

# PSYCHOLOGICAL EVALUATION AND GUN CONTROL

- *Controlling who owns guns*
- *Controlling the guns themselves*


UK gun controls are under review, following the tragic events in Dunblane in March 1996. Among the options which have been suggested is to employ a more 'scientific' process for vetting people applying for firearm certificates. Such 'psychological profiling' could, it is argued, allow potentially dangerous individuals to be identified, and reduce or complement the need to apply further controls to guns themselves.

*This briefing examines the available psychological assessment options and other technical aspects of the current debate.*

## 1 EXISTING CONTROLS

Pistols, revolvers and rifles (and ammunition) were first controlled by the Firearms Act of 1920, which made it illegal to possess these weapons without first obtaining a certificate from the police. Similar provisions were introduced for shotguns in 1967. Current controls derive from five separate Firearms Acts (1968 to 1994), which provide four levels of control covering the different types of guns and ammunition, as summarised in **Table 1**. Air guns and their ammunition are subject to the lowest level of control, with **no certificate** being needed to buy or possess most types. At the other extreme are the **prohibited weapons**, which consist of 14 categories of guns (e.g. self-loading and rapid firing), ammunition and other military hardware (e.g. mortars). Ownership or use of such weapons requires the written authority of the Secretary of State (the Home Office or the Scottish Office). The killings at Hungerford led to self-loading rifles and short barrelled semi-automatic shot guns being added to the list of prohibited weapons in 1988.

In between these two extremes are guns such as shotguns, pistols and certain types of rifles. Anyone wish-



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ing to buy, acquire or possess<sup>1</sup> one of these weapons must first obtain the appropriate certificate from the police. Shotguns - i.e. those with long (>24 inches), smooth barrels, a bore of 2 inches or less and which are incapable of holding more than two cartridges at once - require a **shotgun certificate**, which places statutory obligations on the holder (to sign the certificate; inform the police of any thefts or losses; inform the police of any change of address; and to keep the guns and ammunition in a safe place).

Other types of guns such as rifles, pistols, revolvers, etc., require a **firearm certificate** (see Table 1). This is more stringent than the shotgun certificate - in addition to the statutory requirements above:

- applicants must have a good reason for possessing all the firearms covered by the certificate;
- all firearms and ammunition acquired on the certificate must be approved by the police first;
- police may impose additional conditions on these certificates - for instance specifying the shooting range(s) where the weapon is to be used.

The total number of certificates on issue has declined slightly in recent years, mainly due to a decrease in the number of shotgun certificates (**Figure 1**). Overall, there are currently just under 800,000 certificates in England and Wales, of which ~142,000 (covering ~409,000 guns, or around 3 guns per certificate) are for firearms and ~654,000 for shotguns (accounting for nearly 1.3M shotguns, or around 2 guns per certificate). A further ~100,000 (32,000 firearm and 69,000 shotgun) certificates are currently on issue in Scotland.

1. In the Firearm Acts, possession refers not only to ownership, but also to handling or having a gun on ones person.

**Table 1 LEVELS OF CONTROL ON UK FIREARMS**

Type of Gun/Ammunition	Control
Air guns and ammunition, shot gun cartridges	No certificate required
Most shot guns	Shot gun certificate required
Revolvers, pistols, rifles, other types of shotgun, certain high powered air guns	Firearm certificate required
Other specified types of guns and ammunition (14 categories including automatic, semi-automatic and self-loading guns, rocket launchers, mortars, etc.)	Prohibited weapons

Figure 1 RECENT TRENDS IN GUN CERTIFICATES



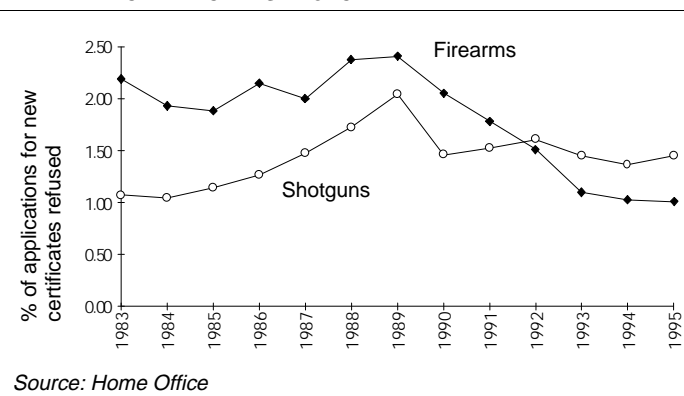
## 2 CURRENT ASSESSMENT PROCEDURES

People wishing to obtain a shotgun or firearm certificate are required to fill in standard forms, and get them countersigned by a respected member of the community (an MP, minister, doctor, lawyer, etc.) who is not a member of their family but has known them for at least two years. Applicants are considered by the Chief Officer of Police, who decides whether to grant a certificate. The criteria used are laid out in the Firearms Acts and in Home Office's (HO) Guidance as follows:

