
25	Danger: Severe Shock				
26	375	1		1	
27	390				
28	405				
	420				
29	XXX				
	435				
30	450	26	25	16	12
Mean maximum shock level		27.0	24.53	20.80	17.88
Percentage obedient Subject		65.0%	62.5%	40.0%	30.0%

\* Indicates that in Experiment 1, five subjects administered a maximum shock of 300 volts.

Table 3: Maximum Shocks Administered in Experiments 1, 2, 3 and 4.

Table 3 demonstrates that 65 percent of all teachers went to the very end of the experiment in the 'remote' condition. It is interesting that it was not until the learner banged on the wall at the 300-volt switch that the few teachers who were disobedient could be distinguished from those who were obedient teachers. Due to the complete absence of disobedience before the 300-volt switch, it would seem obvious to this author that if the learner did not bang on the wall, all of the teachers would probably have completed the experiment to the end. In Experiment 2 when the learner could be heard from the beginning, obedience dropped slightly to 62.5 percent. And, when the victim could clearly be heard and seen because the learner was sitting next to him in Experiment 3, the rate of obedience dropped to 40 percent. Finally, the rate of obedience dropped to 30 percent when the teacher had to touch the learner. Therefore, the above results appear to strongly support the hypothesis that as the perceptual salience of the victim increased there was a corresponding decrease in the rate of obedience. The following will discuss what relevance a study on obedience has on why a proportion of firearm assailants who were capable of killing with guns are unlikely to be capable of killing with the commonly used non-firearm weapons.



*The More Perceptually Salient The Victim Becomes The Harder It Is To Hurt A Person*

The most striking feature of Table 3 was that something was having an increasingly powerful effect on the rate of disobedience at the 150-volt switch in Experiments 2, 3 and 4 (respectively). More specifically, the rate of disobedience at the 150-volt switch resulted in the sudden disobedience of 5, 10 and 16 learners in Experiments 2, 3 and 4 (respectively). This demonstrates that by Experiment 4 (the 'touch' condition), nearly half of all the subjects at this early stage of the experiment suddenly refused to go on. It would seem to this writer that what the learner was saying was partially responsible. According to Milgram (1974: 56), at the 150-volt switch, the learner is heard to say: 'Ugh!!! Experimenter! That's all. Get me out of here. I told you I had heart trouble. My heart's starting to bother me now. Get me out of here please. My heart's starting to bother me. I refuse to go on. Let me out.' However, the above statement was held constant throughout Experiments 2 to 4 yet the rate of disobedience was increasing at an exponential rate with 12.5, 25 and 40 percent of all teachers suddenly refusing to continue at this early stage of experiments 2, 3 and 4 (respectively). It seems that as the learner's perceptual salience increased, what they were saying had a heightened effect on teacher disobedience.

Why exactly did disobedience suddenly increase at an exponential rate at such an early stage? There are probably two main related reasons for the dramatic increase in disobedience. Firstly, it was very difficult, (arguably traumatic) for

the teacher to *slowly* hurt somebody with a heart condition who you could see and hear (high perceptual salience). At the 150-volt switch you *then* had to touch (very high perceptual salience), especially in comparison to slowly hurting someone who you could only hear. As Milgram (1974: 38) has argued 'It is possible that the visual cues associated with the victim's suffering trigger empathic responses in the subject and give him a more complete grasp of the victim's experience.'

How does this relate to the instrumental characteristics of firearms over the commonly used non-firearm weapons? Absent in all the common alternative weapons of homicide is both the incomparable damage that is inflicted by a firearm and that this damage is released instantaneously. By the time a gun assailant is traumatically affected by a wounded and pleading victim to stop, the fatal damage is, comparatively speaking, likely to have already been inflicted. However, with the commonly used non-firearm weapons/methods of homicide not being as instantaneous or as lethal as firearms - there is a greater amount of time for a more perceptually salient victim to plead for their attacker to stop. Furthermore, a gun does not require the assailant to touch their victim - a prerequisite of all the common alternative weapons. This is an important point considering that the Touch-Proximity condition resulted in the highest rate of disobedience.

Closely related to this last point is the second reason why disobedience is likely to have increased as the learner became increasingly more salient. That is, disobedience is much less likely to occur when the teacher could blame the near-standing scientist as being responsible for their actions. For example, the following excerpt is a conversation between one of the teachers and the scientist (Milgram, 1974: 73-74):

[Teacher]: 'I refuse to take the responsibility. He's in there hollering!'  
[Scientist]: 'It's absolutely essential that you continue, Teacher.'  
[Teacher]: '.....I mean who's going to take the responsibility if anything happens to that gentleman?'  
[Scientist]: 'I'm responsible for anything that happens to him. Continue, please.'  
[Teacher]: 'All right' (Teacher completes the experiment).

However, this excuse becomes much more difficult to justify when the teacher is the one forcing the learner's hand on the shock plate. The teacher would not sound very credible saying that the scientist 'forced' him to do it when the only 'force' to be seen was coming from the teacher himself. For example, saying 'I had no choice, the scientist made me push your hand on the shock plate' would hardly sound like a very credible justification for inflicting the shocks. In short, it is much more difficult to deny responsibility for one's actions when directly connected to that action. And, touching makes it very hard to justifiably deny responsibility. As pointed out by Milgram (1974: 39):

In the Remote conditions it is more difficult for the subject to see a connection between his actions and their consequences for the victim. There is a physical

separation of the act and its effect.....The two events are in correlation, yet they lack a compelling unity. The unity is more fully achieved in the.....Touch-Proximity [condition].

