

Time Use Research in the Social Sciences

Time Use Research in the Social Sciences

Edited by

Wendy E. Pentland

*Queens University
Kingston, Ontario, Canada*

Andrew S. Harvey

*St. Mary's University
Halifax, Nova Scotia, Canada*

M. Powell Lawton

*Philadelphia Geriatric Center
Philadelphia, Pennsylvania*

and

Mary Ann McColl

*Queens University
Kingston, Ontario, Canada*

Kluwer Academic Publishers
New York, Boston, Dordrecht, London, Moscow

eBook ISBN: 0-306-47155-8
Print ISBN: 0-306-45951-5

©2002 Kluwer Academic Publishers
New York, Boston, Dordrecht, London, Moscow

All rights reserved

No part of this eBook may be reproduced or transmitted in any form or by any means, electronic, mechanical, recording, or otherwise, without written consent from the Publisher

Created in the United States of America

Visit Kluwer Online at: <http://www.kluweronline.com>
and Kluwer's eBookstore at: <http://www.ebooks.kluweronline.com>

Contributors

Mike Barns School of Architecture, University of Auckland, Private Bag 92006, Auckland 1020, New Zealand.

Andrew S. Harvey Department of Economics, St. Mary's University, Halifax, Nova Scotia, Canada B3H 3C3.

M. Powell Lawton Polisher Research Institute, Philadelphia Geriatric Center, Philadelphia, Pennsylvania 19141.

Mary Ann McColl Division of Occupational Therapy, School of Rehabilitation Therapy, Queen's University, Kingston, Ontario K7Z 3N6.

William Michelson Centre for Urban and Community Studies, University of Toronto, Toronto, Ontario, Canada M5S 2G9.

Wendy E. Pentland Division of Occupational Therapy, School of Rehabilitation Therapy, Queen's University, Kingston, Ontario K7L 3N6.

John P. Robinson Department of Sociology, University of Maryland, College Park, Maryland 20742.

Jerome F. Singleton School of Health and Human Performance, Dalhousie University, Halifax, Nova Scotia, Canada B3H 3J5.

Bryan J. A. Smale Department of Recreation and Leisure Studies, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.

Joseph A. Tindale Department of Family Relations and Applied Nutrition, University of Guelph, Guelph, Ontario, Canada N1G 2W1.

K. Victor Ujimoto Department of Sociology and Anthropology, University of Guelph, Guelph, Ontario, Canada N1G 2W1.

Gail Whiteford School of Occupational Therapy, Auckland Institute of Technology, Private Bag 92006, Auckland 1020, New Zealand.

Ann Wilcock School of Occupational Therapy, University of South Australia, Adelaide, South Australia 5000.

Jiri Zuzanek Department of Recreation and Leisure Studies, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.

Preface

Despite the fact that, for most of us, time is a central focus of our lives, the examination of what we do with our time and why has received limited attention as a method for understanding human behavior in the social sciences. Humans' view and use of time shows tremendous variation, including across cultures and with age, lifestyle, and gender. For many of us, a sense of time is ever-present. We speak of time as a commodity, a resource, an ally, an enemy, and a gift. It may be on our side, on our hands, with us, or against us. We perceive it to change speeds (dragging vs. flying vs. standing still) and lest it get away on us, we attempt to harness and control it with clocks, schedules, and deadlines. We describe our use of time in a myriad of ways: we spend it, save it, waste it, kill it, give it, take it, and grab it.

The impetus for this book grew from a three-day research symposium where established time use researchers from a variety of disciplines from Canada, the United States, Finland, Australia, and New Zealand gathered together to merge their knowledge and resources to collaborate in examining the relationship between human time utilization and health and well-being. We gratefully acknowledge the financial support for the symposium received from the Government of Canada's Program for International Research Linkages and M. Powell Lawton, without whose support and encouragement this book would likely not exist.

The purpose of this book is both to instruct and to demonstrate the use and variety of applications of time use methodology. It is multidisciplinary, multinational, and multicultural. The contributors are experts in their fields. Students of research in the social sciences will find that the breadth and detail of the text make it a particularly useful research resource. Similarly, the book will appeal to experienced research scholars who may

be less familiar with this particular methodology and its potential application to their research questions.