- **previous criminal record** - all criminal convictions must be declared on the form, and serious criminal offences disqualify the applicant from possessing shotguns or firearms;
- **temperance and mental health** - people of "*intemperate habits or unsound mind*" must not be granted a firearm certificate under the Act, while the HO Guidance on shotgun certificates notes that "*any relevant information known to the police about the applicant such as mental illness or intemperate habits may be taken into account*". Application forms for both certificates require details of epilepsy or any mental disorder to be given;
- **character** - firearm or shotgun certificates will only be granted provided the police are satisfied that this will not "*represent a danger to the public safety or to the peace*", and the Guidance for firearms notes that account should be taken of a person's "*character*", "*antecedents and associates*".

Other considerations (e.g. on security arrangements for safe-keeping, the reasons for wanting the weapons) inform an overall view of whether a certificate should be granted. In recent years, the proportion of new applicants **refused firearm certificates** has dropped from ~2% in the 1980s to ~1% at the present time, whereas **refusals for new shotgun certificates** have stayed fairly constant at ~1.5% throughout the 1990s (Figure 2). In 1995, **revocations** amounted to ~0.15% of all firearm and ~0.1% of all shotgun certificates, with the **refusal rates for renewals** being ~0.3% and 0.07% respectively.

Figure 2 PROPORTION OF APPLICATIONS FOR GUN CERTIFICATES REJECTED



Refusals and revocations can be appealed against. Many such appeals are successful - for instance, provisional HO figures suggest that between 1992-95, 101 out of 460 (22%) resulted in the police decision being overturned. This right of appeal means that the police's reasons for refusing or revoking a licence must be sufficiently robust to stand up in court. In practice, this may mean that the police tend to limit their objections to those cases where there are clear criminal or medical grounds for refusing or revoking a certificate. In cases where the objections are less clear cut, perhaps relying on hearsay, a subjective assessment of character or intemperance, a suspicion of criminal contacts, etc., the police may tend to give the applicant the benefit of the doubt, rather than risk having to defend their objections in court.

Incidents such as Dunblane have focused attention on the adequacy of these assessment criteria. Assessing a person's character, temperance and state of mind is a fairly subjective process, based on limited information, and relies very much on the judgement of the officer concerned. Even the requirement to obtain the endorsement of a person of suitable standing is no guarantee of character since, under the present system, an applicant can 'shop around' for a compliant countersignatory (people who refuse to countersign a certificate are not obliged to inform the police of their decision). Some have thus called for a more rigorous and 'scientific' assessment of applicants, perhaps involving a psychological assessment of their mental health, personality, etc. The pros and cons of such approaches are discussed below.

## 3 PSYCHOLOGICAL EVALUATION

### 3.1 Psychology and Violence

Despite incidents such as Dunblane and Hungerford, gun-related deaths in this country remain relatively low by international standards (Table 2). In 1993 there were 82 homicides involving guns in Great Britain, and 75 in 1994. Most of these are isolated incidents, involving a single killing, usually for an identifiable motive (e.g. armed robbery or a violent argument). It is much

less common for a gunman to run amok<sup>2</sup>, but when one does and kills 16 (Hungerford) or 17 (Dunblane) people for no apparent reason, such events inevitably raise the question of whether the perpetrators conform to any recognisable pattern or profile that might allow their behaviour to be predicted. For instance, such people are often seen as psychopathic 'loners', and there is a widespread perception that they must be psychologically distinct from the rest of the population, raising the possibility of devising psychological tests to identify and prevent them from having access to guns.

Psychologists are aware of many 'risk factors' that are linked to violent behaviour, and some of the more important of these are outlined in **Box 1** (page 4). They include both psychological (personality disorders, psychotic symptoms, etc.) and other (biographical details, previous criminal history, access to guns, etc.) factors. To what extent do these have the potential to be used to predict whether individuals are likely to exhibit extreme violent behaviour in the future?

