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# Towards a Value-Based Theory of Sustainability Framing

Tetyana Loskutova

A thesis submitted to the faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, in fulfilment of the Degree of Doctor of Philosophy

Johannesburg, 2017

# DECLARATION

I hereby declare that this thesis is my own unaided work except where due recognition has been given. It is submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree in any other university.

Tetyana Loskutova

Johannesburg

__ _____ 2017

# ABSTRACT

The goal of this research was to develop a comprehensive theoretical perspective on values and framing of sustainability in the context of strategic transformation in an organisational field. This perspective aimed to address the gap in understanding of the role of values within and across framing levels in the sustainability discourse.

The goal of this research was accomplished in two stages. Firstly, a conceptual review of the previous research was used to develop an initial model of the value-based framing of sustainability. Secondly, a case study based on framing analysis was conducted to verify the model. To accommodate the diversity of framing sources, a framing analysis methodology was developed based on the previous methodologies of value elicitation and framing research.

The results confirmed the usefulness of the framing analysis in understanding the meaning construction and the outcomes of change, conflict, or resistance to change in strategic transformation. Additional insights from the empirical case revealed both value-framing divergence and convergence and the influence of the roles of frame actors in such processes. The framing analysis also indicated that some values might be associated with silencing sensemaking.

The original contribution is three-fold. Firstly, an integrated model was developed based on the conceptual synthesis and the case study. The model differentiates sensemaking, sensegiving, and silencing sensemaking as sub-processes within the framing mechanism of sustainability transformation. The model clarifies the role of values as inputs, outputs, and strategic devices. The model outlines the processes of value-framing divergence and convergence. This model forms the foundation for the value-based theory of sustainability framing. Secondly, a new approach to framing analysis was developed that facilitates analysis of diverse communication styles in a comparable way. Thirdly, this research resulted in the development of an agenda for the advancement of the value-based theory.

*Keywords:* framing analysis, meaning construction, sustainability meaning, value-framing, values.

# ACKNOWLEGDMENTS

I want to acknowledge multiple contributions and influences that helped me through my work. Firstly, my parents, Valentina and Stephan Loskutov gave me a head-start by filling my childhood home with works of grand philosophical masters including Kant, Nietzsche, Marx, Sartre, just to name a few. Secondly, great writers of all times instilled in me a strong belief in the immense power of the written word, the power that easily transcends generations. Thirdly, all my teachers, formal and informal, kindled in me the passion for knowledge. I am particularly thankful to my supervisor, Anthony Stacey, who helped me to stumble upon my topic and facilitated my work without restricting my aspirations. I am grateful to Larry Martin who continually inspired me with his love for our beautiful planet and the desire to let it breathe; Larry also introduced me to many critical works that shaped this work. I appreciate the contribution of the listeners to my presentations at the Academy of International Business Conference in 2015, International Conference of Cleaner Production and Sustainable Consumption in November 2015, and the International Society for Ecological Economics conference in June 2016, whose comments helped to shape the transdisciplinary nature of this work.

And lastly, my warmest regards go to Jade, Zenzi, and Ginger, my Zen masters, who patiently taught me equanimity.

# TABLE OF CONTENTS

DECLARATION ..... II

ABSTRACT ..... III

ACKNOWLEGDMENTS ..... V

TABLE OF CONTENTS ..... VI

LIST OF TABLES ..... XIV

LIST OF FIGURES ..... XV

LIST OF ABBREVIATIONS ..... XVI

CHAPTER 1 - INTRODUCTION ..... 1

1.1 Problem Statement and Context ..... 5
1.1.1 Organisational field ..... 6
1.1.2 Sustainability meaning construction ..... 6
1.1.3 Frames ..... 7
1.1.4 Values ..... 8
1.1.5 Values, framing, and sustainability ..... 9
1.2 Purpose Statement ..... 11
1.3 Research Approach ..... 12

CHAPTER 2 - CONCEPTUAL REVIEW ..... 14

2.1 Institutional Theory of Organisations ..... 14
2.2 Sustainability: Definition, Meaning, Framing ..... 16
2.2.1 Meaning construction through framing ..... 19
2.2.2 Stages of meaning construction ..... 21
2.2.3 Meaning of sustainability in a participative approach ..... 23
2.3 Strategic Organising ..... 24
2.3.1 Stakeholder theory ..... 25
2.3.2 Corporate Social Responsibility ..... 26
2.3.3 Marketing and consumer choice ..... 27
2.3.4 Sustainable market creation ..... 29
2.3.5 Sustainability programmes as organisational field ..... 30
2.4 Framing Analysis and Levels ..... 34
2.4.1 The potential of framing analysis ..... 36
2.4.2 Shared frames and frame divergence ..... 38
2.4.3 Cross-level framing in social change ..... 39
2.4.4 Values and other factors in strategic sustainability framing ..... 41

2.5 Theories of Values....44
2.5.1 Meanings of values....45
2.5.2 Organisation of values....46
2.5.3 Values and change....48
2.5.4 Value-framing....50
2.6 Sustainability Framing and Values....51
2.6.1 The prospect of sustainable values....52
2.6.2 Themes of values in sustainability framing research....53
2.6.3 Agreements and disagreements on the role of values in sustainability framing....58
2.7 Model for Analysis of the Role of Values in the Framing of Sustainability62
CHAPTER 3 - METHODOLOGY....67
3.1 Knowledge Gap....67
3.2 Ontological and Epistemological Position....68
3.3 Research Scope....70
3.4 Research Design....71
3.4.1 The choice of the amount of case studies....72
3.4.2 Criteria for case selection....74
3.5 Research Strategy....77
3.6 Previously Used Methods of Framing and Values Research....81
3.7 Quality Criteria....95
3.7.1 Quality in qualitative research....95
3.7.2 Source bias....96
3.7.3 Reflexivity....97
3.7.4 The quality of value analysis....98
3.7.5 Framing quality....99
3.7.6 Generalisability and transferability....100
3.8 Methodological Development....101
3.8.1 Content analysis....104
3.8.2 Qualitative versus quantitative analysis....105
3.8.3 Framing analysis method extension....106
CHAPTER 4 - METHOD....111
4.1 Case selection....111
4.1.1 The Feed-in Tariff programme in Los Angeles....111
4.1.2 A utility death spiral as an example of the transformation of an organisational field....115
4.2 Selection of Sources....116
4.2.1 Scientific communication....119
4.2.2 Public news media, social media, and the programme's news media120
4.2.3 Government communication....123
4.2.4 Data management....123
4.3 Data Analysis....124

4.3.1 Codebook development ..... 125
4.3.2 Qualitative content analysis ..... 126
4.3.3 Open qualitative coding ..... 128
4.3.4 Axial coding ..... 128
4.3.5 Value-mapping ..... 130
4.3.6 Framing analysis ..... 137
4.4 Theory Development ..... 138
CHAPTER 5 - FIRST-ORDER FINDINGS. CROSS-SOURCE FRAMING SUMMARY AND COMPARISON ..... 140
5.1 Time-Bound Framing ..... 141
5.2 The FiT as a Part of Sustainable Development ..... 148
5.3 Frame: Social Participation ..... 149
5.3.1 Local benevolence in the social participation frame ..... 150
5.3.2 Transparency as a requirement for social participation ..... 151
5.3.3 Fairness in participation ..... 152
5.4 Frame: LADWP's Ineffectiveness ..... 154
5.5 Frame: Regulations ..... 155
5.5.1 Rationality of regulations ..... 156
5.5.2 Regulating the decision-making power ..... 157
5.5.3 Local benevolence and self-direction ..... 157
5.6 Frame: Costing of the FiT ..... 158
5.6.1 Economic rationality in the tariffs' assessment ..... 159
5.6.2 Fairness and transparency of the Feed-in Tariff ..... 159
5.7 Frame: Local Development ..... 160
5.7.1 Power and control versus benevolence and self-direction ..... 162
5.7.2 Local development as an achievement ..... 162
5.7.3 Sustainability of the economy ..... 163
5.8 Frame: Environment and Location ..... 164
5.8.1 Neighbourhood solidarity ..... 164
5.8.2 Beauty and the preservation of nature ..... 165
5.9 Contributions of Values in Reasoning ..... 165
5.10 Contributions of the Framing Analysis ..... 176
5.10.1 Frame element of actors' roles ..... 176
5.10.2 Quotation analysis ..... 177
5.10.3 Emotional analysis ..... 178
5.10.4 Limitations of the frames ..... 178
5.10.5 Contradictions and reframing ..... 180
5.10.6 Patterns of silencing sensemaking ..... 181
5.10.7 New meanings that emerged from framing ..... 184
5.10.8 The meanings of "sustainability" and "sustainable" ..... 186
5.11 First-Order Findings' Summary ..... 187
CHAPTER 6 - SECOND-ORDER FINDINGS. THE UNDERLYING

CONCEPTUAL STRUCTURE ..... 188

6.1 Methodological Contribution ..... 189
6.2 The Evolution of the Research Questions ..... 193
6.3 Structural Arrangement of Problems in Frames ..... 199
6.4 The Utility and City Transformation ..... 202
6.4.1 Attitude to change ..... 203
6.4.2 Strategic change phasing ..... 204
6.4.3 Factors of success and failure ..... 208
6.5 Meaning Construction in an Organisational Field ..... 211
6.6 Roles of Framing Participants ..... 213
6.7 Second-Order Findings' Summary ..... 214

