



CULTURAL WORLDVIEWS AND NATURAL HAZARD RISK PERCEPTION: A PILOT STUDY OF AUSTRALIAN ADULTS

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University of
New England

Introduction



Jamie O'Toole



Daniel Berehulak, Getty Images



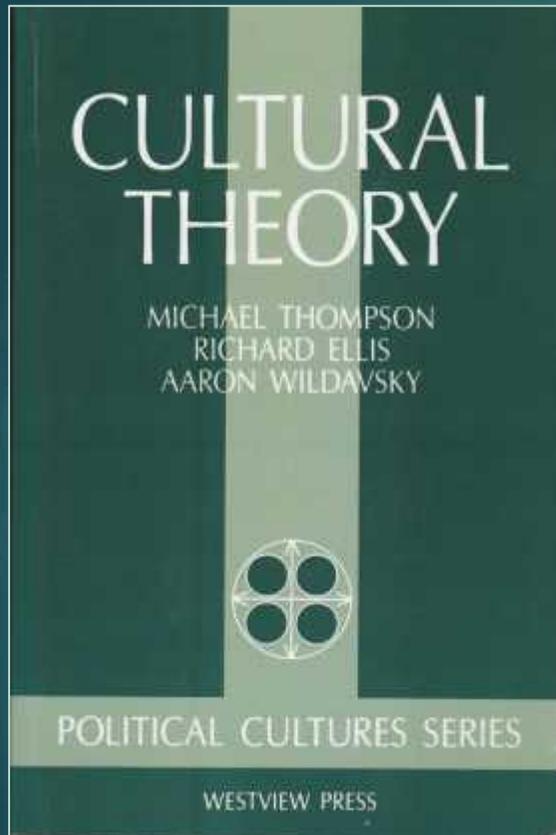
Ruby Cornish, ABC News



- ▶ Australia's natural hazard future is uncertain
- ▶ From an emergency service perspective, natural hazard planning is often accompanied by cries of 'Why can't we get people to do what we think they should do?'

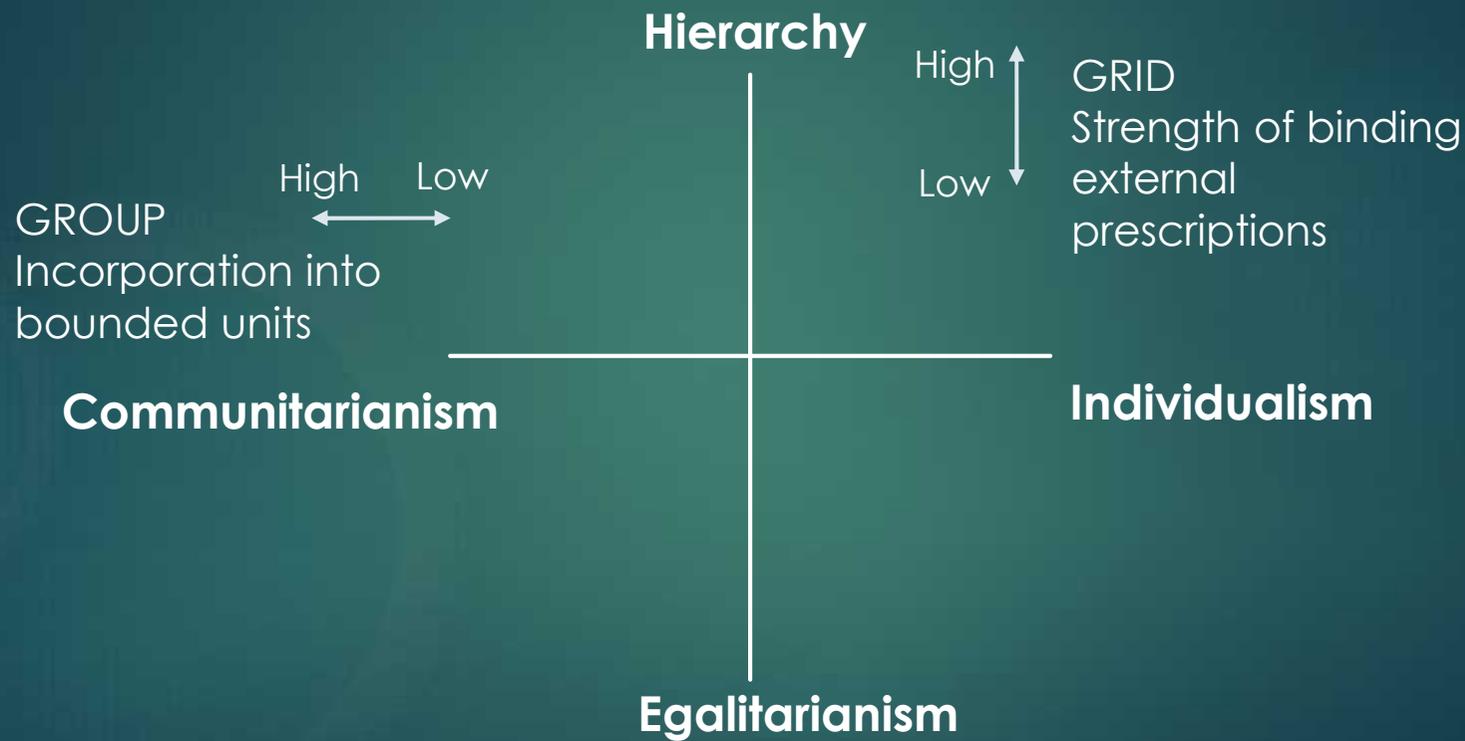
(Alan Rhodes, EMV)