### 3.2 Assessing Dangerousness

This task is routinely faced by mental health professionals in a clinical setting, who have to assess the 'dangerousness' of violent offenders in order to advise on their suitability for release, bail, etc. When conducting assessments of this type, psychologists and psychiatrists form a judgement based on an overview of all the available information concerning the criteria in **Box 1**, gleaned from interviews and other ('collateral') sources (medical records, police files, observational notes compiled by nurses or prison staff, detailed character references, etc.). Several in-depth interviews are required, and these can be structured and 'scored' - the higher the overall score, the greater the risk of future violent behaviour. The process is not entirely objective however, since the decision about what level of risk is or is not acceptable (e.g. whether or not an individual with a certain score should be released from gaol, granted bail, etc.) is very much a matter for expert judgement, and will vary according to circumstances.

Even in a clinical setting, such judgements are not entirely reliable, as illustrated by individuals who return to violence after release. There is thus considerable doubt whether they could be used in a community setting to screen applicants for firearm certificates. Specific obstacles include:

- assessment requires the full **cooperation** of the individual concerned. In the clinical setting, there is plenty of time and much to gain by cooperating. It is far more debatable whether the necessary time and level of cooperation would be forthcoming in a

2. Psychiatrists recognise various different categories of amok killings. For instance, a distinction is often made between 'spree killing' (multiple killings occurring over a short period of time but at different locations) and 'mass murder' (multiple killings carried at the same place and time).

Table 2 RATES OF DEATH BY GUNS IN SOME COUNTRIES

Country	Homicide		Suicide	
	Total	Gun-related	Total	Gun-related
USA	9.3	6.4	12	7.1
New Zealand	2.6	0.49	14.5	2.5
Canada	2.2	0.67	12.8	3.6
Australia	1.8	0.36	11.6	2.5
Britain	1.3	0.14	8.6	0.4
Japan	1.2	0.06	19.3	0.14

Source: Figures from Canadian study ("Review of Firearms Statistics and Regulations in Selected Countries" Canadian Dept of Justice, 1995).

community context - indeed, many could see such assessments as a gross invasion of privacy;

- **cost** - a full evaluation requires several interviews over several days, so that the cost of assessing just new applicants (over 25,000 for shotguns and ~11,000 for firearms in 1995) would be prohibitive, to say nothing of the quarter of a million or so renewals each year (~196,000 shotguns, ~39,000 firearms);
- **other resource implications** - there are barely enough fully trained people to cope with the existing demand for evaluation (e.g. the HO estimates that there are only 2,000 consultant psychiatrists and 2,800 clinical psychologists currently practising in the country), so that any increase in workload would swamp the current system;
- **lack of collateral information** - validation of the interviews would require access to detailed medical information, statements from objective and reliable contacts, etc., which would be difficult to assemble;
- **accuracy** - once in widespread use, it would become possible to brief and train individuals on the 'right' answers, compromising further the tests' accuracy.

Most experts conclude, therefore, that **the clinical approach to assessing dangerousness is a non-starter for screening gun applicants.**

### 3.3 Psychological Tests

If it is not a practical proposition to assess applicants for all the risk factors outlined in **Box 1**, is it possible to devise 'streamlined' tests based on one or more of the most relevant criteria? Such an approach would have many advantages, particularly if self-reported tests (e.g. questionnaires) could be devised. But which of the criteria in **Box 1** are most strongly predictive of violent behaviour and amenable to self-assessment?

As far as predictivity goes, there is no clear consensus among psychologists as to what the most relevant measure of suitability to own a gun would be. The validity of the various criteria in **Box 1** are currently being investigated in one large American study<sup>3</sup>, which is comparing a wide range of risk factors and violent behaviour in 1,000 psychiatric patients following their release from hospital with those of a 'control' population (500 members of the general population living in

3. The MacArthur Violence Risk Assessment Study - further details available from <http://ness.sys.virginia.edu/macarthur>.

**BOX 1 SOME ASSESSMENT CRITERIA FOR PSYCHOLOGICAL EVALUATION****PERSONALITY DISORDERS**

These are distinguished from other forms of mental disorders (e.g. psychotic symptoms - see below) by virtue of their permanence, starting in late adolescence or early adulthood and persisting throughout an individual's life. Various different personality disorders have been identified, and strict diagnostic criteria for these have been laid out in professional manuals such as DSMIV<sup>1</sup>. Several of these have been associated with an increased propensity for violent behaviour, and these include:

- **psychopathic personality disorder (PPD)**, psychologists have devised a standard 'check-list' of some 20 or so key features characteristic of this disorder including grandiosity, egocentricity, forcefulness, impulsivity, cold-heartedness, a tendency towards sensation-seeking behaviour and being easily angered;
- **sadistic personality disorder**, characterised by relating to others in cruel and demeaning ways, aggression, a fascination with violence, weapons, etc.;
- **paranoid personality disorder**, where people feel they are being unfairly treated, discriminated against, lied to, etc. and see injustice where there is none;
- **sexual sadism**, where individuals gain satisfaction from dominating or humiliating others, and are often mixed up in complex fantasy lives.

