

**Strengthening Environmental Stewardship in Perth, Western Australia:
An Investigation of Linkages between Organisational Social Capital and
Information and Communication Technologies in
Environmental Community Organisations**

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DECLARATION

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

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ABSTRACT

Environmental Community Organisations (ECOs) play an important role in the ongoing stewardship of the natural environment in Australia. This ranges from managing urban nature reserves to the mounting of public campaigns in order to curtail further environmental degradation. Many of these organisations, however, operate in challenging circumstances in which access to human and financial resources are scarce. The utility of social capital to overcome resource scarcities coupled with the potential of Information and Communication Technologies (ICTs) for fostering social capital have been increasingly acknowledged. Yet little research exists on the appraisal of social capital in ECOs and the implications of the association between social capital and ICT.

It is the contention of this thesis that by providing additional means to harness social capital, ICT uptake in ECOs can benefit environmental stewardship strategies. The aim of this thesis is twofold. Firstly, it aims to assess social capital in ECOs in the Perth region of Western Australia. Secondly, it aims to investigate the extent to which ECOs are making use of ICTs to enhance social capital. I propose a research framework that recognises intra-organisational and inter-organisational interactions as a basis to conceptualise and ascertain social capital in ECOs. Then, I use a combination of quantitative and qualitative data (including a survey of 81 organisational leaders, interviews, and website content

analysis) in order to explore the level of social capital, the trend of ICT uptake, and the implications of the interplay between ICT and social capital.

The results show that having a higher level of social capital (greater intensity of organisational interactions) places ECOs in a better position to acquire funding and volunteers. Moreover, in spite of ICT uptake being mostly limited to email and websites, findings indicate that not only ICT supplements social capital, but also that social capital influences ICT uptake. The research also demonstrates the usefulness of the adopted framework to empirically ascertain social capital and gauge an association between ICT and social capital in the context of community organisations.

These findings are consistent with the view that social capital is a necessary ingredient of community organisations that often have to do ‘more with less’. While it might be the case that not every ECO requires high level of social capital or needs to adopt ICT, as ICTs become increasingly ubiquitous in an organisational context, ECOs that are either unable or unwilling to adopt ICTs can be disadvantaged because of reduced opportunities to harness social capital. Although my focus is on ECOs in Perth, the implications of findings of this thesis are equally pertinent to similar community organisations across Australia and abroad.

Key words: Community organisations, Community informatics, Environmental stewardship, Perth region, Social capital

TABLE OF CONTENTS

Declaration	ii
Abstract	iii
Table of contents	v
List of figures	ix
List of tables	xi
List of profiles	xii
Acknowledgement	xiii
Abbreviations for Australian States and Territories	xiv
Acronyms	xv

Chapter One: Introduction

1.1 Preamble	1
1.2 Definitions	3
1.3 At the crossroads of three distinct perspectives	5
1.4 The research questions	12
1.5 Significance	13
1.6 Thesis structure	15

Chapter Two: Environmental community organisations: contributions and challenges

2.1 Introduction	17
2.2 Environmental stewardship	17
2.3 Emergence of ECOs in Australia	20

2.4	The contributions of ECOs in Perth	26
2.5	Challenges faced by ECOs	31
2.6	Viability of ECOs and social capital	36
2.7	Chapter summary	38

Chapter Three: Social capital and environmental community organisations

3.1	Introduction	39
3.1	The notion of social capital	39
3.3	The term ‘social capital’	41
3.4	Descriptions of social capital	44
3.5	Organisational social capital	50
3.6	Measuring organisational social capital	54
3.7	Significance of social capital	57
3.8	Shortcomings of social capital	61
3.9	Social capital and ICTs	62
3.10	Chapter summary	63

Chapter Four: Information & communication technologies and community organisations

4.1	Introduction	64
4.2	Information and communication technologies	65
4.3	ICT milestones in Australia	66
4.4	Community informatics	73
4.5	ICT adoption amongst community organisations	77
4.6	The digital divide and community organisations	82
4.7	ICT mediated social capital	86
4.8	Chapter summary	92

Chapter Five: Methodology

5.1	Introduction	93
5.2	Aims and objectives	94
5.3	Geographical study area and unit of analysis	96
5.4	Research epistemology	99
5.5	Data collection framework, hypotheses, and data collection objectives	104
5.6	Data collection process	108
5.6.1	Quantitative data collection	109
5.6.2	Qualitative data collection	117
5.7	Data analysis	119
5.8	Limitations	120
5.9	Chapter summary	121

Chapter Six: Results and discussion

6.1	Introduction	122
6.2	An overview of data collection	122
6.3	Attributes of the respondents and organisations	125
6.4	Organisational social capital	148
6.5	The uptake of information and communication technologies	161
6.6	Association between ICT and OSC in ECOs	189
6.7	Chapter summary	199

Chapter Seven: Conclusion

7.1	Introduction	201
7.2	Recapitulation of the main findings	202
7.3	Revisiting the hypotheses	205
7.4	Implications of the results	206

7.5	Limitations	212
7.6	Future directions for research	214
7.7	Final comments	217
Appendices		219
	Appendix A: Publications based on this thesis	219
	Appendix B: Human research ethics permit	222
	Appendix C: Survey instrument	223
	Appendix D: Participant consent form	231
	Appendix E: Website content analysis indicators	232
References		233

