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Exploring the Match between People and their Guide Dogs

A thesis presented in fulfilment of the requirements for the degree of
Doctor of Philosophy in Veterinary Science
at Massey University - Turitea
Aotearoa/New Zealand

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2004

Abstract

The relationship between guide dog handlers in New Zealand and their guide dogs was investigated to identify the reasons why some partnerships are successful while others are not. A two-part study was designed to explore the match between the handler and the dog to improve the outcome of the matching process. A focus group discussion with people who had a range of visual acuity and experience with mobility aids was conducted as a preliminary measure to help develop the survey questionnaire that was used in the second part of the study.

Fifty current and/or previous handlers, who had used a total of 118 dogs, were interviewed about their prior expectations and the outcome of the partnerships. Results indicated that the majority of matches were successful, and quality of life was improved for most participants because of using a dog. Around a quarter of the matches were considered unsuccessful, although not all mismatched dogs were returned. Mismatches arose predominantly from problems concerning the dogs' working behaviour followed by the dogs' social/home behaviour. However, dogs were also returned for health problems and a few were returned for personal issues concerning the handler.

Compatibility between the handler and the dog, and the fulfilment of expectations were positively associated with better matches. Factors relating to mobility, including a handler's ability to control a dog, made the biggest contribution to success, but non-work related issues, such as companionship and enhancement of social interactions were also significant. Other factors that appeared to be associated with a good outcome included an accurate assessment of workload, having a good relationship with the guide dog instructor, and having a little useful vision - especially if this deteriorated over the time a dog was used. Other findings suggested that the use of a dog improved travel performance, regardless of how well the participants' perceived their travel ability to have been before the dog was acquired, and that second dogs were less favoured than the first ones. These results have permitted a series of recommendations to be proposed to the guide dog industry regarding characteristics of handler and dog that are important for a successful match.

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Exploring the Match between Handlers and Guide Dogs

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2. Job titles cited in 'personal communications' were current at the time of writing this thesis.

3. Selected copies of papers arising from this research can be found in Appendix D, and references are supplied throughout the text for papers not included in the appendix.

4. The style of the content, and the software used to write this thesis is compatible with the Royal New Zealand Foundation of the Blind's (RNZFB) technology to enable RNZFB members and staff to electronically access the information, as per discussions with the RNZFB's Information Service.

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Abbreviations

See the Glossary of Terms for an explanation of some of the following:

AHDEC	Auckland Health and Disability Ethics Committee
ANOVA	Analysis of variance
ARMD	Age related macular degeneration
B	Behavioural in nature
BP	Before present
CS	Compatibility Scale
D	Dog related or Difficulty regarding travel
FES	Fulfilment of Expectations Scale
GDBA	Guide Dogs for the Blind Association (UK)
GDS	Guide Dog Services (New Zealand)
GR	Golden retriever
GSD	German shepherd dog
H	Handler related
ICC	Intra-class correlation coefficient
IFGDSB	International Federation of Guide Dog Schools for the Blind
KMO	Kaiser-Meyer-Olkin (value)
L	Limitations regarding travel
LR	Labrador retriever
M	Mobility
MANOVA	Multivariate analysis of variance
MUHEC	Massey University Human Ethics Committee
MWHDEC	Manawatu/Whanganui Health and Disability Ethics Committee

NW	Non-work related
O	Orientation
O&M	Orientation and Mobility
P	Physical in nature
PCA	Principal Components Analysis
PPWS	Percentage of preferred walking speed
RNZFB	Royal New Zealand Foundation of the Blind *Te Tuapapa o te Hunga Kapo o Aotearoa* Formerly known as the Royal New Zealand Foundation *for* the Blind
SPSS	Statistical Package for the Social Sciences
T	Travel performance i.e. collective O and M
W	Work related

Glossary of Terms

The following explanations and descriptions are provided for the purposes of this research:

Age Related Macular Degeneration (ARMD)
See *Macular Degeneration.*

Blindness
See *Visual Disability.*

Cataracts
See the RNZFB's practical aid to understanding vision impairment on page xxvii.
Pathologic condition. Opacity or cloudiness of the lens, which can prevent a clear image from forming on the retina. May be congenital, caused by trauma, disease or age (Cassin & Solomon, 1997). May cause blurred vision and sensitivity to glare.

Client (of the RNZFB's Guide Dog Services)
A Guide Dog Services client is a person who is either currently or has previously used a guide dog, and/or is on the waiting list for a new dog.