Of these, studies show that PPD is particularly closely linked to violence - for instance prisoners assessed as having PPD on leaving jail are 5-6 times more likely to violently re-offend within 10 years than those without such a diagnosis.

**GENERAL PERSONALITY DIMENSIONS**

These include extraversion, aggression, resilientness, emotional stability, etc., which are readily assessed by personality tests based on self-reported attitudes, beliefs, emotions, behaviour, etc. A number of studies with 'general purpose' personality tests (i.e. designed to assess a broad range of individual differences) have shown that certain personality traits are more closely linked to violent or criminal behaviour than others. Two personality traits linked to violence are **impulsivity** (individuals who make decisions very quickly or act without thinking, and go through life with no thought to the future) and **poor anger control** (people who are 'hot-headed', easily provoked, see injustice where there is none, etc.).

Other studies have identified links between personality type and criminal behaviour. For instance, one recent study in New Zealand<sup>2</sup> looked at the personality traits exhibited by young people who had never been involved in crime (abstainers) compared to those who were persistent offenders, and found that the two groups had quite different personality profiles. Abstainers scored highly on measures of **constraint** such as traditionalism, harm avoidance and control, whereas persistent offenders yielded low scores on these measures, scoring highest on indicators of **negative emotionality** including aggression, alienation (feeling mistreated, betrayed, victimised, etc.) and stress reaction (nervousness, vulnerability, sensitivity, etc.).

**PSYCHOTIC / MANIC SYMPTOMS**

Psychotic/manic symptoms are distinguished from personality disorders by virtue of their episodic nature - i.e. the symptoms come and

go rather than being permanent psychological features. Included in this category are disorders such as **schizophrenia** (key features of which are difficulties in thinking and perception, plus hallucinations, delusions, etc.) and **manic depression** (which again is characterised by thinking and perceptual difficulties, irritability, etc.). As with personality disorders, diagnosis of such conditions requires a detailed interview with a mental health professional, normally backed up by access to collateral information. Despite a widespread perception that people suffering from such disorders are more likely to resort to violent behaviour, the links between violence and psychotic/manic symptoms are much less clear cut than generally imagined. Indeed, the present consensus is that such symptoms are at best only of limited relevance to predicting future violent behaviour.

**OTHER FACTORS**

In addition to the various psychological factors above, a large number of other (so-called risk) factors have been associated with violent behaviour, and these include:

- **demographic factors** such as age, gender, etc.;
- **historical factors** - e.g. family history, work/education record, history of physical or sexual abuse, history of crime or violence;
- **clinical factors** - diagnosis of alcohol or illegal drug abuse, violent fantasies, tests of functioning (i.e. coping with the activities of daily life);
- **situational factors** - stress, social support (living arrangements, social networks), means of violence (e.g. access to guns).

the same areas). Preliminary results from this study suggest that the risk factors most strongly linked with violent behaviour include:

- drug and alcohol abuse combined with a mental disorder (increased the risk of violence 3 to 4 fold);
- poor anger control and impulsivity;
- being unable to function independently in daily life;
- having violent fantasies and pervasive delusions;
- having frequent changes of residence.

In principle, and with the exception of diagnosing a mental disorder (where the judgement of an expert observer is required), most of these risk factors could be assessed using self-reported questionnaires. In practice however, there are fundamental problems with such an approach. Chief among these is the question of

honesty - applicants for gun certificates who do have violent fantasies or abuse alcohol or drugs are hardly likely to admit as much in a questionnaire. Factors such as personality and every day functioning are easier to assess using questionnaires and a variety of such tests are available, but it has yet to be shown that they can be used to predict future violent behaviour. Moreover, personality traits linked to violent behaviour only reveal an increased **propensity** for violence. This is too crude a tool to search for potential spree killers or mass murderers who may only be present in the population in very low proportions. Such tests would thus generate many 'false positives' - people who would be responsible gun owners but who nevertheless 'fail' tests. Measures would also have to be taken (e.g. by 'disguising' the purpose of questions and revising them regu-

1. DSMIV is the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 4th edition.

2. Krueger, RF et al, 1994. *Journal of Abnormal Psychology*, **103**, 328-338.

larly) to prevent applicants from anticipating or becoming familiar with the 'right' answers.

These difficulties mean that many experts see only a limited scope for assessing applicants using questionnaire-based tests. They point out that violence is a complex behaviour deriving from a host of psychological and situational factors and would not expect a simple assessment of one of these (e.g. personality) to strongly predict violent behaviour.

