

Does Breed Specific Legislation reduce dog aggression on humans and other animals? A review paper

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ABSTRACT

There is no evidence in the literature to support the notion that restricting particular breeds helps reduce dog attacks. Breed specific legislative measures reflect a simplistic and unrealistic appreciation of the causal factors involved. Real solutions are available but of necessity, they must involve a multidimensional approach involving dog owners, parents, children, the community at large, local authorities and legislators.

Breed specific legislation has been seen as a reasonable opening legislative gambit by some but only in as much as it signals a political intent to do something about trying to minimize dog aggression accidents and injuries. It is appropriate now that the goal should be to do something *useful*.

Introduction



For over 70 years governments around the world have legislated against various breeds of dogs for a variety of reasons. In Australia, the first instance was more than 70 years ago when in 1929 the Commonwealth Government banned the import of German Shepherd Dogs after lobbying by pastoralists who were convinced that German Shepherd Dogs would mate with dingoes and produce a massive sheep eating machine (Rodger, 1990). This ban remained in force until it was removed in 1974 following intense lobbying from German Shepherd breeders and owners including then Federal Member of Parliament and Customs Minister, Don Chip (Rodger, 1990). The rationale for this legislation was incorrect and as a consequence it was ineffective as a preventative measure. It took 55 years to redress this wrong and the sense of de-javu with current breed specific legislation is unavoidable.

In 1991, following the introduction of the Dangerous Dogs Act in the United Kingdom and the death of an infant in New South Wales as a result of an incident involving a Bull Terrier (Age, 1991) the Commonwealth Government banned from import four dog breeds - American Pit Bull Terrier or pit bull terrier, Japanese Tosa, Dogo Argentino and Fila Brasileiro ¹ (Griffiths, 1991). The 1995 death of an elderly woman in Toowoomba was

¹ Customs (Prohibited Imports) Regulations 1992.

widely reported as an attack by an American Pit Bull Terrier. The dog involved was in fact a cross breed of unknown origins (Collicutt, 1996) and had been registered as a Labrador cross (Shultz, 2003). The result was that several Queensland Councils introduced restrictions or total bans on American Pit Bull Terriers.



Legislation with varied restrictions relating to these breeds came into effect in South Australia² in 1995, New South Wales³ in 1998, Queensland⁴ and Victoria⁵ in 2001 and Western Australia⁶ in 2002. Most States have used the Commonwealth Import Prohibition as justification for their restrictions (NCCAW, 2002).

Restrictions have been extended to other breeds and crosses by some Queensland Councils. More than 15 breeds and crosses have been targeted (CCCQ, 2002; Queensland DLGP, 2003) and one Council, as well as restrictions on particular breeds has restrictions on dogs over a particular weight or height (Mount Morgan Shire).

This kind of breed specific legislation fits a pattern that had its origin in the United States in the eighties. For the purpose of this paper discussion will primarily focus on American Pit Bull Terriers or Pit Bulls as current breed specific legislation is aimed typically at this breed and type both in Australia and elsewhere.

Causal factors

Breed specific bite statistics are generally flawed for two reasons:

- firstly, because breeds are principally about what a dog looks like (phenotype not genotype), it is easy for even experienced observers to make breed and cross breed identifications incorrectly.
- secondly, because relative breed incidence is a function of population proportions that are not known with any certainty, it is impossible to apportion breed blame.

Media hype reflects certain breeds disproportionately and sometimes also misrepresents breeds causing a misunderstanding within the community (Podberscek, 1994). It is possible that breed specific legislation reflects media pressure.

American Pit Bull Terriers and crosses cannot be identified by appearance alone, and no genetic test to identify an American Pit Bull terrier is possible (Wagner, 2002; Coppinger and Coppinger, 2001). Thus there is an important practical problem that any breed-specific legislation raises, that of proof of identification. It is not fair or reasonable for Governments to place the onus on the owner to prove the breed of dog when the majority of experts agree that it is not possible. Dr Stephen Collier (2002) states: "Identification of the breed of an attacking dog is seldom reliably assessed, and usually is taken from media

² Dog and Cat Management Act 1995.

³ Companion Animals Act 1998 – Companion Animals Amendment Bill 2001.