CHAPTER 7 - VALUE MODEL ..... 215

7.1 The Contributions of Values ..... 215
7.2 Value Conflicts and Contradictions in Framing ..... 222
7.3 Combined Effects of Values and Emotions in Framing ..... 223
7.4 The Significance of Value Classifications ..... 225
7.4.1 Self-transcendence ..... 225
7.4.2 Social, environmental, and economic value lenses ..... 226
7.5 The Role of Values in the Framing of Sustainability ..... 228
7.5.1 The empirically derived value-based model of sustainability framing 231
7.5.2 Value-framing construct: Divergence and convergence ..... 234
7.5.3 Summary of theoretical contribution ..... 236
7.6 Value-Model Chapter Summary ..... 237

CHAPTER 8 - CONCLUSIONS ..... 238

8.1 Implications for Academic Scholarship ..... 239
8.1.1 The addressed knowledge gaps ..... 240
8.1.2 Applicability of this research ..... 241
8.2 Implications for Governance ..... 243
8.3 Implications for the Public ..... 244
8.4 Limitations of this Research ..... 246
8.5 Recommendations for Future Research ..... 249
8.6 Summary of Conclusions ..... 251

LIST OF REFERENCES ..... 252

APPENDIX A. TIMELINE OF EVENTS IN THE FIT PROGRAMME ..... 295

APPENDIX B. RESEARCHER'S RELATION TO THE CASE ..... 303

APPENDIX C. LIST OF SOURCES ..... 304

APPENDIX D. FRAMING IN THE LABC'S MEDIA.....317

D.1. LABC's Portrayal of the FiT .....317
D.2. LABC's Frames: Regulations.....317
D.2.1. LABC's definition of the regulations problem.....318
D.2.2. LABC's causal interpretation in the regulations frame.....319
D.2.3. LABC's proposal of treatment for regulations frame.....321
D.2.4. The role of values in the LABC's regulations frame .....322
D.2.5. Actors' roles in the LABC's regulations frame.....323
D.3. LABC's Frames: LADWP's Ineffectiveness.....323
D.3.1. LABC's definition of the LADWP's ineffectiveness problem .....324
D.3.2. LABC's causal interpretation in the frame of LADWP's ineffectiveness .....325
D.3.3. LABC's proposal of treatment of the LADWP's ineffectiveness .326
D.3.4. Actors' roles in the LABC's frame of the LADWP's ineffectiveness326
D.3.5. The role of values in the LABC's frame of the LADWP's ineffectiveness .....326
D.4. LABC's Frames: Local Development .....327
D.4.1. LABC's definition of the problem of local development.....327
D.4.2. LABC's causal interpretation in the local development frame .....327
D.4.3. LABC's proposal of treatment of the local development problem328
D.4.4. Actors' roles in the LABC's frame of local development.....329
D.4.5. The role of values in the LABC's frame of local development ....329
D.5. LABC's Frames: Social Participation.....330
D.5.1. LABC's definition of the social participation problem.....330
D.5.2. LABC's causal interpretation in the social participation frame ....331
D.5.3. LABC's treatment for the problem of social participation.....331
D.5.4. Actors' roles in the LABC's frame of social participation.....333
D.5.5. The role of values in the LABC's frame of social participation ...333
D.6. LABC's Frames: Costing of the FiT.....333
D.6.1. LABC's definition of the FiT costing problem .....333
D.6.2. LABC's causal interpretation in the costing of the FiT frame .....334
D.6.3. LABC's treatment for the costing problem.....335
D.6.4. Actors' roles in the LABC's frame of the FiT costing .....336
D.6.5. The role of values in the LABC's frame of the FiT costing.....336
D.7. LABC's Frames: Environment and Location .....336
D.7.1. LABC's definition of the environment and location problem.....336
D.7.2. Causal interpretation of the frame of environment and location in the LABC's reports.....336
D.7.3. LABC's treatment of the frameof environment and location.....337
D.7.4. The element of actors' roles in the LABC's frame of the environment and location .....337
D.7.5. LABC's portrayal of the role of values in the frame of the environment and location .....338

D.8. Quotation Analysis of the LABC's Sources .....338
D.9. Emotional Analysis of the LABC's Sources.....339
D.10. Summary of Values in the LABC's Sources.....339
D.11. LABC's View of the Utility and City Transformation .....340
APPENDIX E. FRAMING IN THE FIT PROGRAMME'S MEDIA.....343
E.1. The Portrayal of the FiT in the programme's media.....343
E.2. The LADWP's website.....345
E.3. The FiT's Frames: Regulations.....345
E.3.1. The definition of the regulations problem in the FiT's media .....345
E.3.2. Treatment of the regulations problem in the FiT's media.....346
E.3.3. The role of values in the regulations frame in the FiT's media ....346
E.4. The FiT's Frames: LADWP's Ineffectiveness .....346
E.4.1. The treatment of the LADWP's ineffectiveness as discussed in the FiT's media.....346
E.4.2. The role of values in the LADWP's ineffectiveness frame discussed in the FiT's media.....347
E.5. The FiT's Frames: Local Development.....348
E.5.1. Causal interpretation of the problem of local development in the FiT's media.....348
E.5.2. Treatment of the local development problem in the FiT's media .349
E.5.3. Actors' roles in the local development problem in the FiT programme's media .....350
E.5.4. The role of values in the frame of local development in the FiT programme's media .....350
E.6. The FiT's Frames: Social Participation .....350
E.6.1. Causal interpretation of social participation problem in the FiT programme's media .....351
E.6.2. Treatment of social participation problem in the FiT's media .....352
E.6.3. The element of actors' roles in the social participation frame in the FiT programme's media .....353
E.6.4. The role of values in the social participation frame in the FiT programme's media .....353
E.7. The FiT's Frames: Costing of the FiT .....353
E.7.1. Causal interpretation of the costing problem in the FiT's media ..353
E.7.2. Treatment of the costing problem in the FiT's media .....354
E.7.3. Actors' roles in the costing frame in the FiT's media .....354
E.7.4. The role of values in the costing frame in the FiT's media.....355
E.8. The FiT's Frames: Environment and Location.....355
E.8.1. Causal interpretation and treatment of the problem of environment and location in the FiT's media .....355
E.8.2. The role of values in the problem of environment and location in the FiT's media.....356
E.9. Quotation Analysis in the FiT's media .....356

E.10. Emotional Analysis in the FiT's media.....357
E.11. Summary of the Role of Values in the FiT's media.....359
E.12. The Utility and City Transformation in the FiT's Media.....360
APPENDIX F. FRAMING IN THE PUBLIC MEDIA.....362
F.1. The Portrayal of the FiT in the Public Media.....362
F.2. The Public Media Frames: Regulations.....363
F.2.1. The definition of the regulations frame in the Los Angeles Times363
F.2.2. Causal interpretation of the frame of regulations in the discussion in the Los Angeles Times.....363
F.2.3. Treatment of the regulations frame in the Los Angeles Times.....364
F.2.4. Actors' roles in the regulations frame in the Los Angeles Times..365
F.2.5. The role of values in the discussion of the regulations frame in the Los Angeles Times.....365
F.3. The Public Media Frames: LADWP's Ineffectiveness.....366
F.3.1. The definition of the LADWP's ineffectiveness problem in the Los Angeles Times.....366
F.3.2. Causal interpretation of the LADWP's ineffectiveness frame in the Los Angeles Times.....367
F.3.3. The element of actors' roles in the LADWP's ineffectiveness frame in the Los Angeles Times.....368
F.3.4. The role of values in the LADWP's ineffectiveness frame in the Los Angeles Times.....368
F.4. The Public Media Frames: Local Development.....369
F.4.1. The definition of the problem of local development in the Los Angeles Times.....370
F.4.2. Causal interpretation of the frame of local development in the Los Angeles Times.....370
F.4.3. Treatment recommendation for the problem of local development in the Los Angeles Times.....370
F.4.4. The element of actors' roles in the frame of local development in the Los Angeles Times.....371
F.4.5. The role of values in the frame of local development in the Los Angeles Times.....371
F.5. The Public Media Frames: Social Participation.....371
F.5.1. The definition of the problem of social participation in the Los Angeles Times.....372
F.5.2. Causal interpretation of the frame of social participation in the Los Angeles Times.....372
F.5.3. Treatment recommendation for the problem of social participation in the Los Angeles Times.....373
F.5.4. The element of actors' roles in the frame of social participation in the Los Angeles Times.....374
F.5.5. The role of values in the frame of social participation in the Los Angeles Times.....374

F.6. The Public Media Frames: Costing of the FiT .....374
F.6.1. The definition of the costing problem in the Los Angeles Times .375
F.6.2. Causal interpretation of the frame of the FiT's costing in the Los Angeles Times .....375
F.6.3. Treatment recommendation for the FiT's costing problem in the Los Angeles Times .....376
F.6.4. The element of actors' roles in the FiT's costing frame in the Los Angeles Times .....377
F.6.5. The role of values in the costing frame in the Los Angeles Times377
F.7. The Public Media Frames: Environment and Location.....378
F.7.1. The definition of the problem of environment and location in the Los Angeles Times.....378
F.7.2. Causal interpretation of the problem of environment and location in the Los Angeles Times.....378
F.7.3. Treatment recommendation for the problem of environment and location in the Los Angeles Times.....379
F.7.4. The element of actors' roles in the frame of environment and location in the Los Angeles Times.....380
F.7.5. The role of values in the environment and location frame in the Los Angeles Times .....380
F.8. Quotation Analysis in the Los Angeles Times.....381
F.9. Emotional Analysis in the Los Angeles Times .....382
F.10. Summary of the Role of Values in the Los Angeles Times .....383
F.11. The Utility and City Transformation in the Los Angeles Times.....383