## 4 OVERVIEW AND ISSUES

Proposals for tightening gun controls in the UK fall into two main categories - measures aimed at **tightening the certification procedure** and those designed to **restrict the availability of guns** themselves. Examples of the former include psychological assessment and GP evaluation, as well as various other measures such as increasing the number of counter-signatories, requiring applicants to advertise in the local press, or increasing police powers to refuse an applicant. Options embraced by the second approach include bans on all or certain types of guns, imposing further restrictions on the storage or use of guns and/or ammunition, etc. These and other options have recently been considered by the Home Affairs Committee and the Cullen Inquiry. It is beyond the scope of this POST report to discuss the pros and cons of each of the many options, but some technical issues which bear on the debate are outlined below.

### 4.1 Tightening the Certification Procedure

Options for tightening the certification procedure are based on the assumption that potential mass murderers or spree killers can be identified before they commit their violent crimes, a premise over which there is **considerable doubt**. As discussed in Section 3 above, there is only limited scope for a 'scientific' evaluation of applicants because there is no consensus over the best measure of suitability to own a gun; moreover, assessing all the potential risk factors would be impractical and might not be effective anyway. In this context, the Cullen Inquiry heard that while psychologists and psychiatrists agree that there was evidence to suggest that Hamilton had a psychopathic personality disorder and paedophilic tendencies, there was little to suggest a propensity for violence. Psychiatric evaluation was thus rejected by both the Home Affairs Committee ("we do not recommend the introduction of psychiatric testing for applicants for firearms certificates") and the Cullen Inquiry ("there are grounds for considerable reservations as to its effectiveness").

An alternative to formal ('scientific') assessment would be to widen the range of information that the police could use in deciding whether to grant a certificate. This approach is based on the assumption that even if

people such as Hamilton could not be 'scientifically' pinpointed, enough circumstantial evidence was available to raise serious doubts about his suitability to own a gun prior to the events at Dunblane. Such an approach raises two issues - where this extra information is going to come from and whether the law needs to be changed to allow the police to make best use of it.

As far as sources of information are concerned, both the Home Affairs Committee and the Cullen Inquiry saw scope for improving the computerised records held by police forces. Thus Lord Cullen endorsed the steps currently being taken by police to enable forces to swap computerised information on individuals holding firearm certificates, as well as those whose applications have been refused or revoked in the past. The Home Affairs Committee recommended increasing the scope of the information held to include minor incidents where violence, threats or intimidation were used (even if these did not result in charges).

General Practitioners (GPs) were another potential source of information identified by both Lord Cullen and the Home Affairs Committee. GPs countersign many applications for firearms and shotguns anyway, but at present this merely involves them signing a statement that (as far as they know) the applicant's responses to the questions on the form are true, and that they "*know of no reason why the applicant should not be permitted to possess a firearm*" (or shotgun). One suggestion is that GPs should be asked to fill out a detailed medical questionnaire on each applicant, which could include factual information (e.g. details of epilepsy, mental disorders, depressive illnesses, prescriptions or other relevant medical details) as well as give a professional opinion as to the overall suitability of the applicant *vis a vis* gun ownership.

There are however, reservations about asking GPs to comment on subjective matters such as an applicant's standing within the community, their character, etc. On the one hand, the Royal College of General Practitioners (RCGP) sees GPs as well placed to give such an opinion, because:

- GPs form closer relationships with their patients, having more frequent and sustained contact than other health professionals;
- a GP may be able to detect patterns of behaviour based on a series of apparently minor, incidents;
- GPs may have an insight into an individual's family and home circumstances through home visits.

On the other hand, the RCGP acknowledged that "*there must be a serious question as to whether GPs will be prepared to undertake this work and take the risks that go with it*". The British Medical Association (BMA), also raised objections, expressing:

- doubts over whether GPs are actually qualified to

- assess a patient's suitability to possess a gun;
- worries over confidentiality and the possible impact on the patient-GP relationship;
- concerns over the impact on GPs themselves (the risk posed by rejected applicants, burden of responsibility placed on GPs, increased workload, etc.)

Because of these reservations, the proposals made by both the Cullen Inquiry and Home Affairs Committee restrict GPs to providing factual, medical information. Evidence presented to the Cullen Inquiry on behalf of the Association of Police Surgeons (APS) suggested that GPs should not be called upon to make a judgement as to an individual's suitability to possess a gun - rather, they should pass on any relevant information to a Police Surgeon who would be responsible for the judgement as to suitability. In this way, concerns over confidentiality might be allayed since communication of medical information would be on a doctor-to-doctor basis. This proposal was endorsed by Lord Cullen, who recommended that the provision by "*the applicant's medical practitioner of information as to the applicant's medical history and its consideration by a forensic medical examiner should be the subject of consultation with the interested bodies*".