Cultural theory and risk

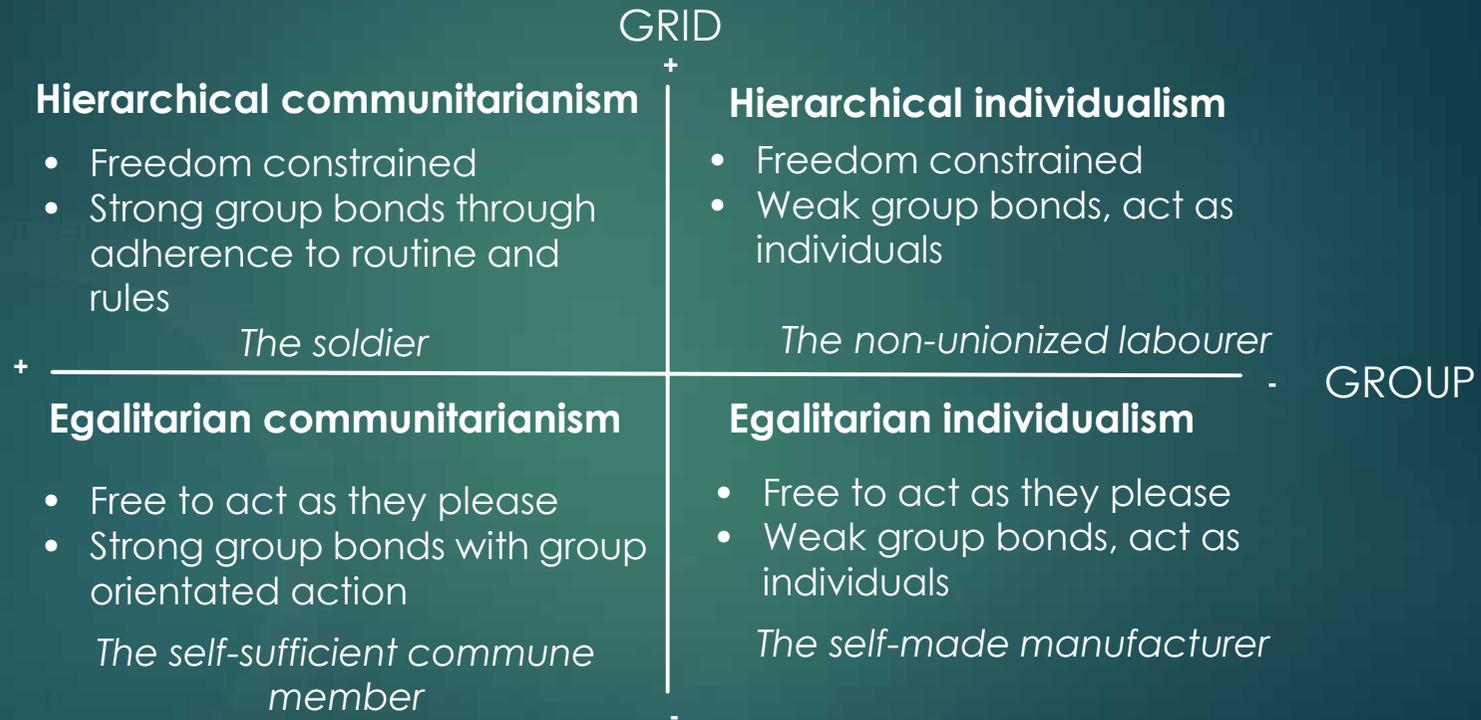


- ▶ Individuals form perceptions of risk that reflect and reinforce their commitment to one or another 'cultural way of life'
- ▶ Individuals take on attitudes towards natural hazard threats that maintain their worldview

The grid-group typology



Cultural worldviews



Sociality NOT personality

Aim of the study

- ▶ Do adults with different worldviews have different perceptions of natural hazards?