# LIST OF TABLES

Table 1 Framing Levels ..... 34

Table 2 Values in Sustainability Framing Research ..... 55

Table 3 Agreements and Disagreements on the Roles of Values and Framing in Sustainability ..... 59

Table 4 Research Gaps in Values and Framing of Sustainability ..... 60

Table 5 Themes of Values in Framing Processes ..... 63

Table 6 Previous Methods for Values and Frames Analysis in Text ..... 82

Table 7 Sources Used for Value and Frame Analysis ..... 90

Table 8 Codebook and Metric Examples ..... 91

Table 9 Methodological Problems and Suggested Solutions ..... 94

Table 10 Value Inference Example ..... 105

Table 11 Framing Devices ..... 110

Table 12 Classification of Sources ..... 118

Table 13 Value-Mapping ..... 131

Table 14 Development of Topics over the Years ..... 143

Table 15 Value-Based Reasoning ..... 166

Table 16 Summary of the Research Questions and Answers ..... 195

Table 17 Attitude to Change in the FiT Framing ..... 204

Table 18 The Role of Values in the Frames of the FiT ..... 217

# LIST OF FIGURES

Figure 1. Theoretical space for the value-based theory of sustainability framing .. 3

Figure 2. Conceptual background of sustainability framing ..... 16

Figure 3. Functionality of the sustainability concept ..... 19

Figure 4. Framing as a mechanism of sustainability meaning construction ..... 21

Figure 5. Processes of meaning construction ..... 23

Figure 6. Sustainability programmes as strategic change mechanisms ..... 31

Figure 7. An organisational field of a sustainability programme ..... 32

Figure 8. Value-framing as a mechanism of change ..... 49

Figure 9. Values in the conceptual background of sustainability framing ..... 52

Figure 10.Value-based model of sustainability framing resulting from the synthesis of previous research ..... 65

Figure 11. The structural arrangement of problems in the frames ..... 201

Figure 12. Value-based model of sustainability framing ..... 231

Figure 13. Value-framing convergence and divergence ..... 235

# LIST OF ABBREVIATIONS

| | |
|---|---|
| CALSEIA | California Solar Energy Industries Association |
| CEO | Chief Executive Officer |
| CPUC | California Public Utilities Commission |
| CSR | Corporate Social Responsibility |
| DOE | Department of Energy |
| DWP | Los Angeles Department of Water and Power |
| EERE | Energy Efficiency and Renewable Energy |
| FAO | Food and Agriculture Association |
| FAQ | Frequently Asked Questions |
| FiT (or FIT) | Feed-in Tariff |
| GHG | Greenhouse Gas |
| GM | Genetically Modified |
| kW | Kilowatt |
| kWh | Kilowatt-hour |
| LA (or L.A.) | Los Angeles |
| LABC | Los Angeles Business Council |
| LADWP (or LA DWP) | Los Angeles Department of Water and Power |
| MDG | Millennium Development Goals |

| | |
|---|---|
| MEM | Meaning Extraction Method |
| MW | Megawatt |
| NEM | Net Energy Metering |
| NGO | Non-Governmental Organisation |
| NREL | National Renewable Energy Laboratory |
| REFIT | Renewable Energy Feed-in Tariff |
| RPC | Renewable Portfolio Standard |
| RVS | Rokeach Value Survey |
| SIP | Solar Incentive Program |
| SOPPA | Standard Offer Power Purchase agreement |
| SPEED | Socio-Political Evaluation of Energy Deployment |
| SVS | Schwartz Value Survey |
| UCLA | University of California, Los Angeles |
| UN | United Nations |
| USC | University of Southern California |

# CHAPTER 1 - INTRODUCTION

> *Objective knowledge provides us with powerful instruments for the achievements of certain ends, but the ultimate goal itself and the longing to reach it must come from another source.…our existence and our activity acquire meaning only by the setting up of such a goal and of corresponding values. (Einstein, 1954, p. 42)*

This thesis started with a question: What do values contribute towards the goals of sustainable living? Immediately followed the questions: What are the existing values? What is sustainable?

The question of values has been addressed extensively in the previous literature, providing definitions and measurement criteria (e.g., Rokeach, 1973; Schwartz, 1994, 2003, 2006). However, the question of the role of values in the sustainability discourse has left many gaps in understanding.

The answers to the question of what is sustainable left more ambiguity. The definitions offered in the literature were vague (Boström, 2012), adjusted to context (World Commission on Environment and Development, 1987), or presented as obvious. In all these cases, the meaning of sustainability was left to the audience to define, evaluate, itemise, and prioritize. The typical areas of ambiguity in the definition of sustainability included temporal and spatial boundaries (Bell & Morse, 2013), and the identification of what to sustain and what to develop (Kates, Parris, & Leiserowitz, 2005). The presentation of the vague meaning of sustainability can be considered a frame in the sense of something that provides a structure for discourse and meaning construction.

To explain the above statement and its implication for further discussion, it is necessary to define framing and frames. Framing is everyday meaning construction (Goffman, 1974; Kaplan, 2008; Weick, Sutcliffe, & Obstfeld, 2005). The meaning perceived by the audience is a cognitive frame of sustainability. The meaning communicated in interactions is a communicative frame of sustainability.

These frames are different but they are not independent of each other. Frame creation is based on cultural and personal values of both frame creators and the targeted frame audience. When a novel frame is presented to the audience, the information is comprehended by the audience. This process is sensegiving (e.g., Foldy, Goldman, & Ospina, 2008; Gioia & Chittipeddi, 1991; Maitlis & Christianson, 2014). Further, the new frame is assimilated into the existing cognitive frames; this is another frame creation process, also called sensemaking (for a review, see Maitlis & Christianson, 2014). Sensegiving and sensemaking can result in the creation of new meaning and in grouping/organising of people in support of particular frames, which become more widely acceptable (e.g., Gioia & Chittipeddi, 1991). Widely accepted frames become cultural norms that are further reified in new institutions and result in institutional change (e.g., Bitektine & Haack, 2015; Gray, Purdy, & Ansari, 2015; Harmon, Green, & Goodnight, 2015). Sensegiving is often a sub-process of strategic framing, namely, framing that has explicit goals of organising and, sometimes, of institutional change (e.g., Fiss & Zajac, 2006; Gioia & Chittipeddi, 1991; Maitlis & Lawrence, 2007). Sensemaking, sensegiving, and organising happen in interactions between frame creators and the audience – the institutional actors that uphold, challenge, and create institutional structures.

The processes are often triggered by the realisation of the need to change the commonly accepted reality[1]. Through sensemaking of unsatisfactory reality, actors engage in a formulation of a new frame of strategic change (Fiss & Zajac, 2006; Maitlis & Christianson, 2014). They negotiate new meanings with the other institutional actors. If accepted, new meanings drive institutional change. Old meanings reinforce existing institutions, and the other way around (e.g., Benford & Snow, 2000). Sustainability, as a contextually defined concept, requires new frames and new meaning in every new context. Sustainability also requires a

[1] Reality in this thesis is understood as social reality, that is, a collection of commonly accepted understandings of the functioning of the world. These understandings may be contested. The potential of such understandings for the change of the physical reality was beyond the scope of this study.

cultural shift and institutional change, as scientists and governments agree that "business as usual" is not sustainable. The processes described above contribute towards the understanding of framing as a vehicle for institutional change. This understanding can be useful to scientists, practitioners, and policymakers. Scientists can use it as an analytical tool to understand the mechanisms of institutional change as a requirement for sustainable development (Kates et al., 2005). Practitioners in organisations can use it for communicating, organising, and achieving the voluntary and obligatory objectives of sustainability. Governments can apply this understanding for developing context-specific policies, which answer local needs and are supported by the population.

The framing processes identified above have been discussed in the research literature; however, an opportunity remains to unite these processes in a cohesive framework by explaining their sequences and interrelationships. The need for integration of conceptual systems has been highlighted by several authors (Cornelissen & Werner, 2014; Ritzer, 2001; Wallis, 2014). In this research, a perspective of values in framing is offered to bring together various lines of theorising in explaining sustainability framing processes (see Figure 1).

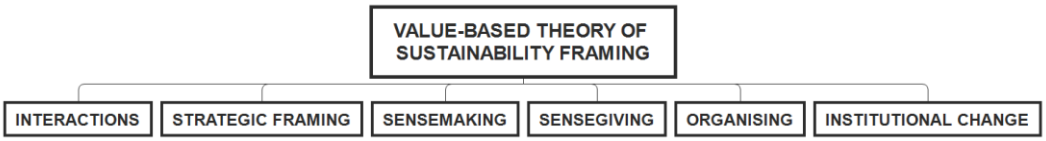



*Figure 1. Theoretical space for the value-based theory of sustainability framing*

Value-frames are powerful tools for meaning construction (Ball-Rokeach, Power, Guthrie, & Waring, 1990). Values underlie decision-making, including decisions on what should be included in sustainability framing, what is acceptable as sustainability, and what should be done. Thus, value-framing has the potential to provide a perspective to explain framing from its emergence in the mind of a frame creator to the potential end result of institutional change. However, value-frames have been called a contested concept (Ball-Rokeach et al., 1990): Different authors have given it a slightly different meaning. For example, Ball-Rokeach et al. (1990) concentrated on its legitimation power; Brewer and Gross (2005)

discussed its priming abilities; Chong and Druckman (2007) saw value-frames as a tool for shaping opinions, they criticised the existence of cognitive frames associated with values; Lee, McLeod, and Shah (2008) saw value-frames as a characteristic of conflict in the presentation of a policy issue. Ball-Rokeach et al. (1990) explained that a criterion composed of values, which was their definition of a value-frame, can be multidimensional.