⁴ Chapter 17A, Local Government Act 1993 - Local Government and Other Legislation Amendment Bill (No. 2) 2001.

⁵ Domestic (Feral and Nuisance) Animals Act 1994 - Animals Legislation (Responsible Ownership) Bill 2001.

⁶ Dog Act 1976, Dog (Restricted Breeds) Regulations 2002.

reports (eg Sacks *et al.* 2000). Not only are the news media more likely to report attacks by breeds like “pit bulls” and to wax and wane in their interest in dog attacks (Podberscek, 1994; Overall and Love, 2001), but in periods of heightened panic, attacks by almost any dog are attributed to pit bulls (Hearne, 1991; O’Neil, 1995; Jessup, 1995). These authors provide specific cases of heavily reported attacks by “pit bulls” that in fact were not pit bulls. A cursory examination of Australian media reports would reveal this to be the general rather than episodic situation.”

To confuse the issue even further the term Pit Bull has often been used as a generalised description to describe a type of dog, such as one might use the terms gundog, sheepdog or spaniel. In the United States the term is usually used to describe the;

- American Pit Bull Terrier
- American Staffordshire Terrier
- Bull Terrier
- Staffordshire Bull Terrier, and
- almost every dog that looks anything like these dogs.

It is also not uncommon for the English Bulldog or the American Bulldog to be included. Another common practice is that any dog that looks even remotely like a Pit Bull is classified as a Pit Bull, Pit Bull type or Pit Bull cross even if another breed of dog is just as evident. Therefore,

Statistics that claim Pit Bulls are responsible for some percentage of attacks are combining many separate breeds together and then comparing that to other dogs that are counted as individual breeds.

It is recognized that a dog's reaction in any situation depends on at least six interacting factors (Wright, 1991; Seksel, 2002):

- heredity
- early experience
- later socialisation and training
- health (medical and behavioral)
- current environment and
- victim behaviour

Therefore,

"The classification of dog breeds with respect to heir relative danger to humans makes no sense, as both the complex antecedent conditions in which aggressive behavior occurs, and its ramifying consequences in the individual dog's ecological and social environment are not considered" (Fedderson-Peterson, 2001).

Are some breeds over represented in dog attacks?

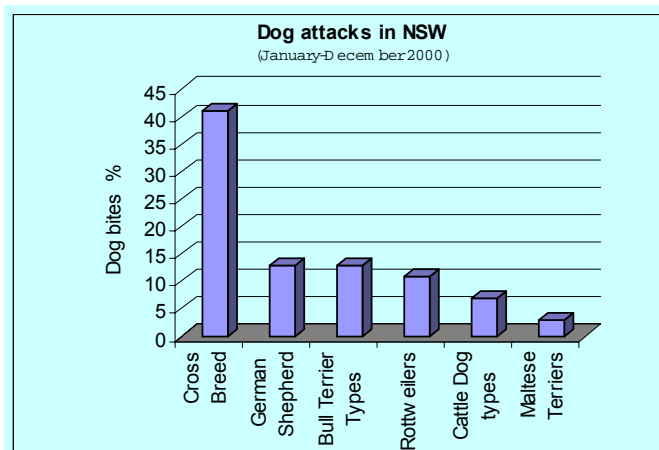
A variety of breeds have been identified over time and place as being “dangerous” and has included German Shepherds, Doberman Pinschers, Rottweilers, American Pit Bull

Terriers, Staffordshire Bull Terriers, Chow Chows, Akitas, St Bernards, Malamutes, Siberian Huskies, Bloodhounds, Great Danes, and Australian Cattle Dogs (Hockey, 2003). Thirty-six breeds and types of dogs have been involved in fatal attacks on humans in a thirty-seven year period in the United States (Delise, 2002). The author also noted that most of these breeds became at some point in time in that thirty-seven year period the breed of choice for many people.

The American Temperament and Test Society was established 24 years ago as a resource to objectively evaluate the temperament of all breeds of dogs. This test is quite extensive, and not easy to pass. Dogs are faced with a variety of unusual and stressful situations such as being approached by strangers, approached by people with other dogs, being startled by a sudden noise, being placed on uneven footing and so forth. Over these 24 years, the American Temperament and Test Society has tested over 22,000 dogs of 185 different breeds (ATTS, 2003). The average pass rate of these breeds combined is 80.4%, while 82.7% of all American Pit bull Terriers have passed.