Cultural worldviews

Survey - cultural worldviews



Cultural cognition scale

(Kahan, 2012)
(30 items)

- The women's rights movement has gone too far (H)
- Our society would be better off if the distribution of wealth was more equal (E)
- The government should stop telling people how to live their lives (I)
- People should be able to rely on the government for help when they need it (C)

The sample

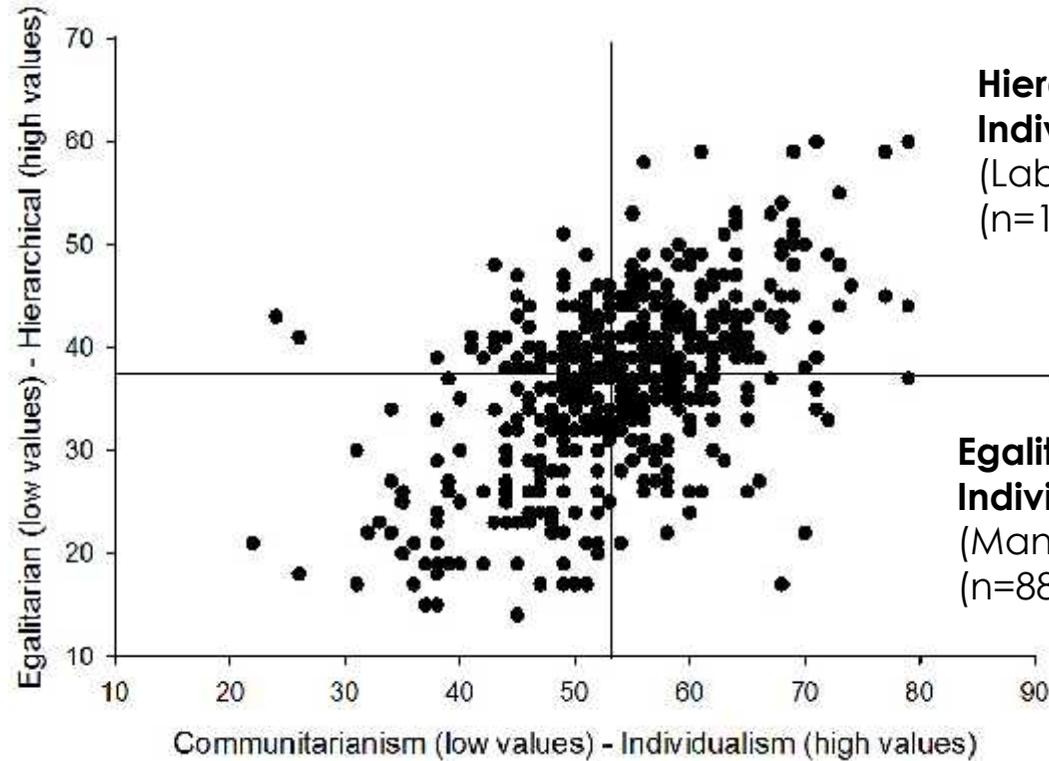
- ▶ 503 participants from NSW, recruited via a panel
- ▶ Stratified by city and regional postcodes and sex
 - ▶ 323 (64%) city postcodes
 - ▶ 180 (36%) regional postcodes
 - ▶ Females - 302 (60%) Males - 201 (40%)