Despite the popularity of framing analysis and the value-framing construct in the political and communication literature, the discipline of management lacks a value-based perspective on framing. Thus, this present research approached value-framing with the intention of clarifying the validity of this construct and its applicability for better understanding of organisational change and the potential of conscious application of value-framing in management communication. This was done from a theory-building perspective using search and interpretation of the role of values in framing processes of sustainability meaning construction. The data used included both previous research and an empirical example. In such an approach, the values in framing were seen as a multidimensional construct.

Firstly, a model of the influence of values was developed based on a review and synthesis of previous research. The model made the following propositions. As dependent variables, values are influenced by the established institutions. As strategic tools, values are used to persuade, motivate, justify certain behaviour, and support reasoning. As independent variables, values shape cognitive frames of sustainability of framing participants. Further, a framing analysis was applied in the context of the Feed-in Tariff (FiT) programme in Los Angeles to validate and advance this model. In this example, the Feed-In Tariff programme was analysed as an organisational field, its actors included public media, government, utility business, and the public. These organisational actors provided sources for the framing analysis. The sources were used in the within-source and cross-source analysis of values. Values were promoted and reinforced in communication from these sources. The commonality of values helped the transference of frames from one source to another. However, the commonality of values was shown to also

result in different interpretations of past and future action; this process was labelled *value-framing divergence*. At the same time, extant values that were ignored in the existing frames contributed towards the creation of new frames. In some cases, different values provided reasoning for the same actions; this process was labelled *value-framing convergence*. Finally, the initial model was improved and extended based on the findings from the empirical example. This is presented in Figure 12.

This emerging value-based theory of sustainability framing can assist in the understanding of the role of stakeholder values in the dynamic communicative processes of sustainability meaning construction and, at the same time, clarify the usefulness of uniting values and framing under one construct of *value-framing*. This theory aims to fill the gap in understanding of the role of values within and across framing levels as part of the transformation that organisations and society undergo facing sustainability demands.

## 1.1 Problem Statement and Context

> *We live in a time of massive institutional failure, collectively creating results that nobody wants. (Scharmer, 2007, p. 2)*

This research was an attempt to penetrate the collective reasoning reflected in multiple media sources and find answers to what could be preventing human civilisation from harmonious co-existence and development. The phenomenon addressed in this research was a transforming organisational field with the transformation initiated by sustainability requirements.

This research addressed the lack of a value perspective on sustainability framing as a process of interactive meaning construction under conditions of an imminent change and transformation. This perspective combined two viewpoints. The first viewpoint discusses values as the "missing pillar" (Burford et al., 2013, p. 3035) of sustainability. The second explains the complexity of the sustainability problem and the need for the contextual meaning construction of sustainability. The details

of the processes on intersection of these views are discussed in chapter two, with the result of the discussion being presented in Figure 10**Error! Reference source not found.**. The goal of this research was to provide a coherent explanation of these processes from a value-based perspective.

In this chapter, antecedents to the further reasoning are laid out in subtopics:

- Organisational field;
- sustainability meaning construction (sensemaking and sensegiving);
- framing of sustainability;
- values in sustainability.

### 1.1.1 Organisational field

This research was set in a context of a transforming organisational field. An organisational field includes organisations, their stakeholders, such as suppliers, customers, workers, related businesses, and the society (DiMaggio & Powell, 1983). It can also be defined as a programme and its actors (DiMaggio & Powell, 1983). The concept of an institutional field can be used synonymously with the concept of an organisational field (Scott, 2005) in cases where a particular organisation is in focus. The transformation of an organisational field discussed in this research is a result and an integral part of sustainability requirements imposed on organisations and society by society or other participating organisational actors.

### 1.1.2 Sustainability meaning construction

Sustainability, in this research, was viewed as a sustainable living and sustainable development that implies survival and development of human society (World Commission on Environment and Development, 1987). This definition is open to various interpretations. “Sustainability is a socially constructed phenomenon” (Christensen, Morsing, & Thyssen, 2015, p. 137), thus, the interpretations of

sustainability differ depending on the social situation and may call for different actions and outcomes, yet they have to be both supportive of the global goals of sustainable development and adjusted to the local needs (Bell & Morse, 2013; Van Der Sluijs et al., 2005). The locally adjusted questions are guided by decisions of what to sustain, what to develop, over what time, and within what boundaries (Bell & Morse, 2013).

Sustainability is a global problem. The understanding or sensemaking of sustainability is impeded by the inevitable complexity and uncertainty of global problems (Funtowicz & Ravetz, 1993, 2003; Kueffer et al., 2012). The goal of this research was not to propose a definition of sustainability but to enhance the understanding of how such definitions emerge and are filled with meaning. The emergence of such meaning was viewed within new interactional theories of institutions, where new meanings emerge through interactions within the organisational field and are constrained by existing context and institutional norms (DiMaggio & Powell, 1983; Myers, Maibach, Roser-Renouf, Akerlof, & Leiserowitz, 2013). Interactions involve an exchange of frames of understanding that are developed by the institutional actors in the process of sensemaking and are passed to the other actors through sensegiving. In the process of such an exchange, different degrees of conflict are possible and better understanding of the meaning construction process may be useful in mitigation of such conflicts.

Inevitably, the values of the actors are involved as part of the broad cultural norms, ideologies, and worldviews. As such, values contribute to the overarching frameworks of meaning, meaning construction, understanding, and enactment of reality (Horlings, 2015); these frameworks are also discussed as institutional structures (Scott, 2005).

### 1.1.3 Frames

Frames are meta-communicative messages that are present in every communication (Tannen, 1993). These messages provide an understanding of what is going on; for example, they allow the observer to distinguish playful

communication from serious (Goffman, 1974). Frames are also cognitive structures of concepts (also called schemata or cognitive frameworks). Cognitive frames define how communicative messages are understood (Lakoff, 2002). Cognitive frames also define behaviour on an individual level (Cornelissen & Werner, 2014). On the level of institutions and cultural practices, both cognitive and communicative frames underpin durable socially acceptable practices and meanings: "What people understand to be organization of their experience, they buttress, and perforce, self-fulfillingly…[in] a corpus of cautionary tales, games, riddles, experiments, newsy stories, and other scenarios which elegantly confirm a frame-relevant view of the workings of the world" (Goffman, 1974, p. 563). Thus, framing links language, cognition, and culture (Cornelissen & Werner, 2014) in the process of the construction of social reality. Socially accepted frames remain embedded in the institutions until these institutions disappear or change (Lakoff, 2010). In summary, framing and institutional or social change are interrelated.

Research on frames often adopts a variety of frame meanings (Cornelissen & Werner, 2014; Entman, 1993). In this research, the meaning of a frame was based on the definition proposed by Entman (1993): A frame is a package of elements that include problem definition, moral evaluation, causal links, proposed treatment, and elements that signify selectivity and increase salience. This definition was applied to communication to extract communicative frames. Other frame-related concepts (sometimes also labelled *frames*) were used to enhance frame extraction and analysis; these concepts included keying (Goffman, 1974), agenda setting, priming (Scheufele & Tewksbury, 2007), sensemaking (Weick, 1995a), and cognitive schemata (Entman, 1993).

### 1.1.4 Values

Values as part of value systems and ideologies are tightly linked to meanings of sustainability and sustainable development and our responses to them: "[V]alues speak essentially to what we care about most deeply, and hold important implications for our ability to respond to the economic, social, and environmental challenges of our time" (Marcus, 2010, p. 89). In particular, values influence

people's behaviour (Williams, 1979), and decisions (Krebs, 2008; Myyry, 2003).

Answers to the question of what to sustain are dependent on dominant values (Bond, Morrison-Saunders, & Pope, 2012; Norton & Toman, 1997) that define what is desirable and what are the preferred ways of achieving it. The widely known Brundtland Commission definition (World Commission on Environment and Development, 1987) expresses the goal of sustainable development to satisfy the needs of both current and future generations, thus emphasising the long-term value of sustainability. Another widely used definition includes economic, social, and environmental development (e.g., Ciegis, Ramanauskiene, & Martinkus, 2009). Economic, social, and environmental aspects of development are conflicting value lenses whose priorities should be established within the context.

### 1.1.5 Values, framing, and sustainability

The short introduction above defined the significance of meaning, framing, and values to the goals of sustainability. However, it did not explain in what way these concepts converge.

Framing is a tool for meaning construction, a central dynamic of social movements and institutional change (Benford & Snow, 2000). New frames draw attention to events and practices that require transformation. For example, Atanasova (2015) discussed how a television series in Britain became a trigger for people to make sense of their experience of obesity and frame it for themselves. The role of values within framing manifests itself in several ways.