How does this relate to the instrumental characteristics of firearms? Presented in an earlier footnote was a statement that was taken by the New Zealand Police that provided this thesis with a good example of an assailant who was likely to be an 'impulsively' motivated assailant. The assailant desperately attempted to justify what he had done by saying "I didn't mean to kill him, I just pulled the trigger". This assailant would certainly appear to have had problems seeing the direct connection between the act of pulling a trigger and the effect it had on instantly killing his victim. Interestingly, if this firearm assailant had used say, a crowbar, instead of a firearm to attack his victim, he would have been unlikely to have provided the police with a similar justification for his actions. For example, 'I didn't mean to kill him, I just swung the crowbar and smashed his skull in'. The unique instrumental characteristic of the firearm is that only a small amount of energy is required to unleash an incomparable blow. Having no control over the intensity of this blow, a firearm assailant is less likely to see the connection between their actions being fully responsible for the consequences. Accentuating this lack of unity between cause and effect is that, unlike with all the common alternative weapons of homicide, a firearm does not require the assailant to touch the victim. However, having to touch someone to hurt them heightens

both ones awareness of the force being exerted *and* on them being solely responsible for the consequences of these actions.

Therefore, from a psychological perspective it could be argued that Milgram's (1963, 1974) obedience experiments indirectly reinforces and sheds greater light on some of the probable instrumental characteristics identified by Zimring (1968, 1972) which are unique to the firearm. The points below combines all of the above points made by Milgram by applying them to the firearm and the commonly used non-firearm weapons of homicide:

- *Common non-firearm weapons/methods*: Having to touch a victim and being in control of the force exerted on them increases the unity between cause and effect. This unity increases the chances of the assailant feeling empathetically towards the victim or guilty and responsible for their actions. Due to the less efficient and lethal nature of such weapons there is more time for these intense feelings to be expressed which may inhibit the attack from continuing further.
- *Firearm*: Not having to touch a victim and not being in control of the incomparable force that is exerted decreases the unity between cause and effect. This lack of unity reduces the chances of the assailant feeling as empathetically towards the victim or guilty and responsible for their actions (relative to what they would have felt if they

used one of the close contact non-firearm weapons). Due to the more efficient and lethal nature of firearms there is less time for these less intense feelings to be expressed to inhibit the attack from continuing further. However, even if these, relatively speaking, less intense feelings of guilt or responsibility inhibit the attack from continuing further, the instantaneous and incomparably lethal nature of a firearm attack means that it is statistically more likely to result in a fatality relative to the other common weapons/methods of homicide.

In summary, the instrumental characteristics unique to the firearm are likely to make undertaking an attack less perceptually salient relative to the commonly used alternative weapons of homicide. Therefore, from a psychological perspective, guns are likely to be easier to hurt somebody with in comparison to using any of the common alternative weapons of homicide. However, as pointed out by Kleck (1991), the applicability of an artificial laboratory experiment on real life homicidal events will always be a valid limitation of Milgram's (1963) experiment.

Interestingly, one of the most historically respected academic contributors to the field of psychology, Albert Bandura (1973: 177) used evidence from the above experiment by Milgram (1963) to reinforce his following statement:

It is relatively easy to hurt a person when his suffering is not visible and when causal actions seem physically or temporally remote from their deleterious effects.....When the injurious consequences of one's actions are fully evident, vicariously aroused distress and loss of self respect serve as restraining influences over aggressive conduct.

As a result of the above information, this writer would feel safe in asserting that both Milgram (1974) and Bandura (1973) would both agree that the vast majority of people in society are likely to be affected, to some degree, by the relationship between perceptual salience and resistance to hurting another human being. However, this would imply that a tiny minority of society are unlikely to be affected by this relationship. If such a minority could be identified, accompanied with information surrounding their homicidal behaviour, is it possible that the weapons used by such people are more likely to be of the close contact variety? In other words, at the complete opposite end of the spectrum, what are the weapon preferences of the minority of people who are not so affected by the relationship between perceptual salience and resistance to inflicting pain or injury on another human being?

Interestingly, criminal psychologists have identified psychological factors influencing weapon selection in a minority group that fits the above characteristics. For example, in regards to one of the rarest types of violent assailants in society, Levin and Fox (1985: 58) point out that sexually motivated serial killers typically do not like to kill with weapons that, relatively speaking, physically remove them from the act they so enjoy. This is more clearly stated by Levin and Fox themselves when they said:

Among serial murders that are sexually inspired, the use of a gun, is in fact, remarkably rare. For those killers, physical contact is so crucial to satisfying their murderous sexual impulses that a gun robs them of the pleasure they receive from killing with their hands.

Levin and Fox (1985: 58-59) then point out how a firearm may be less repugnant than using other common weapons of homicide because a 'gun distances the killer from his victims. Not only effective as a deadly weapon, it is psychologically effective for those who don't want to get their hands dirty.' Due to the observation that many firearm homicides involve close range attacks, Kleck (1991) has discounted this 'killing at a distance' argument. However, the important point is that guns do not require an assailant to touch their victim, which Milgram (1974) demonstrated would significantly reduce the level of perceptual salience.

In conclusion, this section has argued that there are likely to exist a variety of *psychological* factors contributing to Zimring's (1968, 1972) weapon instrumentality effect. Generally speaking, an important instrumental characteristic of firearms is that they are unlikely to be as perceptually salient as the commonly used non-firearm weapons of homicide.