Additionally, new genetic research has recently concluded that there are no inherent differences in phenotypes of dogs in determining aggressive tendencies (Wagner, 2001). What this author is saying is that aggressiveness is not a function of appearance, or in other words, because a dog may look like an aggressive type of dog, this has no bearing on whether it actually is – and vice versa. Dr. Cornilia Wagner states that aggressive tendencies are innate in all canine species. She continues in saying that just because aggression levels can be increased or decreased through selective breeding, does not prove that aggressiveness is hereditary. Most often those people most interested in aggressive dogs are seeking to use them for aggressive purposes, and expose them to environments which shape their behavior in their desired fashion (Stur, 2000). In these situations, environmental factors are ignored, as it is much easier to blame the breed or genetic makeup of the dog. Further genetic research is indicating that the differences in the genetic makeup of breed are so minute that drastic differences in temperament and aggressiveness are most likely not influenced by genetic disposition. Similarly it has been reported that “the genetic differences between a Chihuahua, a German shepherd and even a timber wolf are virtually non-existent and the behavioral differences in breeds has more to do with training than breeding” (DN, 2001). Although they look different, dog breeds have no more scientific basis than do races among humans (Serpell, 2001).

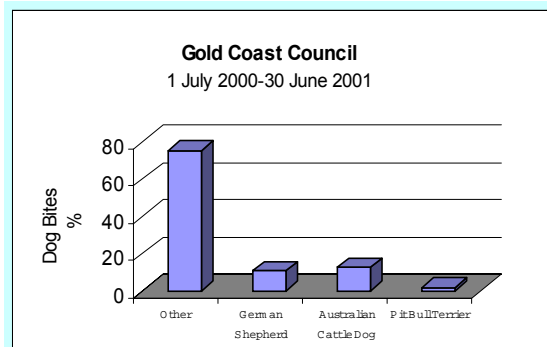
The case against APBT having genes determining aggression was strong enough to be accepted by the Alabama Supreme Court in August 2002 in a case brought by the Washington Animal Foundation (Mays, 2002b).



Over 40% of dogs in Australia are crossbreeds and therefore do not demonstrate consistent breed type to any particular breed (Seksel, 2002).

There are numerous reports on dog bites in Australia. NSW government reports (NSW DLG)

on dog attacks over the years 1996 to 2001 have reported the number of breeds involved as, 28 in 1996, 34 in 1997, 22 in six months of 1998, 18 in 1999, 29 in 2000 and 15 in four months of 2001. More specifically a report on dog bites released in 2001 revealed that there were 213 dog attacks in NSW from January to December 2000 and of these 41% were deemed to be crossbreeds. Where breed was identified, the predominant breeds involved were German Shepherds (13%), Bull Terrier types (13%), Rottweilers (11%), Cattle dog types (7%) and Maltese Terriers (3%). Bull terrier types included American Pit Bull Terrier, Bull Terrier, Pit Bull Terrier and Staffordshire Bull Terrier. No explanation or definition was provided for the breed description Pit Bull Terrier as compared to American Pit Bull Terrier. Cattle dog types included Heeler, Cattle dog and Kelpie.



Gold Coast City Council data on dog attacks for the period 1 July 2000 to 30 June 2001 recorded a total of 163 dog attacks. German Shepherds recorded 17, Australian Cattle Dog 20 and Pit Bull Terrier 3. Attacks attributed to pit bull terriers on the Gold Coast were cited as the major reason for the Local Government and Other Legislation Amendment Bill (No. 2), 2001⁷.

Data from 19 Queensland Councils (EDBA, 2001) reported 8 Pit Bull attacks out of a total of 750 attacks. Brisbane City Council declared Dangerous Dog ratings (BCC, 1997) for the period 1991 to 1996 reported the seven highest danger rated pure breeds and cross breeds and their representation ratio.