But the more fundamental questions over the certification procedure relate to the information available to the police, the basis on which police could refuse or revoke a licence, and the appeals procedure. On these aspects the Cullen Inquiry recommended (*inter alia*):

- Replacing the current counter-signatory arrangements with a system requiring two referees.
- Extending the information available to the police on a certificate holders previous 'gun record'.
- Extending police powers to revoke or refuse a licence on the grounds that the holder/applicant does not have a good reason for possessing the gun.
- Reform of the scope to appeal against refusal/revocation by restricting such appeals to "*enumerated grounds*";
- Amending the HO guidance to more clearly define "*fitness*" to be entrusted with a firearm.

All of the recommendations made by Lord Cullen in respect of the certification system have been accepted by the Government in its response to the Inquiry.

#### 4.2 Restricting the Availability of Guns

Proposals in this area differ widely, with the Cullen Inquiry recommending that consideration be given to further restrictions on the availability of self-loading handguns, and the Home Affairs Committee rejecting such options. The Government's proposals are that all hand guns be banned except for those of .22 calibre or below. Other Parties would not exclude such calibre weapons. The debate on the pros and cons of these

Table 3 'AMOK KILLINGS' IN BRITAIN SINCE 1978

Incident	Weapons Involved	Number shot
West Midlands 1978	Legally-held guns	5 dead
Hungerford 1987	Semi-automatic pistol	8 dead
	AK47 Rifle	8 dead
Bristol 1988	Shotgun	2 dead
Monkseaton 1989	Shotgun	14 shot (1 dead)
Dunblane 1996	Semi-automatic pistols	17 dead

Source: Home Affairs Committee Report on Hand guns

different approaches may be linked with a number of technical questions, some of which are outlined below.

First, there is the question of whether the **availability of guns** is actually a factor in determining levels of gun-related killings. The recent debate on this aspect is summarised in **Box 2**, where it is clear that some studies show a **statistical association between gun ownership and gun-related homicides and suicides**, so that rates of gun-deaths are highest in those countries where guns are most readily available, and lowest in those where fewer people own them. As outlined in **Box 2**, there are plausible mechanisms linking gun ownership to increased mortality overall, although these are challenged by groups opposing further controls.

A closely related issue is the role of **illegal guns** since it is often suggested that:

- illegal guns are the real problem, being responsible for most gun-related crime and that;
- further restricting legally-held guns would simply encourage an increase in the number of illegally-held weapons.

As far as the first point is concerned, few experts would disagree that the vast majority of gun-related crime involves illegally-held weapons, although there are no exact figures available on this. The Home Affairs Committee considered this point and concluded that the "*problems posed by illegally-held firearms are on a far larger scale than those posed by legally-held firearms*". Again, there are few who would disagree with this overall assessment, and many see a need for further measures to restrict the importation, distribution, etc. of illegal guns. However, the current debate was triggered by the events at Dunblane rather than an increase in (say) armed robbery rates, and in cases such as these, where someone runs amok with a gun, the weapons involved are generally legally-held. Thus, of the five such incidents in Britain in the last 20 years, four involved legally-held guns of one type or another (**Table 3**). In the fifth case (Monkseaton in 1989) the perpetrator had stolen the gun from his father (who held it legally).

Turning to the issue of whether further restriction on legal guns would merely encourage determined individuals to obtain firearms illegally, this assertion is difficult to test in scientific terms. Whether it is significant could depend not just on the numbers of illegally-



**Box 2 GUN AVAILABILITY AND GUN-RELATED DEATHS**

Although an important and contentious question, there have been only a few studies across different countries into any relationship between gun availability and rates of gun-related deaths, with most focusing on the USA. Two recent major studies have a broad scope, and have compared 8-16 countries with widely differing ownership and death rates. These have been reviewed by the Home Office in its evidence to both the Home Affairs Committee and the Cullen Enquiry.

The results of these two studies are summarised in **Figure A** (a 1995 review carried out by the Canadian Department of Justice) and **Figure B** (based on data collected from the 1989 and 1992 International Crime (Victimisation) Surveys). In general, such studies appear to show that rates of gun-related homicides and suicides are highest in those countries with the highest levels of gun ownership and lowest in countries where fewer people own guns. Such correlations do not necessarily mean that there is a causal relationship, and the debate on cause and effect hinges on two main areas - the figures themselves, and possible mechanisms.

