

Judgements during Information Seeking: Policy and Research Workers' Assessments of Enough Information

Jennifer M Berryman

A thesis submitted to the University of Technology, Sydney in fulfilment of the requirements for the degree of Doctor of Philosophy

Faculty of Arts and Social Sciences

2008

Certificate of authorship and originality

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in this thesis.

Signed

Date

To

John and Tessa

Marjorie and Bob

Acknowledgements

I am immensely grateful to all who have helped me in this journey of discovery.

I was blessed throughout my candidature with two wonderful supervisors whose sustained guidance and generosity made my path easier. Dr Theresa Anderson was my principal supervisor and I greatly appreciated her intellectual guidance and strong support throughout my journey. Theresa challenged my thinking and expanded my intellectual horizons, always pushing me to take just one more step. One of her most valued contributions was the enthusiasm and excitement she brought to my research project. Professor Joyce Kirk was my alternate supervisor and brought to my endeavours a highly valued mentorship, a watchful eye on progress and a never-ending stream of thought-provoking questions.

Much gratitude must go to the participants in the empirical study which informed the thesis. These people willingly shared with me their experiences of seeking and using information in the workplace, both good and bad. Without their contribution, there would have been no thesis.

I am deeply appreciative of the encouragement I received from the community of information behaviour researchers. The work of this community provided the starting points for my own research contribution. These researchers generously engaged me in scholarly debate, extended my ideas and challenged my thinking, and so helped me produce better research.

My ‘Doktor Schwesters’ Dr Nicola Parker and Dr Suzana Sukovic were highly valued travelling companions. I worked in their slipstreams, learning from the experiences they shared with me and finding my own journey a little easier because of their generosity.

My thanks go to my colleagues at the State Library of New South Wales – Kerrie Burgess, Anne Doherty and Maggie McElhill – who were generous with their time, their ideas and their comments, whenever I needed to take a compass bearing. In particular, Bronwyn Coop’s role in helping me manage my time to combine part time

work and thesis research was greatly appreciated. Thanks are also due to the University of Technology, Sydney, for financial assistance with conference participation and for the many opportunities to present my evolving work in a highly supportive environment.

At the end, I do not have the words to thank John and Tessa as they deserve. My husband and my daughter tolerated my preoccupation and panics, understood my anxieties and absentmindedness and shared wholeheartedly in the joy of my achievements. They were unstinting in their support and never failed to encourage me and to remind me always of the most important things in life.

Table of Contents

CERTIFICATE OF AUTHORSHIP AND ORIGINALITY	II
ACKNOWLEDGEMENTS.....	V
TABLE OF CONTENTS	VII
LIST OF TABLES.....	XI
LIST OF FIGURES	XII
ABSTRACT	XIII
CHAPTER 1 ENOUGH IN A WORLD OF ABUNDANT INFORMATION	1
1.1 ORIGINS OF THE RESEARCH	2
1.2 RATIONALE FOR THE THESIS	3
1.3 SIGNIFICANCE OF THE RESEARCH	7
1.4 RESEARCH AIMS.....	9
1.4.1 Terminology	10
1.5 THESIS OVERVIEW	10
CHAPTER 2 ENOUGH INFORMATION: REVIEW OF THE THEORETICAL AND EMPIRICAL LITERATURE.....	13
2.1 ASSESSMENTS OF ENOUGH INFORMATION	17
2.2 ASSESSMENTS OF ENOUGH INFORMATION INFORMED BY DECISION THEORY.....	23
2.2.1 Optimal stopping points: Predictions during information retrieval.....	25
2.2.2 Satisficing and heuristics: Good enough information.....	28
2.3 ENOUGH INFORMATION AND STOPPING BEHAVIOUR: KEY CONSIDERATIONS FOR THE THESIS	38
2.3.1 Naturalistic decision making	40
2.4 ENOUGH INFORMATION IN CONTEXT	42
2.4.1 The nature of context.....	43
2.4.2 Relationships between people and contexts: Invoking context	45
2.5 ENOUGH INFORMATION THROUGH THE LENS OF CONTEXT: REVISITING THE LITERATURE	51
2.5.1 Attributes associated with the individual.....	51
2.5.2 Contextual factors	52
2.5.3 Informational factors	53
Chapter Conclusion	54