The first section presents information for planning and conducting time use research and the analysis of the data. In Chapter 2, Andrew Harvey discusses various important considerations and provides clear guidelines for sampling and diary construction, including how to include various subjective and contextual variables. Coding and file setup of time-diary data are critical steps in this research process and both are covered in detail in this chapter. Various analysis issues are then reviewed, including the calculation of descriptive characteristics of time use (duration, participation, activity sequences) and contextual features (deriving activity settings through the use of hypercodes, episode sampling).

In Chapter 3, John Robinson provides a brief history of the use of time use methodologies in Canada and the United States. He provides in-depth information regarding the reliability, validity, and limitations of various types of time use data. Multivariate analysis is then outlined and the examination of contextual variables is demonstrated.

William Michelson, in Chapter 4, focuses on less conventional applications of time use research. He illustrates how time use data and associated contextual information can be used to try to understand and explain how human's everyday contexts impact on their time use. Examples are given, including the influence of physical environment contextual variables (housing, neighborhoods, urban infrastructure) on socialization and understanding working mothers' time use by including subject emotion variables (perceived tension, perceived control, perceived available time or "busyness").

The intent of the second section is to expose readers to the wide variety of existing applications of time use methodology and, we hope, stimulate researchers' thinking and awareness of how the methodology may be a valuable tool to apply for answering their research questions. In Chapter 5, Powell Lawton, long recognized for his work in gerontology, discusses the unique issues and considerations when applying time-budget methods to research with the elderly. He then gives detailed guidelines and illustrations of the use of time budgets to understand the elderly's psychological perceptions of time use and its influence on their life satisfaction and well-being.

Time use data are powerful illustrators of role behavior and lifestyle. Examples of such illustrations are discussed in Chapters 6–8. Jiri Zuzanek and Bryan Smale describe how they used time use data to examine the relationships between life cycle, daily time use, and weekly rhythms of everyday life. In Chapter 7, Joseph Tindale examines the temporality of family and the life cycle and the adaptations people must make to different

stages. He outlines the changes in the meaning of time that result from the impacts of various life-cycle events such as employment, unemployment, and becoming a parent. In Chapter 9, Wendy Pentland and Mary Ann McColl discuss important considerations for conducting time use research with persons with disabilities and provide an example of research comparing time use between persons with, and those without, severe physical disabilities.

The impact of culture on lifestyles and behavior can be examined with time use methodologies. Chapters 9–11 provide examples of time use research from Australia and New Zealand, and with elderly people from ethnic minorities. Ann Wilcock discusses the influence of biological necessity and sociocultural influences on our use of time and considers the potential benefits of applying quantitative and qualitative methods to the understanding of human time use.

Each culture has its own view and concept of time. This is an essential consideration before planning to conduct time use research in countries where routines and the time of day are marked not by clocks and minutes, but by the sun, the moon, the tides, or body needs (hunger, fatigue). Time use data collection methods should be considered ethnospecific in that techniques that work in one culture may fail miserably in others unless major methodological modifications are made. Chapter 10 by Gail Whiteford and Mike Barns clearly illustrates this issue. In their chapter, the meaning of time both now and prior to colonial contact is presented from the perspective of the Maori, who are the indigenous people of Aotearoa (New Zealand). They outline the inherent dangers in applying traditional time use data collection techniques across cultures and suggest recommendations for methodological modifications.

In Chapter 11, Victor Ujimoto also addresses cross-cultural issues related to time use research in gerontology. Examples of issues and refinements are given through the presentation of a number of his studies examining aging of persons from ethnic minorities in Canada. Jerry Singleton, in Chapter 12, provides an example of the application of time use methods to a very specific population; leisure behaviors in the elderly and those with Alzheimer's disease. Cognitive deficits in this latter population present significant challenges to data validity and reliability and the reader will find the strategies outlined very useful.

Finally, in Chapter 13, Pentland and Harvey outline the current issues, challenges, and future trends for time use research. The intent of this final chapter is to allow readers to put what they have learned about time use research into context and see both its strengths and those areas where time use research needs to develop further.

We hope that this book will clearly show the unique, adaptable, and

cross-discipline applications of time use research methods and provide readers with the basics to begin research with this method. It is our belief that as we learn more about the complexity of human behavior, individually and socially, time use research techniques will become an increasingly invaluable tool that researchers in the social sciences cannot overlook.