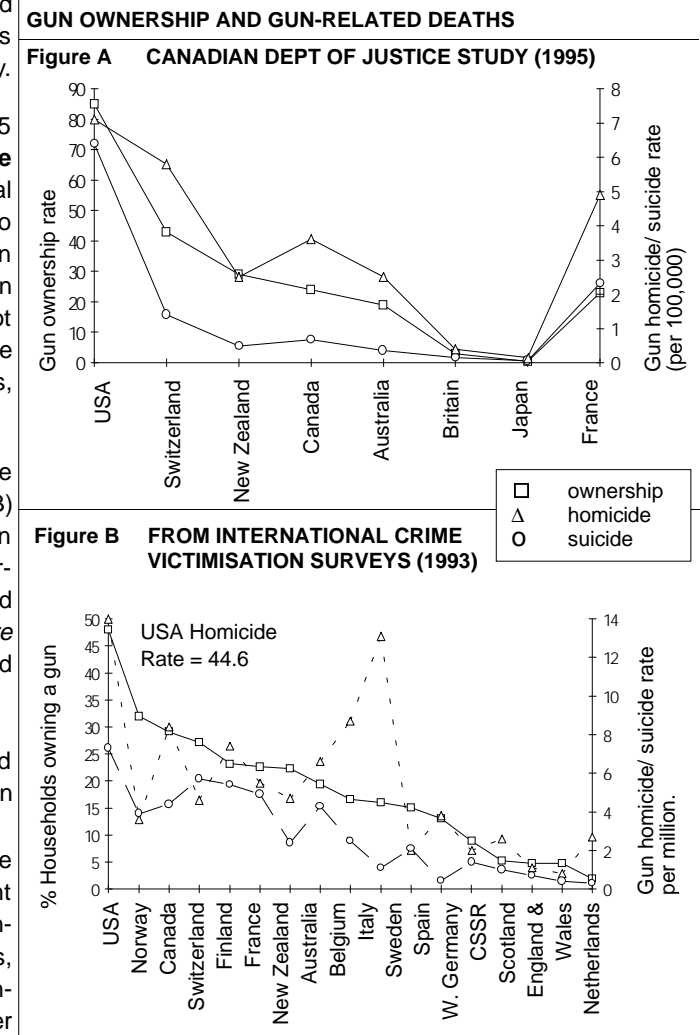
As far as the figures are concerned, the main bone of contention is the measures of gun ownership rates used. The second study (Figure B) has been particularly criticised in this respect, and it has been suggested that the telephone survey methods used may have underestimated ownership rates. Nevertheless, the HO review addressed concerns over data quality and suggested that the "overall picture indicates a strong statistical association" between gun ownership and gun-related deaths (homicide and suicide).

Turning to mechanisms, a number of questions have been raised concerning the plausibility of possible mechanisms linking rates of gun ownership and deaths. These include:-

- Is gun ownership merely a reflection of different levels of violence in the countries studied? Here comparisons between different measures of violence show that the hugely greater rate of gun-related homicides in the USA relative to the UK (50-fold for guns, 150-fold for hand-guns) is not reflected in other measures (non-gun homicides are 3-fold greater in the USA and only 25% greater for aggravated assault).
- Does the availability of guns influence the overall mortality rate, or merely the proportion of those that are gun-related? There is agreement that guns are more lethal and by their use increase the likelihood of a lethal outcome relative to another weapon (knives, fists etc.). However, in some circumstances (e.g. domestic arguments), the availability of a gun may lead to a fatal outcome; in others, the lethality of the gun (e.g. in an armed robbery) may reduce the likelihood of resistance and therefore of injury. If there is no net effect, then countries with high gun-related death rates might be expected to have relatively low rates of death from other weapons. This does not happen and this provides evidence that guns increase death rates beyond a country's 'natural' propensity for killing.
- Rather than guns being the driving force behind high homicide rates, could high levels of violence in society fuel the demand for guns? As mentioned above, the variation in ownership rates is much larger than that in levels of societal violence. Moreover, the link between gun-suicides and gun ownership rates cannot be explained this way (why would a rising suicide rate persuade more people to buy guns?).

Overall, therefore, there is some evidence to suggest that higher levels of ownership are generally associated with higher levels of gun-related homicide and suicide, but debate continues over whether this relationship is causal.

held firearms available, but also on individual factors - particularly **advance motivation** and **contacts** (the extent to which an individual would be able to locate and negotiate the purchase of such a weapon). In the latter context, in only one of the five cases in Table 3 is there evidence that the perpetrator had access to illegal guns (Barry Williams, who killed 5 people in the West Midlands in 1978 using legally held guns, was subsequently found by police to also illegally possess a small



bore pistol). In the case of Dunblane, the Cullen Inquiry heard evidence from expert witnesses that it was unlikely that Thomas Hamilton had the necessary contacts to obtain illegal weapons.