Values provide direction for frames through “associating a value and a political issue in a certain direction” (Shen & Edwards, 2005, p. 798). Values facilitate understanding and construction of frames. Values in frames “are powerful and efficient tools for the organization and symbolic construction of the meaning of issues and events (stories)” (Ball-Rokeach et al., 1990, p. 256). Values increase the appeal of sustainability campaigns: Framing sustainability in different value terms makes it appeal to different social groups (Corner, Markowitz, & Pidgeon,

2014). This appeal can result in action, organising, social movements, and behaviour change. In contested issues, value-framing can be used to emphasise a particular value importance. For example, in the issue of compulsory AIDS testing for homosexual individuals, increasing the salience of public health values has been found to gain support for the compulsory testing; whereas increasing the salience of the value of freedom for the homosexual population has been found to gain opposition to the testing (Sniderman, Brody, & Tetlock, 1991). In this case, both values could be important for a particular individual and, in an abstract case, there should be no conflict between the values of health and civic liberties. However, in particular cases, such as described by Sniderman et al. (1991) and Chong and Druckman (2007), abstract values has been shown to come into conflict with the situation at hand. In a slightly different manner, value-framing has been shown to appeal to identity values to elicit uncharacteristic behaviour, such as environmental support from people with predominantly economic or social values, or vice versa (Corner et al., 2014; Evans et al., 2013; Price, Walker, & Boschetti, 2014; Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). Thus, explicitly linking communication messages to the identity values (Bolderdijk, Steg, Geller, Lehman, & Postmes, 2013) is a strategy used to invoke support and participation from individuals and groups characterised by different predominant values. Such a strategy relies on so-called framing effects that link human cognition and communication. The psychological roots of framing effects were explained by Kahneman and Tversky (1984) and further discussed in relation to cognition, political choices, and communication (e.g., Iyengar, 2005; Lakoff, 2008; Scheufele & Tewksbury, 2007). However, these framing effects are not always consistent and are dependent on the context (Shen & Edwards, 2005; Sonenshein, DeCelles, & Dutton, 2014). In an organisational context, the congruence of values in communication with personal values of the audience is linked to outcomes and behaviour, that is, the congruence is important for organising and behaviour change (Meglino & Ravlin, 1998). In this research, a phenomenological hermeneutic perspective[2] was adopted to research values and

[2] It is common in the phenomenological and hermeneutic traditions to write a research report from

framing within the context of a sustainability programme. The research focused on strategic change initiated through the programme and the role of values in frames that emerged in strategic meaning construction.

## 1.2 Purpose Statement

The goal of this research was to fill the gap in understanding the roles of values within and across framing levels in the context of an organisational field's transformation towards sustainability. This understanding aimed to contribute to institutional theory of organisations with a particular focus on organisational change and communication. By focusing on framing analysis, the research also contributed to the literature on framing.

The research explored the possibility of institutional change as part of sustainable development (Kates et al., 2005). This change happens with the aid of framing and sensemaking interlaced with values. Evidence of these processes can be traced in various media sources. The possibility of an institutional change through framing as sensemaking has already been discussed (Gioia & Chittipeddi, 1991; Kaplan, 2008). However, this research intended to extend this discussion and contribute to the literature on organisational change and framing as an approach to analysing organisational communication.

Firstly, this research sought to describe framing in different media sources, which provided different lenses on the organisational field. Secondly, this research intended to describe the role of values in these frames, their similarities and differences across sources. Thirdly, this research intended to develop a model of the contribution of values towards the construction of sustainability meaning and their further contribution to the institutional change based on the new meanings attributed to sustainability. Ball-Rokeach et al. (1990) stated that the value-frames

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the first person point of view. This research, however, is written from a neutral point of view. The rationale for this choice is that the researcher's mind is merely a tool in this interpretive study. This tool was shaped by the pre-existing body of knowledge.

of media are usually constrained by the media's power relationships with the economic and political institutions that support the media. This research also sought to reveal such constraints through an improvement in the framing analysis method.

## 1.3 Research Approach

Ritzer (2001) argued that a theory may be developed based on many sources including theoretical ideas from other fields (economics, philosophy, psychology, etc.), contact with the social world, or an "immaculate conception" (p. 14); a theory may result from a reaction and a careful study of works of other theorists. In this research, the approach to building theory included synthesising ideas from several fields as stated in 1.2 Purpose Statement and complementing the synthesis with a case study. As in the previous research (e.g., Lounsbury, Ventresca, & Hirsch, 2003; Weick, 1993), the real-world case was used to illustrate the conclusions of the conceptual framework and to extend them where necessary.

The case for the study was the organisational field of the FiT programme in Los Angeles. The practical problem addressed in this study was the usage of value-laden rhetoric by the participating organisational actors and the role of this usage in the development of understanding of sustainability in this particular context. This development of understanding was tracked in the formulation of problems and possible treatment options and the conflicts and their resolutions that accompanied the implementation of the programme. Though it is not possible to fully separate the contribution of the physical constraints from the constraints of understanding, the divergence of views can give a useful indication of the latter. Considered together, physical constraints and convergence/divergence of opinions provided a useful measure for the development of understanding as a prerequisite for institutional change associated with the transition to solar power.

This research was done in an interpretive hermeneutic tradition. In this tradition, the theoretical framework and research questions emerge from the data collected

(Gioia & Chittipeddi, 1991). In this research, following the recommendations of Ritzer (2001), previous findings in research of other fields were also treated as the initial data and were used for the development of research questions. For clarity, the research questions are presented as they were developed.

# CHAPTER 2 - CONCEPTUAL REVIEW

The goal of this chapter is to provide an overview of the key concepts that play a role in the selected research area, and theories that offer explanations and generalisations in the area. Firstly, the field of institutional theory is introduced. Secondly, a review is provided of the current discourse in the literature about sustainability and sustainable development, their meanings and relevance to institutional and organisational change. Next, new and existing forms of organising are discussed related to their adaptation to the new sustainability demands. Then framing is introduced as a means of meaning construction and organising. Finally, values are discussed as an underlying force in the field of sustainability transformation. The concepts from the review are summarised on the conceptual diagram at the end of the chapter.

## 2.1 Institutional Theory of Organisations

This research was conducted in line with ideas of modern sociological institutionalism (Meyer, 2008). Institutional theory deals with deeply ingrained and resilient structures of society (Scott, 2005). While the initial work of institutional scholars was largely focused on the constraining effects of existing institutions on organisational forms, more recent research focused on the potential of organisations and other institutional actors to modify the existing rules and legitimacy standards (Scott, 2005). This new work tackled the issues of organisational change (Washington & Ventresca, 2004). Sustainability transformation can be analysed as organisational change because big multinational business organisations have been called the main reason for sustainability problems (Clifton & Amran, 2011).

In modern sociological institutionalism, actors are constrained and empowered by broad cultural norms and are affected by historical developments of the context (Meyer, 2008). Institutions, in this view, are packages of cultural and organisational material. The organisational material may be represented by a

programme or a project (DiMaggio & Powell, 1983) and studied through externally visible elements of organising, communication, strategies, and structures. In the view of model institutionalism, these externally visible elements reflect the deeper ingrained institutional logics (Washington & Ventresca, 2004).

As the new institutionalism shifted its focus to change, it also highlighted the role of institutions in the creation of a rationality structure, which includes both utilitarian rationality and social intelligence associated with habits, conventions, and rules (Scott, 2005). In other words, institutions define meanings associated with performance and improvement of the quality of a product or a service – this is discussed further as economic rationality (see 2.4.3 Cross-level framing in social change). In addition to performance measures, institutions construct the standards of social legitimacy, such as reputation and Corporate Social Responsibility (CSR).

Framing is introduced as a mechanism that facilitates organising (Weick et al., 2005) and the construction of meanings. It enables social change by questioning existing meanings and norms (Kaplan, 2008). The change in question here is the institutional transformation promoted by goals of sustainable development (World Commission on Environment and Development, 1987). The meaning of sustainability in sustainable development is concerned with the future; specifically, sustainable development is a mechanism for achieving sustainability in the future. As a desirable end state, sustainability can be viewed as a value system. In a value system, a complex combination of values and priorities is applied towards thinking and decision-making forming attitudes, behaviours, cultural norms, and organisational arrangements. The high-level sketch of this conceptual background is shown in Figure 2. The discussion proceeds to identify the dimensions, mechanisms, processes, and relationships that take place against this background.