Contents

I. INTRODUCTION

Chapter 1. Time Use Research	3
<i>Andrew S. Harvey and Wendy Pentland</i>	
Introduction	3
What Is Time Use Research?	3
Historical Development of Time Use Studies	5
Applications of Time Use Data	8
Summary	14
References	14
Chapter 2. Guidelines for Time Use Data Collection and Analysis	19
<i>Andrew S. Harvey</i>	
Introduction	19
Collection Guidelines	20
Data-File Editing and Creation	25
Analysis Issues	27
Conclusions	42
References	42
Chapter 3. The Time-Diary Method: Structure and Uses	47
<i>John P. Robinson</i>	
Uses of Diary Data	48
Features of the Diary Method	54
The Zero-Sum Character of Time	55

Measuring How People Spend Time	56
Previous Time-Diary Studies	64
Diary Studies in Canada	67
Activity Coding	68
Procedures to Analyze Time-Diary Data.....	69
A Larger Multivariate Model	77
Methodological Properties of Time Diaries	80
Summary and Conclusions.....	83
Appendix: Methodology of the 1965–1985 Americans' Use of Time Projects	84
References.....	87

**Chapter 4. Analysis and Exploration of Meaning and Outcomes
in Connection with Time Use Data** 91

William Michelson

Introduction.....	91
Two Purposes of Time Use Research: Descriptive Patterns and Indicators of Meaning	92
Four Ways to Study Meaning and Outcomes.....	93
Concluding Comments	103
References	104

**II. USING TIME USE RESEARCH
TO EXAMINE LIFESTYLE VARIABLES**

A. Quality of Life

**Chapter 5. Methods and Concepts for Time-Budget Research
on Elders** 107

M. Powell Lawton

Introduction.....	107
Methodological Issues.....	108
Psychological Aspects of Time Use.....	117
Conclusions.....	122
References	123

B. Roles and Lifestyles

**Chapter 6. Life-Cycle and Across-the-Week Allocation of Time
to Daily Activities** 127

Jiri Zuzanek and Bryan J. A. Smale

Review of Literature.....	128
---------------------------	-----

CONTENTS	xiii
Statement of the Research Problem	135
Database and Operationalization of the Variables.....	135
Data Analyses.....	137
Discussion	145
Conclusions.....	149
References	151
Chapter 7. Variance in the Meaning of Time by Family Cycle. Period, Social Context, and Ethnicity.....	155
<i>Joseph A . Tindale</i>	
The Times of Our Lives	155
Work and Family: Balancing Time	158
Becoming a Parent: Cohort Changes in Appropriate Timing... ..	159
Responses to Unemployment in Different Family Life-Cycle Periods.....	161
Getting On and Getting Along	162
Conclusions about Family Life-Cycle Flexibility	165
References.....	167
Chapter 8. Application of Time Use Research to the Study of Life with a Disability.....	169
<i>Wendy Pentland and May Ann McColl</i>	
Introduction	169
What Is Meant by Time Use?.....	170
The Relationships among Time Use, Health and Well-Being... ..	171
What Is Known about Time Use and Variables Relevant to Persons with Disabilities?.....	173
Relationships between Disability and Use of Time	173
Methodological Considerations When Examining Use of Time in This Population.....	178
References.....	183
<i>C . Culture</i>	
Chapter 9. Biological and Sociocultural Perspectives on Time Use Studies.....	189
<i>Ann Wilcock</i>	
Biological and Sociocultural Temporality.....	190
Research Paradigms.....	194
Integrating Research Approaches.....	198
Data Collection Methods.....	200

Summary	208
References	208
Chapter 10. Te Ao Hurihuri: New Zealand's First Time	211
<i>Gail Whiteford and Mike Barns</i>	
Traditional Time	212
The Colonial Experience	215
Aotearoa Now: Time and Time Use in Contemporary New Zealand	220
Ka Awatea: The Dawning	227
References	229
Chapter 11. Time Budget Methodology in Social Science Research Ethnicity and Aging	231
<i>K. Victor Ujimoto</i>	
Introduction	231
Time-Budget Methodology for Gerontology	236
Refinements in Time-Budget Methodology	238
Conclusion	240
References	241
III. CONCLUSION	
Chapter 12. Lessons from Leisure-Time Budget Research Implications for Practice	245
<i>Jerome F. Singleton</i>	
Background	245
Time Budget	246
Time Budget and Older Persons	247
Implications for Practice	248
Therapeutic Recreation	249
Alzheimer's Disease	251
Conclusions	255
References	255
Chapter 13. Future Directions	259
<i>Wendy Pentland and Andrew S. Harvey</i>	
Overview	259
Applications	261

CONTENTS

xv

Theoretical and Methodological Issues.....	264
References	267
Index	269