

TABLE OF CONTENTS

INTRODUCTION	1
METHODOLOGY	2
STRUCTURE OF THE DOCUMENT	6
CHAPTER ONE. DEMOCRATIZATION, TECHNOLOGY AND SCIENCE SHOP WORK: THE EXAMPLE OF THE DTU SCIENCE SHOP	9
INTRODUCTION	9
1. THE SCIENCE SHOP MOVEMENT	12
1.1. Origins and development of the movement in the Netherlands	12
1.2. Spreading to other countries and building up the Living Knowledge network	13
1.3. An attempt of classifying the diversity of science shops.....	20
2. SCIENCE SHOP WORK AND THE DEMOCRATIZATION OF SCIENCE AND TECHNOLOGY.....	24
2.1. Perspectives on science shops and democracy – the strong democracy discourse	24
2.2. Critiques of the role of science shops in the democratization of science and technology.....	27
2.3. Science shops versus other forms of participation in science and technology	29
3. THE SCIENCE SHOP OF THE TECHNICAL UNIVERSITY OF DENMARK	35
3.1. The DTU Science Shop's trajectory	37
3.1.1. The beginnings: the Interdisciplinary Center	37
3.1.2. The conversion to a department-based science shop	40
3.1.3. The Science Shop's position at the DTU today.....	42
3.1.4. The DTU Science Shop's perspective on its work today.....	46
3.2. The parallel evolution of the DTU urban ecology research and teaching unit.....	47
3.3. The day-to-day work of the Science Shop	50
CONCLUSIONS	53

CHAPTER TWO. THE DEMOCRATIC SIGNIFICANCE OF THE DTU SCIENCE SHOP'S SELECTION OF REQUESTS	55
INTRODUCTION	55
1. DISCREPANCIES BETWEEN THE 'STRONG DEMOCRACY' PERSPECTIVE AND THE DTU SCIENCE SHOP'S PRACTICE.....	56
1.1. The selection of requests is a complex task	56
1.2. An apparent strong democracy perspective	58
1.3. The selection criteria in action	61
1.3.1. The range of accepted groups and issues	61
1.3.2. The re-configuration of requests into demands	65
1.3.3. Zooming in: The community groups of two research processes in the light of the criteria...	69
1.4. Preliminary conclusions on the democratic significance of the selection criteria	80
2. SCIENCE SHOP WORK AS 'ISSUE ARTICULATION'	81
2.1. Issues as occasions for democratic dynamics.....	81
2.2. The DTU Science Shop's qualification work in the light of issue articulation.....	85
2.2.1. The demand-driven approach as a mechanism for getting access to issue-publics dynamics	85
2.2.2. The qualification of demands: the extraction of the public from the private	87
2.3. Guiding questions for the analysis of the DTU Science Shop's promotion of community-based research.....	89
2.3.1. The democratic effort involved in community-based research	90
2.3.2. The mediating role of the DTU Science Shop.....	90
CONCLUSIONS	91
 CHAPTER THREE. A COMMUNITY-BASED RESEARCH PROCESS FACILITATED BY THE DTU SCIENCE SHOP: THE VANLØSE COLLABORATION	 93

INTRODUCTION	93
1. THE FIRST STEPS AND THE MEDIATING ROLE OF THE SCIENCE SHOP	94
1.1. The transformation of a request into a 'demand' and a project definition	94
1.1.1. The configuration of a first demand and a first project	94
1.1.2. The definition of a second project	98
1.2. Analysis of the definition process from the perspective of issue articulation	103
2. 'INDEPENDENT AND PARTICIPATORY'? THE RESEARCH PROCESS	106
2.1. Following the steps of student-driven research	106
2.1.1. Reviewing theory and Copenhagen's planning strategy	107
2.1.2. Adopting a theoretical position.....	110
2.1.3. Analyzing the problem – and reducing it to a manageable complexity.....	111
2.1.4. Elaborating proposals with 'inspirations' from the residents and the community group.....	113
2.2. The research process from the perspective of issue articulation	119
3. ASSESSING 'IMPACTS'.....	125
3.1. Research outcomes: actors and collaborations.....	125
3.1.1. The students: learning about their discipline.....	126
3.1.2. The supervisor: a contact to 'reality'	127
3.1.3. The Science Shop's team: networking.....	128
3.1.4. The community group: 'inspirations' for ongoing negotiations.....	129
3.2. The collaboration's outcomes in terms of issue articulation	133
4. THE EVOLUTION OF THE RESEARCH PROCESS FROM THE PERSPECTIVE OF ISSUE ARTICULATION	136
CONCLUSIONS	140
 CHAPTER FOUR. A REFLEXIVE ANALYSIS OF A FIRST-HAND EXPERIENCE IN COMMUNITY-BASED RESEARCH: THE TALLER DE BARRIS	 141
INTRODUCTION	141

