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# **Increasing household preparedness for earthquakes:**

**Understanding how individuals make meaning of earthquake  
information and how this relates to preparedness**

A thesis presented in fulfilment of the requirements for the degree of

Doctor of Philosophy

in

Psychology

at Massey University, Wellington,

New Zealand.

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**2012**



# Abstract

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New Zealand's susceptibility to experiencing damaging earthquakes makes managing the associated risk a societal imperative. A prominent component of earthquake risk management is fostering household earthquake preparedness. This involves encouraging people to acquire survival items (e.g. food, water, torches, and other essential items), implement mitigation measures (e.g. retrofit buildings), make emergency plans, learn survival skills and engage in socially-based preparedness activities.

Despite considerable effort and expenditure incurred by emergency management to encourage such activities, levels of overall preparedness remain low in New Zealand. This identifies a need for more effective earthquake education programmes. To develop more effective programmes, it is important to understand how people make sense of hazards and make decisions about how to manage the associated risk.

One particular gap in current understanding relates to how individuals render earthquake hazard and preparedness information meaningful and how this influences actual preparedness. In particular, questions remain about how individual, community and societal factors interact to influence how people interpret risk and decide whether to prepare or not.

This thesis explores the earthquake information meaning-making and preparedness processes. A series of qualitative interviews using grounded theory methodology was undertaken in 2008 with household residents in three New Zealand locations at risk of earthquakes. The interviews explored personal, community and societal influences on how people interpret and impose meaning on earthquake information and how the outcome of this process relates to undertaking actual preparedness actions.

Three main types of information were identified: passive; interactive; and experiential information. Each type of information makes unique contributions to the interpretation and preparedness process. Passive information has a more restricted effect, and interactive and experiential information a wider-ranging effect. People utilise all these types of information when interpreting and making meaning of hazard and preparedness

issues. Consequently, future earthquake education programmes should accommodate passive, interactive and experiential information in their design and implementation.

In making meaning of information, and making decisions about whether to prepare or not, a number of aspects were found to be important to the overall process including: raising awareness and knowledge of earthquakes and preparedness; understanding earthquake consequences; stimulating thought and discussion; developing skills; information seeking; salient beliefs; emotions and feelings; societal influences; intentions to prepare; and resource issues. Key societal influences on meaning-making and preparedness include: community (community participation, sense of community); leadership; responsibility (responsibility for preparing, responsibility for others); social norms; trust; and societal requirements. Earthquake education programmes also need to take such factors into account in their design.

# Acknowledgements

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In completing this PhD thesis, I would like to acknowledge the financial support of a number of institutions. This research was funded by the Foundation for Research Science and Technology (now the Ministry of Science and Innovation) through the GNS Science Geological Hazards and Society Programme. Additional funding was also provided by Canterbury Civil Defence Emergency Management Group and Hawke's Bay Civil Defence Emergency Management Group.

I would like to specifically thank GNS Science for supporting my research both financially and on a personal level. In particular I would like to thank Chief Executive Officer Alex Malahoff for encouraging me to undertake a PhD. I also acknowledge the support I have received from current and previous managers, including Terry Webb, Kelvin Berryman, Phil Glassey, Andrew King and Michele Daly. Without such backing, I would not have been able to embark on this PhD. I trust the work that I have done on earthquake preparedness has contributed significantly to GNS Science's research programme, and will help develop a more resilient New Zealand.

I could not have been able to complete this research without the sound guidance of my supervisors. My thanks go to Associate Professor David Johnston of the Joint Centre for Disaster Research at Massey University and GNS Science who has always believed in me and encouraged me to undertake a PhD; to Professor Douglas Paton at the University of Tasmania who spent many hours with me helping me understand the field, and providing invaluable and timely advice; and to Professor Kevin Ronan at Central Queensland University who provided a complementary perspective on my research area.

My thanks go to those who assisted me during the progress of the research, including key organisations and individuals. I would like to acknowledge the support I received from civil defence emergency management agencies, in particular: Nigel Simpson and Lisa Pearse from Hawke's Bay Civil Defence Emergency Management Group; Angela Reade from Napier City Council Civil Defence; Max Benseman and team from Wanganui District Council Civil Defence; Jon Mitchell, John Fisher and Sara McBride

at Canterbury Civil Defence Emergency Management Group; and Mark Bang and Lamorna Cooper from Timaru District Emergency Management. David Allen also assisted on an individual basis within Timaru.

This research could not have been completed without the support of household residents from Napier, Wanganui and Timaru who volunteered to take part as interviewees. I thank them for the time they spent talking with me about earthquakes and preparedness, and providing me with valuable reflections on the preparedness process.

On a personal level I would like to acknowledge the on-going support of my husband, Jonathan Povey, who has spent approximately 5 years listening to me ‘talk PhD’. I’d like to thank my immediate and wider family as well, all of whom believed I could complete a PhD and provided encouragement along the way. Friends have also assisted me in keeping sane during the process. I was able to share many frustrations with fellow PhD student and colleague Wendy Saunders along the way, and I’d like to thank Wendy for her unwavering support. Ian de Terte and I also shared many conversations over the duration of our candidature for which I am grateful. Finally, I’d like to express my thanks to the wider social science team at GNS Science who were very patient with me while I was undertaking my research and writing the dissertation.

This thesis is dedicated to the memory of my grandfather, Walter Herbert Gibbons, who passed away on the 21 November 2010. His continual quest for knowledge and belief in the importance of education inspired me to want to seek knowledge for myself. My search for new knowledge has been realised in undertaking and completing this PhD.

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