LIST OF FIGURES

Figure 2.1	Timeline of major environmental policies (1989-2008)	.....25
Figure 2.2	Growth of ECOs in the Perth region (1995-2004)	.....28
Figure 4.1	Telecommunication milestones in Australia (1821-1993)	.....68
Figure 4.2	ICT milestones in Australia (1996-2009)	.....69
Figure 5.1	Location map of the Perth region	.....97
Figure 5.2	Data collection framework	.....105
Figure 6.1	Educational qualifications of the respondents by gender	.....128
Figure 6.2	Number of ECOs reporting various sources of funding	.....133
Figure 6.3	Activities of responding organisations	.....137
Figure 6.4	Mean score of organisational capabilities	.....140
Figure 6.5	Organisational affiliations	.....149
Figure 6.6	Intensity of interactions	.....155
Figure 6.7	OSC index of ECOs in the Perth region	.....160
Figure 6.8	Modes of interactions by type of ECOs	.....163
Figure 6.9	Types of organisational websites	.....174
Figure 6.10	Barriers to ICT adoption	.....185
Figure 7.1	Force-field analysis	.....211

LIST OF TABLES

Table 3.1	Organisational social capital	.....54
Table 5.1	Synopsis of research epistemology	.....103
Table 6.1	Responding organisations by type and location	.....124
Table 6.2	Interviewees and interviews	.....125
Table 6.3	Age and gender of the respondents	.....126
Table 6.4	Respondents' current position and years in the position	.....128
Table 6.5	Time spent on activities of ECOs and involvement elsewhere	....129
Table 6.6	General attributes of organisations	.....131
Table 6.7	Other types of funding sources and fund-raising activities	....133
Table 6.8	Significance of incorporated status	.....136
Table 6.9	Other types of activities undertaken by ECOs	.....138
Table 6.10	Future outlook of the organisations	.....145
Table 6.11	Spearman correlation test between capabilities and future outlook	..146
Table 6.12	Type of partner organisations	.....152
Table 6.13	Correlation of frequency of interactions	.....158
Table 6.14	Dichotomised OSC indices by types of ECOs	.....160
Table 6.15	Access to the Internet and points of access	.....165
Table 6.16	Trend of ICT adoption	.....168
Table 6.17	Email versus access to the Internet	.....169
Table 6.18	Cross-tabulation between type of ECOs and websites	....171
Table 6.19	Cross-tabulation between location of ECOs and websites	....172
Table 6.20	Odds ratios of having a website	.....173
Table 6.21	Website content analysis	.....176

Table 6.22	K-W tests between ICT benefits and location of ECOs	....181
Table 6.23	Barriers to ICT uptake	.....186
Table 6.24	Other barriers to ICTs uptake	.....188
Table 6.25	The significance of social capital	.....190
Table 6.26	Pearson correlation between ECOs' resources and OSC index	..191
Table 6.27	Regression analysis of OSC index and organisational attributes	..193
Table 6.28	Mann-Whitney <i>U</i> tests between ICT uptake and interaction	....196
Table 6.29	Significance of having websites	.....199

LIST OF PROFILES

Profile 6.1	Meet the female leader	127
Profile 6.2	Meet the male leader	129
Profile 6.3	A social capital profile of a 'care' organisation	151
Profile 6.4	A social capital profile of a 'friends' organisation	154
Profile 6.5	ICTs profile of a 'care' organisation	167
Profile 6.6	ICTs profile of a 'friends' organisation	184

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ABBREVIATIONS FOR AUSTRALIAN STATES AND TERRITORIES

ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

ACRONYMS

ABS	Australian Bureau of Statistics
ACF	Australian Conservation Foundation
ACOSS	Australian Council of Social Service
ARPANET	Advanced Research Projects Agency Network
ARTCS	Australian Round Table on the Civil Society
ATO	Australian Taxation Office
BEV	Blacksburg Electronic Village
CACOM	Centre for Community Organisations and Management
CERN	European Organisation for Nuclear Research
CFOC	Caring For Our Country Program
CI	Community Informatics
CISA	Community Information Strategies Australia
CSTAG	Centre for the Study of Telematics and Governance
DCEP	Department of Consumer and Employment Protection
DCITA	Department of Communications, Information Technology and the Arts
DEST	Department of the Environment, Sports and Territories
DEWHA	Department of the Environment, Water, Heritage and the Arts
DEWR	Department of the Environment and Water Resources
DIT	Diffusion of Innovations Theory
ECO	Environmental Community Organisations
ESRC	Economic and Social Research Council

FFA	Force-Field Analysis
FTG	Farm Tree Groups
GCA	Group Conservation Area
HRSCEH	House of Representatives Standing Committee on Environment and Heritage
ICT	Information and Communication Technologies
LA 21	Local Agenda 21
LCDC	Land Conservation District Committee
NAPSWQ	National Action Plan for Salinity and Water Quality
NFF	National Farmers' Federation
NHT	Natural Heritage Trust
NLP	National Landcare Program
OECD	The Organisation for Economic Co-operation and Development
OSC	Organisational Social Capital
RDT	Resource Dependence Theory
RMT	Resource Mobilisation Theory
SCC	Swan Catchment Council
SNRMO	State Natural Resources Management Office
SNT	Social Network Theory
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USEPA	United States Environmental Protection Authority
WADEC	Western Australia Department of Environment and Conservation
WAPC	Western Australia Planning Commission
WCED	World Commission on Environment and Development