1. THE BEGINNINGS: BRINGING TOGETHER DIFFERENT TRAJECTORIES IN A 'PILOT PROJECT'.....	143
1.1. The constitution of the project.....	143
1.2. The Taller de Barris as a pilot project: combining two issues?.....	147
2. PHASE 1	148
2.1. Establishing objectives and a working routine, exploring the district.....	148
2.1.1. The first draft of the project definition	148
2.1.2. The first steps of the Taller de Barris	151
2.1.3. Confronting ideas in a participatory workshop: the 'Taller de Ideas'	152
2.1.4. Parallel projects by students of the Universidad Politécnica de Valencia	157
2.2. Exploring the issue potential of the Velluters district	158
3. PHASE 2	162
3.1. Preparing the ground for the emergence of concrete projects	162
3.1.1. The team grows and its expertise diversifies	162
3.1.2. The process focuses on data gathering and its visualization	163
3.1.3. Communicating results in a second workshop and making proposals	166
3.1.4. The academic side of the Taller de Barris.....	169
3.2. Visualizing the district's potential in terms of issue articulation.....	172
4. PHASE 3	174
4.1. Focusing on one project and handing the process over.....	174
4.1.1. A concrete opportunity becomes the group's focal point	174
4.1.2. The relationship with the association turns conflictive	177
4.1.3. Setting the stage for a participatory dynamic.....	178
4.1.4. After the Taller de Barris: uses and open threads.....	181
4.2. An open-ended articulation.....	183
5. A REFLEXIVE EVALUATION OF THE RESEARCH PROCESS.....	185
5.1. Adopting a reflexive approach.....	185

5.2. Choices and uncertainties in issue articulation	189
5.2.1. The issue - between definition and exploration.....	192
5.2.2. Articulation – a co-creation of knowledge and identities?	193
5.2.3. The identity question in the Taller de Barris	196
CONCLUSIONS	198
 CHAPTER FIVE. EVALUATION FOR EXPERIMENTATION.....	 199
INTRODUCTION	199
1. SCIENCE SHOP WORK IN THE LIGHT OF DEMOCRACY	201
1.1. Revisiting the 'strong democracy' perspective on science shop work: representation through intermediation.....	201
1.2. No guarantee of representativity, no intermediation!.....	205
1.3. An issue-centered democracy perspective.....	207
1.3.1. Issues and publics instead of an abstract 'public interest'	208
1.3.2. Collaborative research as issue articulation.....	209
1.3.3. The science shop's role as a positioned mediator	211
2. A FRAMEWORK FOR EVALUATION: ISSUES, ARTICULATION AND MEDIATION	213
2.1. Principles for evaluation	216
2.2. Engaging with issues and publics.....	217
2.2.1. Defining what counts as 'issues'	217
2.2.2. Getting to the issues and their publics through both a demand-driven and a proactive approach	220
2.2.3. Selecting 'good' issues and publics.....	221
2.3. The articulation of issues and publics through collaborative research.....	224
2.3.1. Framing the issue for collective exploration	224
2.3.2. Defining confrontational expertise	226
2.3.3. Opening while being constructive: useful results versus public-ization	229
2.4. Being a mediator of issue articulation	233

2.4.1. Exploring frames for critical collaborative research.....	234
2.4.2. Delegating the articulation while staying responsible for it	238
2.4.3. Being the promoter and the object of experimentation.....	242
2.5. Synthesis of the dimensions of evaluation	245
CONCLUSIONS	246
 CONCLUSIONS.....	 249
 REFERENCE LIST	 255
 APPENDICES	 271
APPENDIX A - DTU SCIENCE SHOP.....	273
1. LIST OF INTERVIEWS	273
2. DOCUMENTS DTU SCIENCE SHOP	275
2.1. Schedule for the second project of the Vanløse collaboration resulting from the start-up meeting.....	275
2.2. Article in DTU newspaper (Plougheld, 2006).....	276
APPENDIX B - TALLER DE BARRIS.....	279
1. LIST OF INTERVIEWS / MEETINGS.....	279
2. DOCUMENTS.....	280
2.1. First draft of the Project.....	280
2.2. Results of the SWOT workshop:.....	284
2.3. A version of the matrix crossing the SWOT results with the principles of bioclimatic urbanism	287
2.4. Working document with categories and variables defined for the data gathering	289
2.5. Map about the equipments in the district.....	290
2.6. A selection of further maps.....	291
2.7. Results from the second workshop.....	299

2.8. Full-sized version of figure 4.7	300
2.9. Full-sized version of figure 4.8	301