Results - Cultural worldviews



**Hierarchical
Communitarianism**
(Soldier)
(n=87) (17%)

**Egalitarian
Communitarianism**
(Commune
member)
(n=153) (30%)



**Hierarchical
Individualism**
(Labourer)
(n=175) (35%)

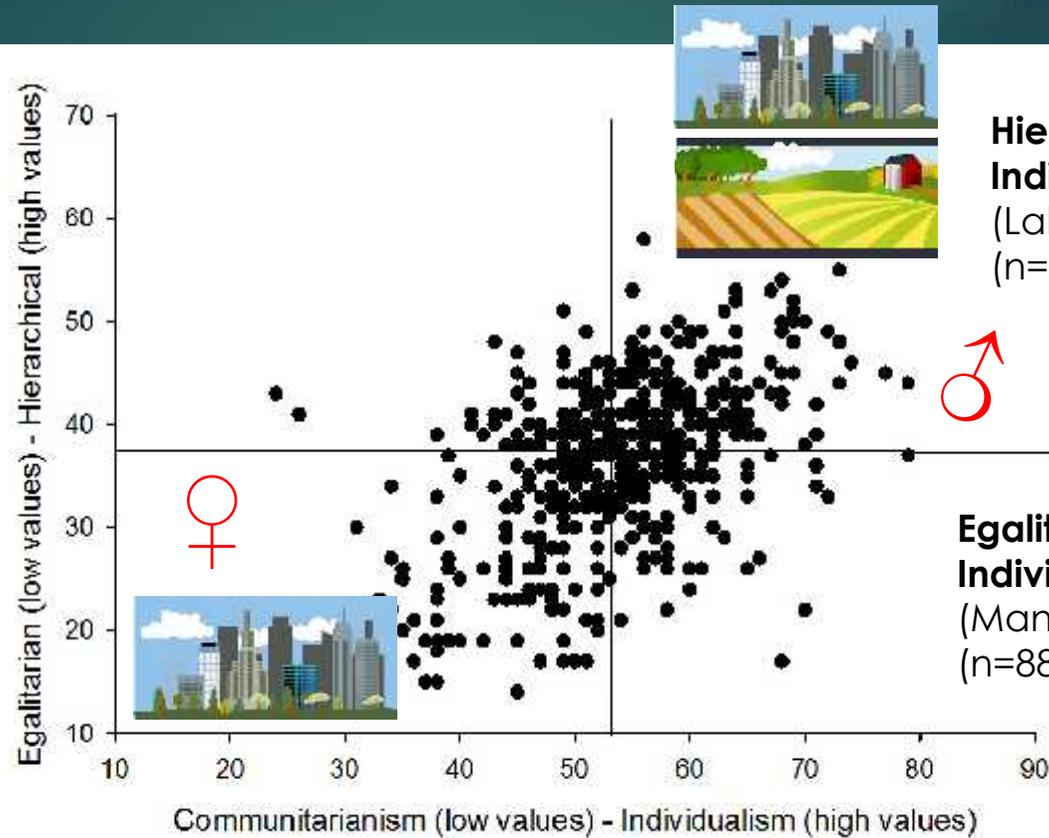
**Egalitarian
Individualism**
(Manufacturer)
(n=88) (18%)

n=503 Group boundaries set at the median

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Relationships between cultural worldviews and natural hazard risk perception

Survey – natural hazard perception



Bushfire

Flood

Storm

Earthquake

RISK

Perception of risk
and loss
(6 items)

- I'm worried that I might be killed or injured in a [bushfire]
- People in Australia are more concerned about [bushfires] than they need to be

RESPONSIBILITY

Responsibility for
hazard
management
(11 items)

- If people die or have their homes destroyed in a [bushfire] that's their own fault because they chose to live there
- I don't need to worry about preparing for a [bushfire] the emergency services will come and help if I get into difficulty

CONTROL

Perception of control
(9 items)

- [Bushfires] are a natural part of Australia's environment
- There is nothing that can be done to minimize losses from [bushfire] in Australia

Survey – natural hazard perception



Bushfire

Flood

Storm

Earthquake

TRUST

Trust in sources of
natural hazard
information
(9 items)

- How much would you trust each of the following to give you reliable information about the risk that a [bushfire] could occur in your area? - Council, emergency services, family, media, friends, myself, insurance companies, scientists, government departments

Analysis

Relationships between cultural worldviews and perceptions of natural hazard risk, responsibility, control and trust

Differences between worldview groups



Item	Bushfire	Flood	Storm	Earthquake
RISK (Perception of risk & loss)	NS	NS	0.031	0.009
RESPONSIBILITY (Perceived responsibility for hazard management)	0.000	0.000	0.000	0.000
CONTROL (Perception of control)	0.001	0.020	0.012	0.041
TRUST – PERSONAL SOURCES	0.022	0.041	0.044	0.039
TRUST – IMPERSONAL SOURCES	0.000	0.000	0.000	0.000