Compatibility
The behavioural, physical and psychological fit of the handler-dog team concerning work (mobility) and non-work related issues, as described by the guide dog handler.

Diabetic Retinopathy
See the RNZFB's practical aid to understanding vision impairment on page xxvii.
A variety of pathologic retinal changes characteristic of chronic diabetes mellitus. A major cause of blindness that may be proliferative or nonproliferative. Visual symptoms include blurred vision, sudden loss of vision in one or both eyes, and black spots or flashing lights in the visual field (Beers et al., 1999).

Glaucoma
See the RNZFB's practical aid to understanding vision impairment on page xxvii.
Pathologic condition. Group of diseases characterised by increased intraocular pressure resulting in damage to the optic nerve and retinal nerve fibres. Preventable by drugs or surgery (Cassin & Solomon, 1997). May cause tunnel vision, decreased night vision and a blurring of central vision when advanced.

Guide Dog
See also *Service Animals/Dogs.*
In New Zealand a guide dog may be defined as a service dog that has been trained and certified by the RNZFB's GDS for the purpose of guiding people who are blind or sight impaired.

Guide Dog Handler and Guide Dog Handler-Owner
A guide dog handler is a person with a visual disability that uses a RNZFB guide dog as an aid to travel. Guide dogs in New Zealand are bred, purchased or received as donations, and are trained by the RNZFB's GDS. Although the dogs live with, and are used by, the guide dog handlers, the dogs remain the legal property of the RNZFB. However, this policy is currently under review with the intention of providing the handlers with the option of legal ownership one year after graduating with their dogs. A small percent of people have their own pet dogs trained and validated by the RNZFB's GDS as qualified guide dogs; these people are known as guide

dog handler-owners and their dogs remain their legal property. Note: For the purposes of this research, all persons who use guide dogs are referred to as handlers.

Guide Dog Instructor and Orientation and Mobility (O&M) *Instructor*
Guide dog instructors and O&M instructors are both qualified to teach people who are blind or sight impaired to use a mobility tool as an aid to travel. Guide dog instructors (who are also qualified *guide dog trainers* - see below) are O&M instructors who are also qualified to assess, match and train people who apply to be trained with a qualified guide dog, and are responsible for ongoing follow up. An O&M instructor is qualified to teach people who are blind or sight impaired to use a mobility aid, other than a guide dog. Guide dog instructors are also responsible, within their demographic region, for puppy development, breeding stock, guide dog training, canine health co-ordination, boarding dogs, adoption services, cadet (trainee) support, funding development/public relations and some offshore services.

Guide Dog Services (GDS)
A specialist service of the Royal New Zealand Foundation for the Blind (RNZFB - see below) offered free to RNZFB members. GDS is part of the RNZFB's Adaptive Living Services, which teaches members to adapt their everyday techniques to live with sight loss and maintain independence. Funded 100% by voluntary donations.

Guide Dog Trainer
A person who is qualified to train dogs to become certified guide dogs.

Matching
The process of selecting the most suitable guide dog available for a particular individual.

Macular Degeneration
See the RNZFB's practical aid to understanding vision impairment on page xxvii.
Pathologic condition. Usually age related (age related macular degeneration (ARMD)), and is the most common cause of vision loss after age 60, but can occur at any age. Group of conditions that include deterioration of the macula, resulting in loss of sharp central vision, with no loss of peripheral vision. Two types - dry and wet. (Cassin & Solomon, 1997).

Mobility
See *Orientation and Mobility.*

Optic Atrophy (Leber's disease or Leber's hereditary optic atrophy)
Pathologic condition. Characterised by rapidly progressive optic nerve degeneration affecting both eyes. No known treatment; vision stabilises and is not totally lost. Occurs in young men ages 20-30. Rare; hereditary. (Cassin & Solomon, 1997).

Optic Neuritis
Pathologic condition. Inflammation of the optic nerve. Characterised by rapid onset of decreased vision, usually accompanied with a central visual field defect. (Cassin & Solomon, 1997).

Orientation
See *Orientation and Mobility.*

Orientation and Mobility (O&M)
Orientation (O), Mobility (M), and when used collectively, O&M, are explained as three separate entities. Orientation refers to the ability to establish and maintain an awareness of one's position in space relative to other objects in the environment, mobility refers to the act of purposeful movement using a tool such as a long cane, low vision aid, electronic aid or a guide

dog, and O&M refers to the process of travelling through the environment safely and efficiently (adapted from La Grow & Weessies' (1994) definitions of orientation and mobility).