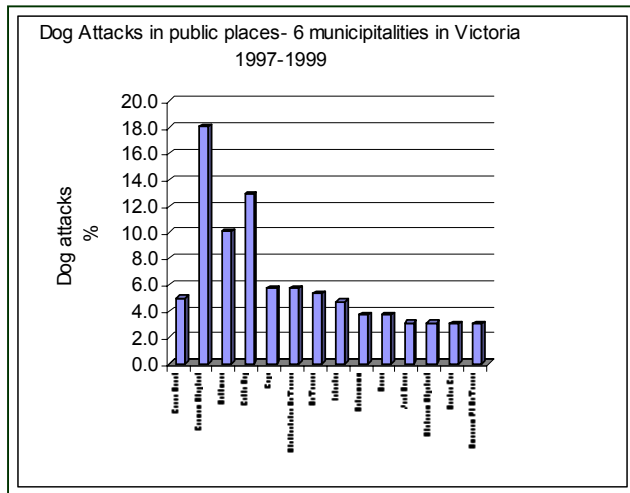
The representation ratio can be used to compare relative risks between breeds. For example, using these figures, the Cattle Dog is about two times more likely to be declared a dangerous dog than a Staffordshire Bull Terrier. The methodology used has a number of limitations including the use of declared dangerous dogs accumulated over several years whereas the registration figure was for one year (1996). Also, not all dogs are registered and breed identification may not be accurate. In 1996, despite the absence of the American Pit Bull Terrier in these ratings, Brisbane City Council banned American Pit Bull Terriers and crosses.

Danger rankings for breeds on Brisbane City Council's Dangerous Dog List	
PUREBREEDS	Danger Rating
1. Cattle Dog	1.72
2. Bull Terrier	1.62
3. German Shepherd	1.55
4. Rottweiler	1.29
5. Dobermann	1.08
6. Staffordshire Bull Terrier	0.84
7. Border Collie	0.34
CROSS BREEDS	
1. Bull Terrier x	3.63
2. German Shepherd x	3.14
3. Cattle Dog x	2.94
4. Rottweiler x	2.63
5. Kelpie x	2.25
6. Labrador x	1.79
7. Border Collie x	1.00

In 1998, the Victorian Bureau of Animal Welfare (BAW, 1998) reported similar findings where it was revealed that the predominant breeds involved were the German Shepherd (22 attacks), Rottweiler (22 attacks), Australian Cattle Dog or Queensland Heeler (19 attacks), Staffordshire Bull Terrier (13 attacks), Australian Kelpie (6 attacks) and

⁷ Local Government and Other Legislation Amendment Bill (No. 2) 2002 – Explanatory Notes.

Labrador (4 attacks). Only one attack in the Victorian findings could be definitively



attributed to a Pit Bull Terrier as the breed of dog involved. However four possible Pit Bull crosses were identified within the total of 223 dog attacks in the report. Between 1997 and 1999 the Victorian Bureau of Animal Welfare conducted a study of dog bites in public places in six municipalities (BAW, 1999). A total of 700 attacks were recorded. There were 46 breeds (including crosses) responsible for attacks with the following order of precedence: German Shepherd 127, Cattle Dog 90, Rottweiler 71, Kelpie 40,

Staffordshire Bull Terrier 40, Bull Terrier 37, Crossbreed 35, Labrador 33, Dobermann 26, Boxer 26, Jack Russell 22, Rhodesian Ridgeback 22, Border Collie 21, American Pit Bull Terrier 21.

A study of breeds presented for aggressive behaviour at a behavioural clinic in Brisbane over a two-year period include twenty-six breeds of dogs (Blackshaw, 1991).

It is clear that the dogs involved in attacks on humans and animals in Australia involve a range of common breeds of dog. The same applies for crossbreed dogs.

In a review of 31 studies on dog bites by breed (Hockey, 2003) the diversity of breeds mentioned in reports as well as the persistence of particular breeds was noted. This review found that German Shepherds were mentioned in 28 out of 31 studies but some breeds such as Chihuahuas and Shih Tzus were only mentioned once. Pit Bull terriers were mentioned in only eight studies. Further, this review states that very few of these studies have attempted to measure the relative dangers of particular breeds and also use reliable measures of the relative frequency of the breeds in the dog population. Of these six studies all but one identified German Shepherds as being over represented in dog bite statistics with the relative risk ranging from 3.4 to 1.8. The other found that German Shepherds were no more likely to bite than Labrador Retrievers and that mixed breed dogs were no more likely to bite than pure breeds. The review (Hockey, 2003) also noted that none of the studies identified Pit Bull Terriers as being over represented in dog bite statistics.