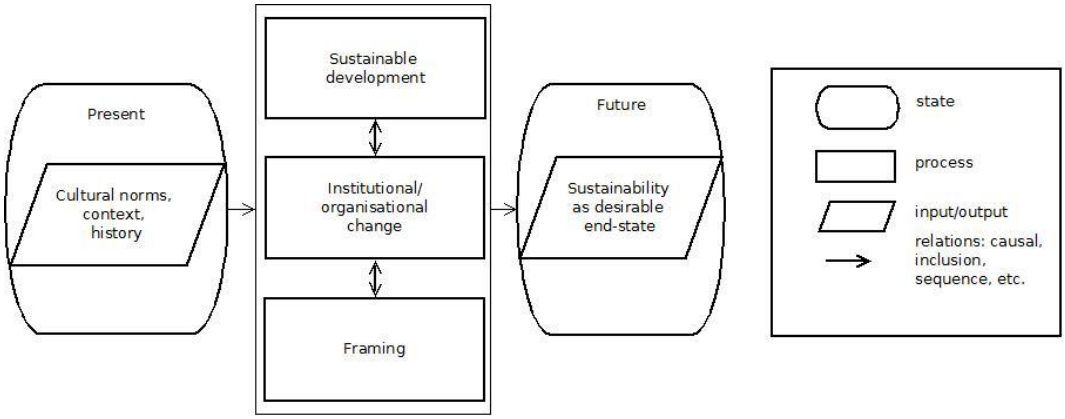



*Figure 2. Conceptual background of sustainability framing*

## 2.2 Sustainability: Definition, Meaning, Framing

Sustainability in this thesis pertains to the social and ecological sustainability of human civilisation under threats of climate change, environmental degradation, unintended consequences of technological development, growing population, and so on. Sustainability is important in organisational communication as it is used to justify actions, which can be routinely conflicting. Sustainability reasoning in organisational communication often implies concern for a wide range of stakeholders including the global population and nature. This reasoning has particular significance if the influence of consumers on ensuring organisational survival is acknowledged. Such influence is evident in buying an organisation's products (for business organisations), donating (for non-profit organisations), or voting (for government organisations). Consumers play a crucial role in the success of products and programmes. Quite often, sustainability rhetoric is used to get consumer support. Routinely this sustainability rhetoric is supported by value appeals, such as "food for the planet" (Monsanto, n.d.-a), "health and personal safety" (BP, n.d.), "facilitating… cultural, sports, and traditional events" (HUAWEI, 2016), and women's rights (Waller & Conaway, 2011) among others. The same value dimensions are often targeted by activists in campaigns to stop unsustainable organisational practices. Presented with two conflicting courses of action seemingly underpinned by the same values, how can the general public decide which one to support? One of the contributions of this research is in

pointing to elements in communication that can help non-specialists to disentangle value-laced sustainability rhetoric and make an informed and educated choice.

The Merriam-Webster dictionary defines sustainability as a "lifestyle involving the use of sustainable methods <sustainable society>" ("sustainability [Def. 2b]," 2016). From the definition, it follows that sustainability is a reified behaviour (lifestyle); it is concerned with action (use of methods) and is tightly linked to its social context (sustainable society). Sustainability was originally defined in ecology as "the ability of the whole or parts of a biotic community to extend its form into the future" (Ariansen, 1999, p. 84). In the present discussion, the system in question is human society that is a part of the larger system of the natural environment. Transformation of human society is a naturally occurring phenomenon. The role of sustainability as a conceptual tool is to ensure that such transformation is a progressive development, in other words, a sustainable development. This role of sustainability is achieved through a "broad strategic framework" (World Commission on Environment and Development, 1987, p. 41). Thus, the difference between the natural change of the global society and sustainable development is in the strategic nature of sustainable development. This transformation is achieved through sustainability practices, sustainability projects, and sustainability initiatives (Boström, 2012). Broad strategic imperatives were determined globally (World Commission on Environment and Development, 1987), but the exact actions leading to this transformation were left for context-specific interpretations. Thus, sustainability and sustainable development are characterised by "interpretative flexibility" (Boström, 2012, p. 3). This interpretative flexibility is a trigger for sustainability meaning construction.

Existing definitions of sustainability do not offer an exact meaning, rather they provide a frame, as a cue and a structure for meaning construction. Boström (2012) defined sustainability as "a conceptual tool that policy-makers and practitioners can use to communicate, make decisions, and measure or assess current developments, and that scholars can very well study and even refine" (p.

4). This conceptual role of sustainability is also supported by the *Our Common Future* report: “No single blueprint of sustainability will be found...Each nation will have to work out its own concrete policy implications” (World Commission on Environment and Development, 1987, p. 39).

Widely used in the literature is the definition of sustainable development suggested by the Brundtland Commission: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p. 41). The breadth and inclusiveness of this definition are both its strength and weakness. The strength is in allowing a detailed definition to depend on its context. And the weakness is in its anthropocentrism, its lack of clarity about the “needs” and their priorities, its discounting of changes in technology, and resource distribution (within current and between current and future generations) (Starik & Rands, 1995).

Kates et al. (2005) conducted a comprehensive literature survey regarding the definition or meaning of sustainable development and reported a consensus on the objectives of sustaining and developing. However, decisions regarding what to sustain, what to develop, to what degree, and in what time frame, differed significantly among the authors. This indicated that existing meanings are not only context-driven but also rooted in existing knowledge and views of authors. In terms of development, it is important to note that development does not equate to growth (Bell & Morse, 2013). Given that, the distinction between sustainability and sustainable development is not significant when the terms are viewed as conceptual tools. In the literature, these terms are often used interchangeably. Semantically, sustainability is a destination, and sustainable development is a process. From the semantics, it is logical to deduct that though the final goal is achieving sustainability, the way to it is through sustainable development as a “process of change” (World Commission on Environment and Development, 1987, p. 17). In this research, both sustainability and sustainable development were viewed as a conceptual tool for communicating, decision- and policy-

making, negotiation of meanings, and evaluation of progress. This is shown in Figure 3. The development of the sustainability concept or meaning construction is interlinked with the context and existing meanings of sustainability. New meanings result from active interpretation based on knowledge (Pan & Kosicki, 1993). Context and meaning become inputs and outputs to the processes enabled by sustainability as a conceptual tool. In Figure 3, the concept of existing meanings is presented separately from the concept of context. This was done to account for the ability of meanings to transcend contexts.

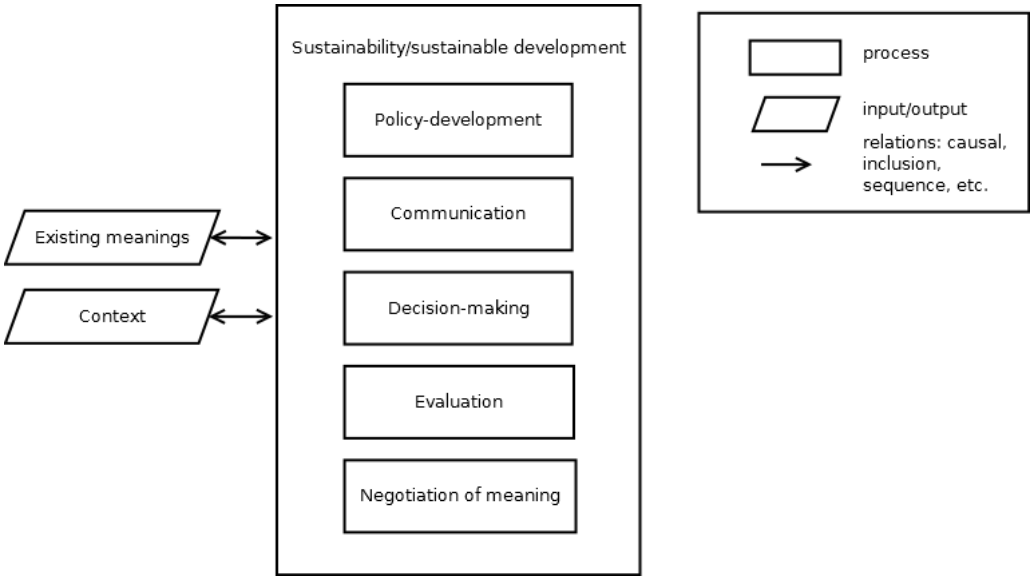



*Figure 3. Functionality of the sustainability concept*

### 2.2.1 Meaning construction through framing

Meaning construction is conceptualised as two sub-processes: sensemaking and sensegiving (Gioia & Chittipeddi, 1991). Sensemaking refers to a cognitive process that develops understanding and cognitive frames or schemata (Entman, 1993). Sensegiving refers to offering a new meaning to others. Sensegiving is often associated with action as it can be part of a strategic change initiative or a trigger of it (Maitlis & Lawrence, 2007). In this research, sensemaking and sensegiving were viewed as sub-processes of meaning construction, which happens through framing. Framing is reflected in written communication and is affected by it.

Framing is a way to reduce a complex real world problem into a simpler and more comprehensive view. Both cognitive and communicative frames are reduced and concentrated presentations of the reality. This is especially well captured by Creed, Langstraat, and Scully (2002):

> *Like a window, we see the world through frames that determine our perspective while limiting our view to only a part of a complex world around us. At the same time, we can think of frames in terms of the frame of a house, an invisible infrastructure that holds together different rooms and supports the cultural building blocks that make up the edifices of meaning.* (p. 36)

The definition above explains how framing provides structure and focus for the cultural reality and institutions. In the case of sustainability, science has collected a vast amount of information. However, in its full scope, this information is too complex and incomprehensible for the general public. Several authors (Jasperson, Shah, Watts, Faber, & Fan, 1998; Tversky & Kahneman, 1986) have argued that the presentation of information affects how it would be understood and in what action it would result. This presentation is framing used as sensegiving. Framing starts with the elimination of options that are perceived to be dominated by better options (Tversky & Kahneman, 1986). Thus, framing is both choice and priority (Entman, 1993). By defining the range of prescribed meanings through drawing attention to particular aspects of the problem (Jasperson et al., 1998), and making claims (Snow, Benford, McCammon, Hewitt, & Fitzgerald, 2014), articulated framing acts as sensegiving. Framing is also sensemaking as a way of conceptualising information and reducing the scope of a complex real-world problem (Cornelissen & Werner, 2014). Cognitive frames are produced through the labelling of the observed attributes (Hahn, Preuss, Pinkse, & Figge, 2014). Interpretation processes invoke cognitive frames, while communication frames are produced based on interpretation and meaning construction efforts. As a combination of sensemaking and sensegiving and, thus, negotiation of meaning, framing contributes to the construction of a commonly acceptable understanding

of sustainability.