Kruskal-Wallis non-parametric ANOVA significances
NS = not significant

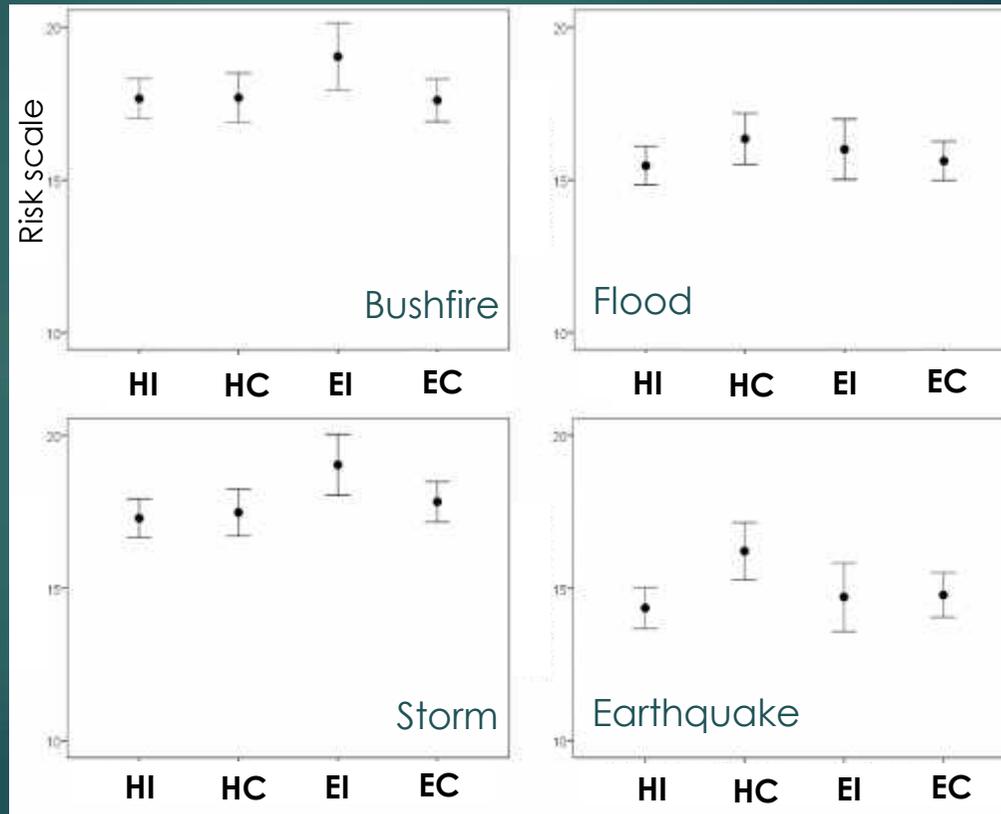
Perception of risk

Perceives greater threat



Perceives less threat

HI (Labourer)
Hierarchical individualism
HC (Soldier)
Hierarchical communitarianism
EI (Manufacturer)
Egalitarian individualism
EC (Commune)
Egalitarian communitarianism