Do attacks from some breeds result in more severe injuries?

A review (Hockey, 2003) cited two reports to answer this question. One relied on unvalidated media reports of dog attacks and found that more than half of the 278 reports involved Pit Bulls (Lockwood et al, 1987). The review found that comparison of this report with other contemporary studies indicated a reporting bias towards attacks involving this type of dog. The review also noted that another bias inherent in this study was that the injury severity was not validated and, in light of the hysteria surrounding this breed, media reports may have tended to overstate the severity of the injuries where Pit

Bulls were involved. Also media reports may be more likely to wrongly identify the breed as a Pit Bull where the injuries are more severe. These biases were recognised by the authors. Of the 143 Pit Bull attacks 38.5% were regarded as serious (requiring medical attention) compared to 26.7% where other breeds were involved. This result was not statistically significant. The authors also found that the common theme in virtually all attacks reviewed was that the owner had not taken appropriate steps to prevent the dog from becoming a problem and that irresponsible owners are not a problem unique to one particular breed. Consequently they recommend that dog control legislation must emphasise responsible ownership.

The other study reviewed by Hockey (2003) involved reports of 2132 animal bites in 1993 to animal control authorities (Palm Beach County, 1993). All bites were graded for severity from 1. Very superficial wound requiring little or no first aid, to 5. Death. There were 143 pit bull attacks comprising 8% of all bites of which 16% had a severity of 3 or above (requiring medical attention). Corresponding figures for other popular breeds are Dalmatian 24%, Rottweiler 21%, Doberman 17%, Golden Retriever 16%, Labrador Retriever 16% and German Shepherd 12%. The review noted that in comparison to other popular breeds the figure for Pit Bulls does not appear to be excessive.

Has breed specific legislation reduced dog attacks?

Only one study has attempted to quantify the affect of breed specific legislation. This was in the United Kingdom where a comparative prospective study of mammalian bites attending at an Emergency Department before implementation of the Dangerous Dogs Act in 1991 and again two years later (Klaassen et al, 1996). The report found that introduction of the Act resulted in no decline in dog bite presentations with 73.9% before and 73.1% after. Prior to the introduction of the Act, Alsatians were the most common breed with 24.2% of cases, the same as human bites. The percentage of bites involving so-called 'dangerous' breeds increased from 6% pre legislation to 11% post legislation. The authors concluded that the Dangerous Dogs Act 1991 has done little to protect the public from mammalian bites and that the Act has singled out certain 'dangerous' breeds without any substantive data to support it. They also conclude that if legislation is to reduce injury from dog bites there should be much wider control of the dog population in general and not just targeting of the breeds referred to in the Act.

Numerous dog bite data do not support the inference that American Pit Bull Terriers pose more of a threat than a lot of other breeds. Studies of breeds of dog involved in attacks clearly show the breeds often subject to restrictions are no more likely to attack or cause more serious injuries than many other similarly sized dog.

Is breed specific legislation enforceable?

Dog owners will challenge breed specific laws but the challenge is a difficult one because in general the courts defer to lawmakers, upholding legislation when there seems to be some rational connection to the promotion of public safety. It is even more difficult when Governments write laws purposely to make challenges difficult, if not impossible. A good example of this is the Queensland Governments 2001 legislation⁸ related to restricted breeds.

⁸ Chapter 17A of the Local Government Act 1993.
Part 17A of the Local Government Regulation 1994.
Part 7 of Chapter 19 of the Local Government Act 1993.

One of the worst aspects of the Dangerous Dogs Act in the United Kingdom was that the burden of proof was reversed. The dog was presumed guilty and the owner had to prove their dog's innocence when on a charge of resembling a pit bull type (essentially any short dog with four legs, a head and a tail). "The Dangerous Dogs Act, in its original, brutal form, lasted for six years until the Government caved in to public pressure – even the media had changed sides and pronounced the Act unfair" (Mays, 2001a). In 1996 the Victorian Bureau of Animal Welfare stated that the cost of breed identification alone for the enforcement of the UK Dangerous Dog Act 1991 was \$US14 million. Disputes over breed identification also cost millions in kennel fees (Hidalgo, 1993). This is being repeated in Australia with the Queensland Government implementing legislation⁸ that has also reversed the burden of proof.