**CHAPTER 3 RESEARCHING THE JUDGEMENT OF ENOUGH INFORMATION:
METHODOLOGICAL CONSIDERATIONS 59**

3.1	RESEARCHING HUMAN INFORMATION BEHAVIOUR	60
3.1.1	<i>Previous investigations into judgements and decisions during information seeking</i>	62
3.2	METHODOLOGICAL ORIENTATION OF THE STUDY	64
3.2.1	<i>Relationship between people and contexts</i>	66
3.2.2	<i>Relationship between researcher and research interest</i>	68
3.2.3	<i>Implications for the study</i>	69
3.3	POTENTIAL RESEARCH APPROACHES	71
3.3.1	<i>Ethnography</i>	71
3.3.2	<i>Phenomenography</i>	73
3.4	CASE STUDY: THE SELECTED RESEARCH APPROACH	75
3.4.1	<i>Challenges in case study research</i>	76
3.4.2	<i>Expanding knowledge from case study findings</i>	78
	<i>Chapter Conclusion</i>	80

CHAPTER 4 INVESTIGATING JUDGEMENTS OF ENOUGH INFORMATION 83

4.1	RESEARCH CHALLENGES ENCOUNTERED	83
4.1.1	<i>Research design: Multiple case study</i>	84
4.2	SETTING AND PARTICIPANTS	86
4.2.1	<i>Recruiting participants</i>	87
4.3	DATA GATHERING	90
4.3.1	<i>Interviews as data gathering techniques</i>	92
4.3.2	<i>Gathering the data</i>	96
4.3.3	<i>Piloting the data gathering techniques</i>	99
4.4	DATA ANALYSIS.....	101
4.4.1	<i>Case analysis</i>	103
4.4.2	<i>Analysis of context using Taylor's information use environment</i>	107
4.5	QUALITY OF THE STUDY.....	109
	<i>Chapter Conclusion</i>	113

**CHAPTER 5 THE INFORMATION USE ENVIRONMENT OF POLICY AND RESEARCH
WORKERS 115**

5.1	PEOPLE: MEDIA, CHANNELS AND NETWORKS.....	119
5.2	PROBLEMS AND PROBLEM RESOLUTION	121
5.2.1	<i>Characteristics of the problems in the study</i>	123
5.2.2	<i>Using information to resolve problems</i>	126
5.3	SETTING	133

5.3.1	<i>Constrained communications</i>	135
5.3.2	<i>Timeframes</i>	135
5.3.3	<i>Approach to risk and uncertainty</i>	136
5.4	DECISION PROCESSES.....	137
5.5	TASKS	138
5.5.1	<i>Types of critical incident tasks</i>	142
5.5.2	<i>Uncertainty about the critical incident tasks</i>	145
	<i>Chapter Conclusion</i>	147

CHAPTER 6 JUDGING ENOUGH INFORMATION: PROCESS AND INFLUENCES 149

6.1	JUDGING ENOUGH INFORMATION.....	149
6.1.1	<i>Enough for what? Mental templates against which to judge enough information.</i> ..	150
6.1.2	<i>Iterative process of judging enough information</i>	155
6.1.3	<i>Fluid nature of the judgements of enough information</i>	156
6.1.4	<i>Collaborative process of judging of enough information</i>	158
6.2	INFLUENCES ON JUDGEMENTS OF ENOUGH INFORMATION	165
6.2.1	<i>People</i>	167
6.2.2	<i>The problems</i>	173
6.2.3	<i>Organisational style and structure</i>	174
6.2.4	<i>Decision making processes</i>	179
	<i>Chapter Conclusion</i>	184

CHAPTER 7 DISCUSSION: JUDGING ENOUGH INFORMATION 189

7.1	HOW POLICY AND RESEARCH WORKERS MADE JUDGEMENTS OF ENOUGH INFORMATION	189
7.1.1	<i>Developing mental templates of tasks</i>	190
7.1.2	<i>Judging enough: iterative and fluid</i>	191
7.1.3	<i>Judging enough information against the mental template</i>	192
7.1.4	<i>Collaborative judgements of enough information</i>	194
7.2	INFLUENCES ON JUDGEMENTS OF ENOUGH INFORMATION	195
7.2.1	<i>Influences on what constitutes enough information</i>	196
7.2.2	<i>Recognition of enough information</i>	200
7.2.3	<i>Influences on the process of judging enough information</i>	202
7.3	QUALITY OF THE RESEARCH	204
7.4	DIRECTIONS FOR FUTURE RESEARCH.....	206
7.5	CONTRIBUTIONS TO THE STUDY OF HUMAN INFORMATION BEHAVIOUR	208
7.5.1	<i>Contribution to human information behaviour research</i>	209
7.5.2	<i>Contribution of naturalistic decision making to information behaviour research.</i> ..	212
7.5.3	<i>Contribution to information management practice</i>	216