Orientation and Mobility (O&M) Instructor
See *Guide Dog Instructor.*

Retinitis Pigmentosa
Retinitis: Pathologic condition. Inflammation of the retina. A progressive retinal degeneration in both eyes. Night blindness, usually in childhood, is followed by a loss of peripheral vision (initially as a ring shaped defect), progressing over many years to tunnel vision and finally blindness. Hereditary. (Cassin & Solomon, 1997).

Retired Dogs, Returned Dogs and Withdrawn Dogs
Dogs that stop working as guides at age eight years or older are classified as 'retired', including dogs that died after this age. 'Returned' dogs are dogs younger than eight years that did not succeed as guides for particular handlers (including dogs that were not owned by the RNZFB's GDS). It should be noted that many dogs that are returned are rematched by the RNZFB's GDS to other handlers with varying degrees of success. Dogs that were returned but not rematched were classified as 'withdrawn'. Withdrawn dogs may be rehomed, kept as a pet by the handler, or work for a different service. In the latter scenario, these 'change of career' service dogs may become drug detector dogs for the Ministry of Agriculture and Fisheries, police dogs or assist people who are hearing impaired.

Retrolental Fibroplasia (obsolete term for Retinopathy of Prematurity)
Retinopathy: Pathologic condition. Non-inflammatory degenerative disease of the retina. Series of destructive retinal changes that may develop after prolonged life-sustaining oxygen therapy is given to premature infants... Sometimes regresses; other times a peripheral fibrotic scar forms that detaches the retina. Can result in vision loss or blindness. (Cassin & Solomon, 1997).

Returned Dogs
See *Retired Dogs.*

Royal New Zealand Foundation of the Blind (RNZFB)
Te Tuapapa o te Hunga Kapo o Aotearoa
Formerly known as the Royal New Zealand Foundation *for* the Blind. The agency in New Zealand that provides people who are blind or sight impaired with the skills they need to adapt and become independent within the visual world. The majority of funding is received from voluntary donations and the remainder by government contracts.

Service Animals/Dogs, Therapy Animals/Dogs and other Working Dogs
Service animals, including the service dog (or assistance dog) are trained to meet the disability-related needs of their handlers. The law protects the rights of individuals with disabilities to be accompanied by their service animals in public places. Service animals are not considered pets. Examples include guide dogs (see *Guide Dog*), hearing dogs for the deaf, mobility assistance dogs, Top Dog Companions and seizure-alert dogs. Therapy animals provide people such as the elderly, those hospitalised/institutionalised and/or with disabilities, with contact to animals. Therapy animals are usually the personal pets of their handlers, and work with their handlers to provide services to others. As therapy animals are not classified as service animals, there are no provisions in law for people to be accompanied by therapy animals in public places. Other working dogs in New Zealand include Search and Rescue Dogs, Farm Dogs, Ministry of Agriculture and Forestry Dogs, Aviation Security Dogs, Customs and Police Dogs, Royal New Zealand Airforce Dogs, Prison Dogs (drug detection) and Arson Dogs.

Sighted Guide
A sighted guide is a person with vision who serves as a guide to a person who is blind. The technique involves the person who is being guided grasping the upper arm of the guide, directly above the elbow, and following one step behind.

Sight Impairment
See *Visual Disability.*

Therapy Animals/Dogs
See *Service Animals/Dogs.*

Trainer
See *Guide Dog Trainer.*

Visual Disability - Blindness (total vision loss) and Sight Impairment (partial vision)
See the RNZFB's practical aid to understanding vision impairment on page xxvii.
Blindness refers to having no useful vision or extremely limited levels such as the ability to distinguish between light perception and projection only. In New Zealand, persons are considered legally blind if their visual acuity is less than 3/60 in the better eye after the best possible correction, or their visual field does not subtend 10 degrees at its widest angle. A person who is sight impaired (functional deficit) has loss of vision to the degree of being eligible to receive services from the RNZFB. Persons are eligible if their visual acuity is less than 6/24 in the better eye after the best possible correction, or their visual field does not subtend 20 degrees at its widest angle. (La Grow, 1992). For those with multiple disabilities, the individuals must have sight impairment as their primary disability.

Withdrawn Dogs
See *Retired Dogs.*

Working Dogs
See *Service Animals/Dogs.*

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