After German States enacted sweeping breed bans in 2001, the Federal Administrative Court decreed in 2002 that a state could not ban ownership of a dog based on breed.

In the United States, Pennsylvania, Virginia and another nine States have legislation in place prohibiting local authorities from implementing dog control ordinances based on breed. Cincinnati repealed its breed specific ordinances after deeming them to be both "ineffective and unenforceable" and as mentioned previously the Supreme Court of Alabama ruled there was no genetic evidence that one breed of dog was more dangerous than another, simply because of its breed (Mays, 2002b).

Edmonton, Canada (Edmonton, 2003) is proposing to remove the restricted breed component of their laws because "in every city surveyed the pit bull breeds are not the major problem, and even in cities that do not restrict pit bulls they are not the major 'problem' dog". The statistics taken since 1997, show 4 other breeds with the same number of incidents as pit bulls, and 11 breeds with a greater number of incidents. "Therefore : The justification used for restricting pit bulls applies equally to several other breeds, that is, some individuals of the breed did attack and injure humans in this City. If carried through to its logical conclusion this would lead to the situation of banning numerous very popular breeds".

In Australia, breed identification by hastily trained council employees has already been found wanting (Taylor, 2002; Kincald, 2002; Mays, 2002b). It is only a matter of time before the reversal of the onus of proof is challenged in a higher court.

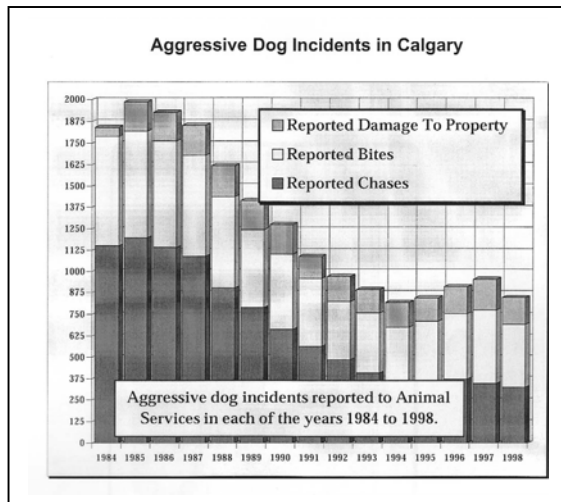
What does reduce dog attacks?

In 2001, a task force on Canine Aggression and Canine-Human Interaction was formed by the American Veterinary Medical Association. This task force examined many aspects of Canine behaviour. They published a papers, titled "A community approach to Dog Bite Prevention". This panel consisted of over 20 professionals and included Veterinarians, Dog Behavior Specialists and Attorneys. They referred to over 70 periodicals and professional journal articles in discussing this problem.



In its findings, the Task Force stated clearly that there was no statistical, biological or behavioral evidence that any breed of dog was more vicious or more dangerous than others

All dogs bite. All dogs can inflict harm on another dog or person. They stated clearly that dog bite statistics are constantly skewed towards larger and more popular dogs, and are an inaccurate measure of how likely a breed of dog is to bite. Additionally, they state emphatically throughout this report that people involved in these incidences (owners and victims alike) are often more to blame than the dogs themselves. This report emphasised that a well-planned proactive community approach would make a significant impact on the frequency of dog attacks. Many local communities have managed to implement successful dog bite prevention strategies without resorting to breed bans. The State of Nevada was able to reduce the incidence of dog bites by approximately 15% by actively focusing on dog bite prevention using a program based on recommendations by the task force.



The City of Calgary (Calgary, 2003) is another good example, with a reduction in the dog attack rate of 50% over 10 years. The dog bite: people ratio reduced from 1.03 bites per 1000 people in 1984 to 0.45 bites per 1000 people in 1998.