7.5.4	<i>Contribution to research design in human information behaviour studies</i>	<i>219</i>
7.6	CONTRIBUTION TO UNDERSTANDING PUBLIC POLICY MAKING PROCESSES.....	219
APPENDICES		223
	APPENDIX ONE: GLOSSARY	224
	APPENDIX TWO: ETHICS APPROVAL	226
	APPENDIX THREE: CORRESPONDENCE WITH PARTICIPANTS	227
	APPENDIX FOUR: TRANSCRIBER’S CONFIDENTIALITY AGREEMENT	233
	APPENDIX FIVE: INTERVIEW GUIDES	234
	APPENDIX SIX: EXAMPLES OF ANALYTIC WORK	236
	APPENDIX SEVEN: AUDIT TRAIL.....	248
BIBLIOGRAPHY		251
PUBLICATIONS RELATED TO THIS THESIS		269

List of Tables

TABLE 2.1	CUES WHEN JUDGING ENOUGH INFORMATION AND DECIDING TO STOP	40
TABLE 3.1	ALIGNING THE RESEARCH: FROM AIMS TO METHODS	71
TABLE 4.1	ORGANISATIONS PARTICIPATING IN THE STUDY	88
TABLE 4.2	PARTICIPANTS' YEARS OF EXPERIENCE	90
TABLE 4.3	TYPE AND NUMBER OF INTERVIEWS	95
TABLE 4.4	STAGES IN DATA GATHERING.....	101
TABLE 4.5	STAGES OF ANALYSIS.....	109
TABLE 4.6	DEMONSTRATING THE QUALITY OF THE STUDY	113
TABLE 5.1	THE INFORMATION USE ENVIRONMENT FRAMEWORK	116
TABLE 5.2	RELATIONSHIPS BETWEEN PROBLEM AND TASK.....	139
TABLE 5.3	RELATIONSHIP BETWEEN LARGER AND CRITICAL INCIDENT TASKS	141
TABLE 5.4	TYPES OF CRITICAL INCIDENT TASKS.....	142

List of Figures

FIGURE 2.1	KEY STUDIES ON ENOUGH INFORMATION AND STOPPING BEHAVIOUR	16
FIGURE 2.2	INVOKING CONTEXT THROUGH A PROCESS OF SITUATION AWARENESS	50
FIGURE 4.1	RESEARCH QUESTIONS MAPPED TO INTERVIEW QUESTIONS	98
FIGURE 6.1	COMPONENTS OF THE MENTAL TEMPLATE	154
FIGURE 6.2	VITA'S ASSESSMENT AND REASSESSMENT OF ENOUGH INFORMATION	163
FIGURE 6.3	THE PROCESS OF JUDGING ENOUGH INFORMATION	165
FIGURE 6.4	THE INFLUENCE OF SUPERVISOR AND STAKEHOLDERS.....	170
FIGURE 6.5	DRAWING ON EXPERIENCE IN JUDGING ENOUGH INFORMATION	172
FIGURE 6.6	PRAGMATIC APPROACH TO THE RISK OF NOT ENOUGH INFORMATION	178
FIGURE 6.7	OVERVIEW OF INFLUENCES ON JUDGEMENTS OF ENOUGH INFORMATION	182

Abstract

This thesis examines how people determine they have enough information, a fundamental but perplexing question for human information behaviour researchers. Informed by theories of human judgement and decision making, the thesis investigates the ways in which judgements of enough information are made and the subtleties that shape this critical judgement.

The empirical work that underpinned the thesis was an exploratory study conducted from an interpretive orientation and using the case study approach. The study examined multiple cases of judgements of enough information made while seeking and using information in the workplace. Semi-structured interviews (33) were conducted with public sector policy and research workers in Australia. Two interviews were carried out, the first with individual participants to explore the nature of the contexts in which they worked and the second, a paired interview with two participants to focus on how they assessed they had enough information. Interviews were taped and transcribed and inductive data analysis carried out.

Principal findings included the importance of task in shaping judgements of enough information through an iterative and fluid process. Throughout the process the nature of what constituted enough information changed. Factors in the information use environment of the policy and research workers that shaped their judgements of enough information included the views of colleagues, supervisors and stakeholders, organisational decision making processes and organisational attitudes towards uncertainty. The collaborative information seeking and use of the policy and research workers resulted in collaborative judgements of enough information.

The research makes three contributions to the field of human information behaviour research. Firstly findings provide new insights into judgements of enough information made by the policy and research workers, illuminating the judgement of enough information as a process and refining concepts critical to understanding judgements made while seeking and using information. Secondly the study provides a rich description of policy and research workers, a professional group not previously studied in relation to enough information, and their role in the public policy process. Thirdly

concern about the limitations of behavioural decision theory to fully explain judgements of enough information led to consideration of naturalistic decision making, a recent development in decision theory. Naturalistic decision making affords a different perspective on human judgement and decision making. As a conceptual framework within which to develop more nuanced understandings of judgements and decision making during information seeking, naturalistic decision making has much to offer human information behaviour researchers.