Frames and framing can be regarded as synonymous terms. For clarity, “frame” is used as a static concept, equivalent to a problem definition, a moral judgment, a diagnostic and prognostic device (Entman, 1993). “Framing” is used as a dynamic “process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue” (Chong & Druckman, 2007, p. 104).

In Figure 4, the discussion of framing in construction of meaning as part of institutional structure is summarised. Framing is a mechanism of meaning construction, that is, meaning construction triggers framing and advances through it. Framing includes cognitive and communicative frames that roughly correspond to sensemaking and sensegiving processes of meaning construction. Strategic framing is particularly pertinent to sustainability meaning given the strategic imperatives of sustainable development.

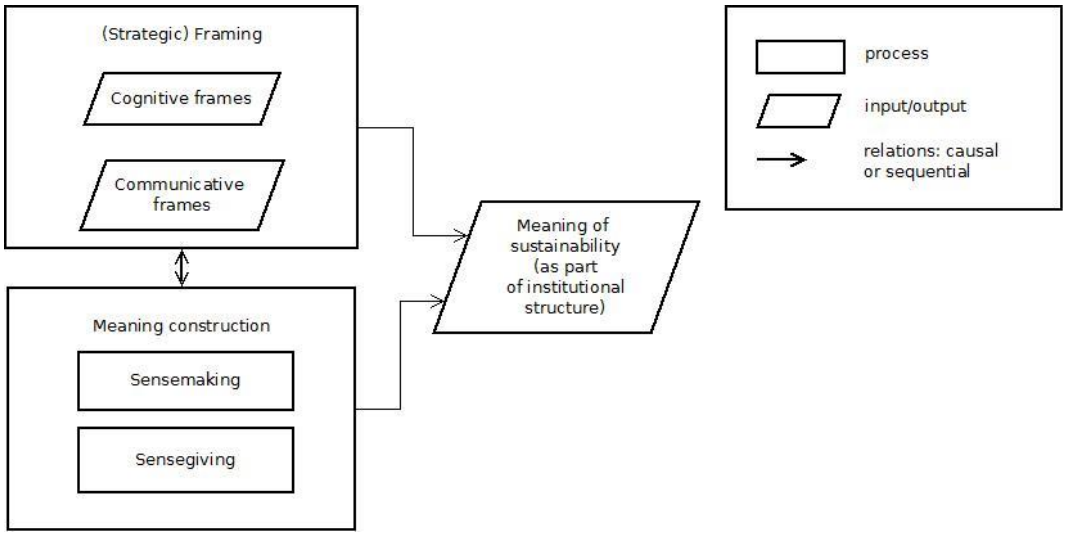



*Figure 4. Framing as a mechanism of sustainability meaning construction*

### 2.2.2 Stages of meaning construction

The previous section started the discussion of the interminable nature of meaning construction. Advancement in understanding, that is, meaning construction happens through a repetitive process of sensemaking and sensegiving. Repetitive,

interminable, and ongoing processes are usually analysed by breaking them into discrete stages. Gioia and Chittipeddi (1991) proposed a way of decomposing sensemaking and sensegiving into discrete stages. They demonstrated how meaning is advanced in organisations undergoing strategic change. In their research, they investigated the role of a Chief Executive Officer (CEO) as the main initiator of strategic change and developed a sequence of stages that characterises such change in organisations. A CEO develops a new strategy through an envisioning process, which parallels cognitive sensemaking. This process was also called prospective sensemaking in the literature, that is, sensemaking used to evaluate how current action or inaction may affect events in the future (Maitlis & Christianson, 2014).

The new vision is then presented to the organisation's stakeholders and constituents in the act of sensegiving. This is the phase of signalling. Sensegiving does not necessarily mean a detailed explanation, it can be a hint of what is going to happen, that is, sensegiving is presented as a frame, which can be more or less detailed. The extent of information presented in sensegiving is a strategic tool in itself as the lack of details is a trigger to sensemaking (Gioia & Chittipeddi, 1991). The stakeholders and constituents further engage in cognitive sensemaking to develop their own vision. Gioia and Chittipeddi (1991) labelled this process re-visioning. Finally, the stakeholders provide feedback as sensegiving to the CEO in the phase called energising. In situations when sensemaking is not complete before decision-making, various deviations of rationality can be observed (Tversky & Kahneman, 1981, 1986). Those can be re-evaluated in sensemaking that follows decision-making (Gioia & Chittipeddi, 1991; Maitlis & Christianson, 2014; Weick et al., 2005) and roughly corresponds to the re-visioning and energising phases. The sensemaking, which follows decision-making, contributes to learning. Learning also happens from observing the communication within the context (Habermas, 1984). Initial perceptions (as a result of the initial sensemaking) become conventional when transferred from person to person through sensegiving (Weick, 2012) and, thus, sensemaking and sensegiving contribute towards the construction of social reality (Weick et al., 2005). These

processes and phases are presented in Figure 5. Cognitive and communicative frames in Figure 5 are outputs to cognitive and communicative mechanisms of meaning construction. These frames are intrinsically linked as communication cannot happen without cognition and cognition is shaped by communication in the social constructivist paradigm.

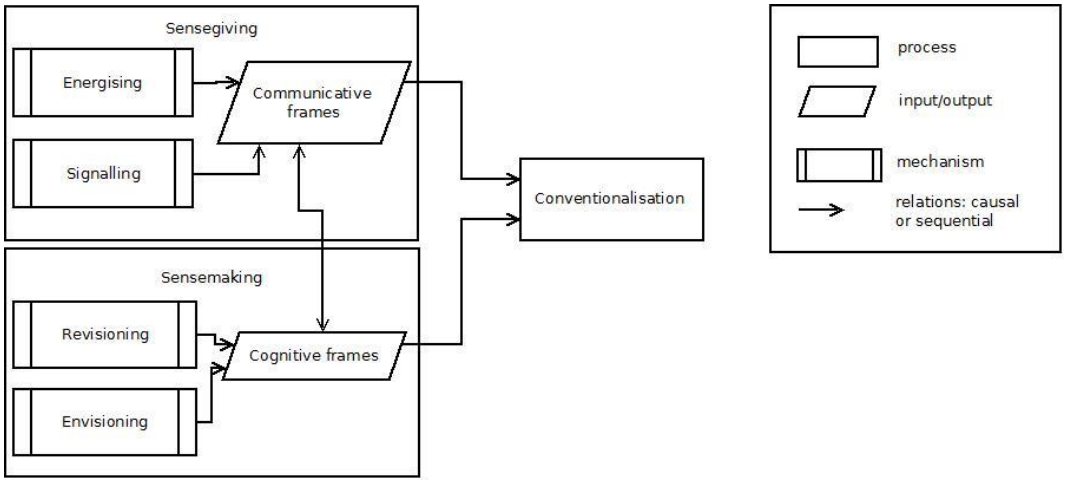



*Figure 5. Processes of meaning construction*

Strategic change in an organisational field is similar to the strategic change in a large organisation. In the context of an organisational field, the processes of sensemaking and sensegiving happen between private and public spheres including governments, businesses, the public, and the media; in comparison, in an organisation, sensemaking and sensegiving involve mostly the organisation's stakeholders. In both cases, framing takes inputs from ideologies, organisational and institutional structures and results in the development of new behaviours, attitudes, organisational arrangements, and so on (Scheufele, 1999).

### 2.2.3 Meaning of sustainability in a participative approach

To account for the differences in the development of sustainability meaning within an organisation as compared to an organisational field it is important to consider the view of communities. The meaning of sustainability is dependent the vision that communities develop of their own and natural wellbeing (Miller et al., 2014). This vision depends on the knowledge and understanding of the communities. The

level of understanding of the details of climate change also impacts behavioural choice (Spence & Pidgeon, 2010); this choice is important in enabling social change. Because knowledge and understanding are crucial, they also require that institutions of knowledge play a new role. Peer and Stoeglehner (2013) recommended universities to collaborate with local and regional communities in knowledge generation and transfer. Such collaboration has the potential to achieve a level of values and facts that is effective to enable change towards sustainability (Peer & Stoeglehner, 2013). Several other authors advocated developing sustainability meaning as a participative event with local stakeholders (Bond et al., 2010; Brulle, 2010; Peer & Stoeglehner, 2013; Wilhelm-Rechmann & Cowling, 2011).

## 2.3 Strategic Organising

The processes of sustainability meaning construction (Figure 4, Figure 5) are strategic in nature as they require formulation of strategic action goals that lead to institutional transformation towards a (supposedly) more sustainable future. However, change is a problematic process for organisations. Organisations are often seen to be interested in the reinforcement of the existing practices and their evaluative criteria (Nilsson, 2015) and negative to change (Kabanoff, Waldersee, & Cohen, 1995). Even when organisations do change, they tend to do so "to satisfy the social expectations of their environment" (Scherer, Palazzo, & Seidl, 2013, p. 262). In their research on the strategic transformation of Nokia, Aspara, Lamberg, Laukia, and Tikkanen (2013) found that the management of Nokia planned transformation in line with the existing reputational strengths of the organisation and the ability to reinforce them.

However, this adaptability to the expectations of the environment does not necessarily mean lack of agency; the adaptability can be progressive as well. Gioia, Schultz, and Corley (2000) noted that flexible organisational identity is a prerequisite for organisational change. Such change is commonly seen as a requirement because "the growing societal sensitivity to unsustainable business

practices" (Scherer et al., 2013, p. 260) has challenged the conventional identity of business. The next three sections discuss theories which aim to develop a new vision of organisation to answer the requirements of sustainability.