The Division of Unintentional Injury Prevention of the Centers for Disease Control and Prevention in the United States noted in a paper on fatal dog attacks (CDCP, 1996) that breed specific approaches to the control of dog bites do not address the issue that many breeds are involved in the problem and that most of the factors contributing to dog bites are related to the level of responsibility exercised by dog owners. To prevent dog bite related deaths and injuries they recommend public education about responsible dog ownership and dog bite prevention, stronger animal control laws, better resources for enforcement of these laws and better reporting of bites.

Summary

One or more dogs are kept by 68% of Australian Households and 53% who do not at present own a pet would, in the future, like one. Most want a dog. The great majority of pet owners are responsible and considerate carers. They treat their dog or cat with affection and as a member of the family. They care for its well-being, health and safety (McHarg et al, 1995). It is not always appreciated how much dogs mean to their human families. American studies have found that 33% of dog owners feel the dog to be as important as other family members, and 8% feel closer to the dog than to any other family member (Hart 1995).

A significant proportion of society perceives pet ownership to be of real and lasting value to the individual, the family unit and therefore the community (PIAS, 1974). It has been estimated that by considering the improved health implications, pets translate into enormous savings in the Australian health budget. This has been estimated at \$2.2 billion per year (Headey et al, 1999).

While dog attacks are a significant public safety issue in Australia, as elsewhere, a very small number of the dogs in our communities bite people in any given year (BAW, 1999). The risk is very small and the public and personal benefit of dog ownership is enormous. The average annual death rate attributed to dog attacks between 1979 and 1996 was 0.004 per 100,000 people, with 11 fatalities in that period (Ashby, 2001). To give these figures some perspective in comparison to other causes of death, between 1979 and 1995, 41 Australians died as a result of a bee or wasp sting (AVRU, 1998). For 2001, 2454 suicides were registered with an age standardised rate for that year of 12.5 deaths per 100,000 persons (ABS, 2001). Between 1925 and 1998, 164,190 road deaths were recorded. In 1999 alone there were 1,761 road fatalities, representing 9.5 fatalities per 100,000 persons (ATSB, 1998). Has legislation been proposed to prohibit vehicle models that can *potentially* go dangerously fast?

Dog aggression incidents require closer examination to determine factors involved. In a book on fatal dog attacks occurring in the United States, chaining a dog was one of the single most dangerous conditions in which to maintain a dog. Of 431 deaths between 1965 and 2001, 25% of all fatalities involved a chained dog (Delise, 2002). It is also interesting to note that studies have shown a significant relationship between socio-economic status and dog bite rate (DHS, 1996). Similarly, it was noted in another paper that the problem of irresponsible ownership appeared not to be uniform across socio-economic areas (Upton, 1992). This area of research is worth looking at more closely.

Better management by government and owners alike is needed before increasingly restrictive legislation. It should not be hard for people to keep dogs for pets. The last thing needed is restrictive legislation that logically cannot and historically never has, been beneficial.

This image is a metaphor. You can see what they are trying to say, but you can also see that it is all wrong in the detail.



Breed specific legislation is like that.

Key Points

- Breed specific legislation has *not* been shown to reduce the incidence of dog bites in any part of the world despite a twenty-year history. By its nature it is unjust.
- Breed specific legislation removes responsibility for dog biting incidents from dog owners and places the blame on dogs. This is a dangerously simplistic solution to a complex problem.
- Breed specific legislation engenders a false and dangerous perception that breeds not included will not show aggression.
- Enforcing and administering any law comes at some monetary cost. This would be better used implementing non-discriminatory laws which have an ability to enhance public safety.
- Aggression is a normal canine behaviour and can be shown by any dog of any breed or type.
- To reduce the incidence of dog aggression, all dogs should be socialised, obedience trained, understood and managed competently by their owners.
- People determine whether dogs will be useful inhabitants of a community or nuisances. It is the people who either intentionally or unintentionally foster viciousness in dogs whom legislators must endeavour to control.
- As the dog bite statistics demonstrate, every breed of dog will bite. The likelihood of an unwarranted bite is determined by the circumstances and level of control/restraint. The dog's breed is not relevant. It is more about owner competence than anything else.

Acknowledgements

The constructive suggestions and assistance of Dr Dick Murray in finalising this paper has been greatly appreciated as has the support and commitment of the Endangered Dog Breeds Association.

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