Finally, there is the question of whether further controls should be targeted at **any specific type of gun**. Hand guns (especially semi-automatic ones) have been a particular focus of attention in this respect, since these were the weapons used in Dunblane. Advocates of

tighter restrictions argue that such weapons are uniquely dangerous because they are relatively easy to conceal, can have a high rate of fire and are easy to aim and reload.

Organisations representing gun owners question the underlying assumption that hand guns are inherently more dangerous than other types of firearms. For instance, they point out that experienced shooters can achieve high rates of fire with shotguns, rifles, etc., especially if the shots are directed rather than aimed. They also point out that the lethality of a gun depends not only on its rate of fire, but also on factors such as the bore and length of the barrel, type of ammunition used, etc. (as well as the intent of the person holding it). They claim that pistols can be less dangerous than other types of guns, having a shorter range than rifles and a lower disposable energy than either rifles or shotguns, and thus challenge the grounds for targeting further restrictions at this class of firearms. **In practice, it may be difficult to generalise and the relative lethality of different weapons will vary with the circumstances.** Clearly where sniping is involved, a high powered rifle will be more lethal than a pistol. When shooting at close range, the flexibility of a hand gun may be an important factor and the disposable energy, though lower than a rifle, remains well above that needed to kill, as demonstrated by the fact that hand guns were the cause of all the murders at Dunblane, and half of those at Hungerford.

Overall, Lord Cullen concluded that self-loading pistols and revolvers were distinguished from other types of firearm such as rifles by virtue of their:

- ease of carrying and concealment;
- ease of aim;
- and rapidity of fire.

A secondary issue concerns the proposals that there might be different treatment for lower calibre hand guns, generally using 0.22 calibre as the size below which less stringent restrictions might be applied. This, too, is a source of disagreement, with shooter's organisations pointing out that a 0.22 calibre bullet can be just as lethal as a higher calibre round, especially if fired at close range, and that the absence of recoil in a 0.22 pistol makes rapid firing relatively easy. Lord Cullen saw no grounds for distinguishing between handguns on the basis of calibre, noting that "*in the light of the evidence I see no good reason for making an exception in the case of any particular calibre of multi-shot handgun*".

Finally, on the question of what, if any, measures should be introduced to **further restrict ownership of hand guns**, the Home Affairs Committee favoured a tightening of the certification procedure (discussed previously). They considered a range of options including a

total or partial ban on hand guns, but rejected these as ineffective and impractical. Such options were also considered by the three main Police Organisations in England and Wales in their evidence to the Committee:

- the ACPO (Association of Chief Police Officers) rejected a "*blanket prohibition of hand guns*" as unfairly impacting on lawful shooters, and felt that a "*stronger emphasis of control on the individual*" was needed;
- the PSA (Police Superintendents' Association) also rejected a ban as being "*too draconian*", but noted that the "*number of weapons in private hands needs to be reduced*" and that "*it is difficult to justify the holding of hand guns in private dwellings*";
- the Police Federation supported a ban, suggesting that "*the balance is overwhelmingly on the side of the prohibition of hand guns*".

The Cullen Inquiry recommended that consideration be given to further restricting the use of hand guns, and proposed that guns might be disabled either by removing key components or by the fitting of barrel blocks; failing that by the banning of the possession of such guns by individual owners. The Home Affairs Committee had rejected dismantling weapons as an option partly because of the danger of guns becoming damaged with constant dismantling and reassembly, and partly because they felt this approach was only feasible for certain types of gun. The Government voiced similar doubts about dismantling guns in its response to the Cullen Inquiry, and also rejected the fitting of barrel blocks following advice from the Forensic Science Service that a determined individual might be able to remove such a device. In view of this, the Government announced its intention to ban all hand guns of more than 0.22 calibre, a move which would result in the destruction of at least 160,000 guns (some 80% of legally-held firearms). The proposed legislation would also ban the possession of 0.22 calibre hand guns unless "*they are kept in licensed gun clubs under conditions of the most stringent security*".

## FURTHER READING

- Lord Cullen's Inquiry, Cm 3386, 1996, and evidence submitted.
- Home Affairs Committee, Fifth Report, Possession of Handguns, 393 -I and II, July 1996.
- Government Response to the Cullen Inquiry (Cm 3392), 13 March, 1996.

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