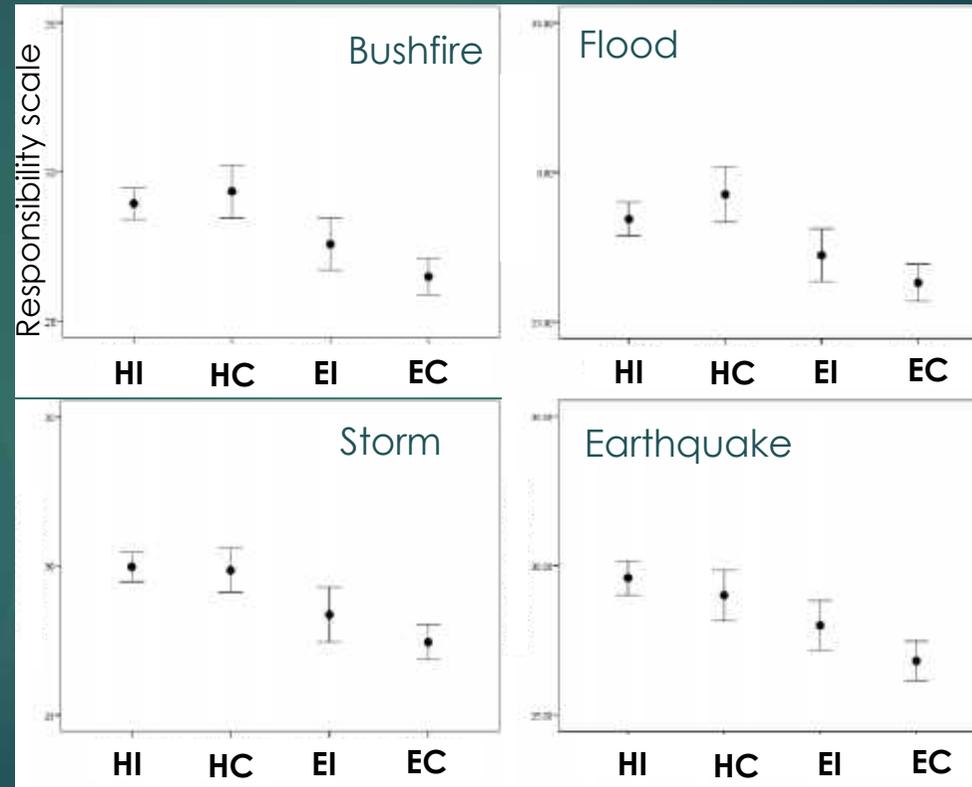


Perception of responsibility

Perceives
greater self
responsibility



Perceives
responsibility lies
with others

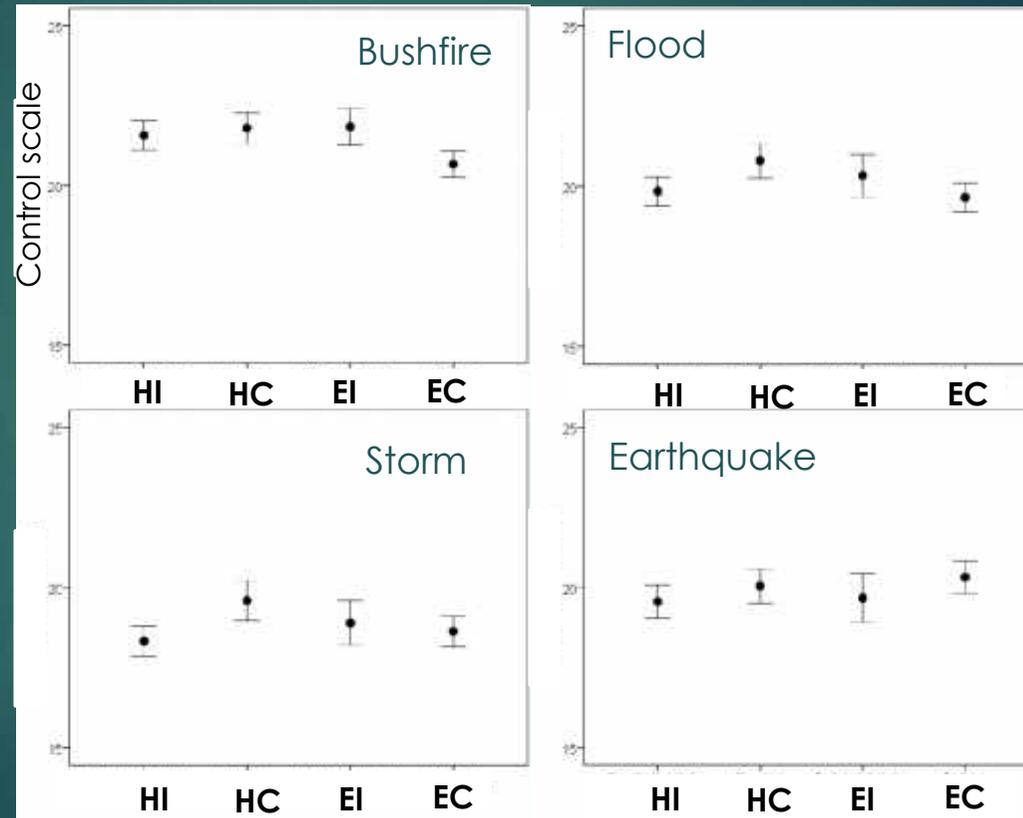


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Egalitarian individualism
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Egalitarian communitarianism

Perception of control

Perceives
greater
control

Perceives
less control



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Perception of trust



- ▶ EI had greater trust in personal information sources (family, friends, self, neighbours) than the other worldviews
- ▶ EC had greater trust in impersonal information sources (emergency service organisations, scientists, government departments)

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Risk perception and emergency management



- ▶ Attitudes towards natural hazards did differ among people with different worldviews



Risk perception and emergency management



- ▶ People have attitudes towards natural hazards that maintain their worldview

Hierarchical communitarianism	Hierarchical individualism
 Self-responsibility	 Self-responsibility
Egalitarian communitarianism	Egalitarian individualism
 Government advice	 Government advice