### 2.3.1 Stakeholder theory

The constructs of stakeholder theory underpin much of the academic and real-world strategic management thought. The key goals of the stakeholder theory are twofold. The first is to address managers and ask them to explicitly articulate the value that the organisation is aiming to create (Freeman, Wicks, & Parmar, 2004)[3]. The second key is to ask managers to consider the relationships with the stakeholders (Freeman et al., 2004).

While the inclusion of stakeholders has been widely emphasised in sustainable development (e.g., Bond et al., 2010; Van Der Sluijs et al., 2005), it can be observed that the key goals of the stakeholder theory are sufficiently broad to doubt its full alignment with the objectives of sustainable development. Clifton and Amran (2011) discussed in detail how the definitions of stakeholders, whether taken narrowly or broadly, make it problematic for the stakeholder theory to steer managers towards achieving more global sustainability objectives. The narrow definition of stakeholders excludes the natural environment, while the wide definition takes the environment as one of the stakeholders but fails to provide suitable prioritisation criteria for environmental needs. Overall, stakeholder theory relies on the corporate and managerial value system, within which the legitimacy of stakeholder claims is considered (Clifton & Amran, 2011).

Orts and Strudler (2002) also criticised stakeholder theory as suitable for dealing mostly with humans stakeholders and human economic interests. Even inclusion of the environment as a stakeholder does not alleviate the problem of decision-

[3] Note that the meaning of value in the previous sentence is a polyseme in the word's usage throughout the thesis, that is, value as something valuable is polyseme to value as a belief that certain phenomena are to be valued. As a polyseme and not a mere homonym, the meaning of value as an abstract desirable ideal often underpins an organisation's value creation.

making. This can be demonstrated in terms of stakeholder attributes, such as urgency or power, which are mostly incomparable between human and environmental stakeholders (Clifton & Amran, 2011). For example, Freeman (2010) stated that "[t]he bottom line for stakeholder management has to be set of transactions that managers in organizations have with stakeholders" (p. 69); in other words, nature as a stakeholder becomes important only in transactions with the organisation. The limits of this anthropocentric relation to nature have been widely discussed (e.g., Orts & Strudler, 2002; Starik & Rands, 1995). The issues of the needs of silent and powerless stakeholders have been better addressed in the discussion of Corporate Social Responsibility.

### 2.3.2 Corporate Social Responsibility

CSR aims to institutionalise the responsibility of organisations to consider their long-term societal footprint, prioritise ethical over profit goals, and contribute towards the improvement of the social quality of life (Clifton & Amran, 2011). Despite these authoritative goals, the meaning of CSR is vague (Sheehy, 2015) and the obligations are "potentially indeterminate, disintegrative, and conflictual" (Schultz, Castelló, & Morsing, 2013, p. 681).

Organisational strategic response is often seen as adaptation or manipulation (Scherer et al., 2013). Given that the objective of CSR is to create the criteria of legitimacy for business organisations (Schultz et al., 2013), the organisations become interested in setting or changing these criteria (Scherer & Palazzo, 2007) and become "*co-authors* of the [social] responsibility frame [italics original]" (Reinecke & Ansari, 2016, p. 319). As co-authors, organisations also act as an intermediary between individuals and society in the processes of sustainability transformation. However, there are several problems in this role of organisations. Firstly, it is difficult for outsiders to evaluate the communicative and non-communicative strategies of organisations and to act on such an evaluation (Clifton & Amran, 2011). Secondly, not all organisational actors are predisposed to act: Previous research has shown the "astounding levels of embedded nonactorhood in what were supposed to be political, economic, and cultural

choices" (Meyer, 2008, p. 789). Thirdly, individual stakeholders have limited knowledge of sustainability problems and limited choices as consumers and employees. For example, some employees recognise that excessive air travel is not sustainable because its high emission footprint but have to fly based on their job requirements (Barr, Gilg, & Shaw, 2011). Travel companies also increase demand for air travel through their offerings and marketing. Marketing campaigns often pose as educational resources (Plec & Pettenger, 2012) offering allegedly sustainable solutions to confused consumers. Having access to the media, organisations promote their interpretations of sustainable development and mobilise support, sometimes relying on their reputations instead of facts. Peloza, Ye, and Montford (2014) conducted research where perceived CSR rankings of organisations were used to influence consumer behaviour. They found out that not only are consumers misled by the organisations' reputations, moreover, they tend to make unhealthy choices based on these perceptions. It is important to understand how these damaging misunderstandings appear and what can be done to prevent them.

The above examples show the important roles that organisations play in sustainability transformation. However, these examples can also be analysed from the perspective of stakeholders as consumers who inevitably make choices by either consuming or not consuming.

### 2.3.3 Marketing and consumer choice

Sustainability transformation can be viewed through the lens of the citizen-consumer paradigm which claims that a change in consumption patterns becomes a wider social change (Barr et al., 2011). Consumers are not passive receivers of marketing messages, rather they are active creators of market value (Yi & Gong, 2013). Through participating in creating market value, consumers participate in market creation. Two aspects of consumer behaviour are relevant to this research: participation, which defines the impact of their influence, and values, which define the range.

Recognising that the impact of consumers on the markets is not uniform, Yi and Gong (2013) suggested a scale for measuring consumer value creation. Their scale contains dimensions of consumer participation and consumer citizenship. The elements of consumer participation include information seeking, information sharing, responsible behaviour, and personal interaction, whereas the aspects of consumer citizenship are feedback, advocacy, helping, and tolerance (Yi & Gong, 2013). Brodie, Ilic, Juric, and Hollebeek (2013) conducted a netnographic research on the online community of fitness participants and found that the process of engagement with different brands included discussion of safety, quality, price, and personal experience with the brand. The authors noted that the sense of moral responsibility characterised engaged consumers.

Another approach to describe consumer behaviour is through values. Thøgersen and Olander (2002) found that there is a significant positive relationship between pro-environmental behaviour and universalism and benevolence and a weaker negative relationship with hedonism. However, the stability of values in a society is higher than the stability of behaviours thus rendering values not an accurate predictor of consumption behaviour (Thøgersen & Ölander, 2002). In another study, Grebitus, Steiner, and Veeman (2013) found that more environmentally conscious behaviour was exhibited by consumers who were characterised by delayed gratification. Both Thøgersen and Olander (2002) and Grebitus et al. (2013) concurred with the finding that only a few values are correlated with consumer behaviour.

The ethical claim of the consumer-citizen paradigm is that individual consumer-citizens have responsibilities towards their social and natural environment (Prothero et al., 2011). However, this responsibility is difficult to achieve in isolation. For example, Barr et al. (2011) found that environmental practices come into conflict with the established codes of practice, thus limiting consumer choice and restricting the change. De Boer and Aiking (2011) argued that consumers are largely unaware of the macro-scale implications of their daily choices. Noticing another limitation, Prothero et al. (2011) suggested that consumption practices of

governments and big organisations should also be examined on a par with consumer-citizens.

Integrating consumer choice with the wider institutional arrangements and participants requires a different from the consumer-citizen paradigm approach. Prothero et al. (2011) suggested adopting a full-lifecycle approach to examining consumer behaviour. Such a perspective would integrate consumer choice, the influence of marketing campaigns, and values that underpin the engagement of consumers and organisations. Another possible approach would be to focus on marketing. Marketing has been criticised for considering only the interests of the executive management thus perpetuating the dominant social paradigm of consumption (Kilbourne, McDonagh, & Prothero, 1997). Kilbourne, McDonagh, and Prothero (1997) emphasised that marketing discipline pays little attention to what is actually wanted and needed; they suggested that it was the responsibility of the macromarketing discipline to challenge the dominant consumption paradigm within the Western societies.

### 2.3.4 Sustainable market creation

Aligned with the proposed goals of macromarketing (Kilbourne et al., 1997), Viswanathan, Seth, Gau, and Chaturvedi (2009) proposed sustainable market orientation as an approach to strategic planning focused on consumer and social welfare. Such an approach is critical for subsistence marketplaces but the insights from the development of the subsistence marketplace (e,g., Ingenbleek, 2014) may have a lot in common with more general sustainable markets. The important ingredient of sustainable market orientation is an understanding of the consumer and social concerns (Viswanathan et al., 2009).Viswanathan et al. (2009) highlighted the need to learn from the marketplace about the existing consumption and entrepreneurship, and to create trust between the consumers and the new business. These suggestions are well-aligned with the recommendations for the participative approach to sustainable development (see 2.2.3 Meaning of sustainability in a participative approach).

There are multiple difficulties with creating new and sustainable markets. Such markets often need to develop and promote new or modified products, such as products labelled as organic (e.g., Grebitus et al., 2013; Grunert, Hieke, & Wills, 2014). The creation of a new market often requires creation of a superior value compared to an existing one (Aspara et al., 2013). In the case of food labelling, such superior value is not necessarily noticeable. For example, Grunert et al. (2014) reported an apparent failure of sustainable labelling practice in several European countries. The other problem is that there is divergence between the articulated sustainable intentions of consumers and the actual behaviours (Webb & Mohr, 1998). These problems confirm the need for understanding and learning from the existing practices suggested by Viswanathan et al. (2009).

### 2.3.5 Sustainability programmes as organisational field

Stakeholder theory, CSR, consumer-citizen paradigm, and theories of sustainable market help the understanding of sustainability transformation. However, these approaches are focused mostly on the interaction of organisations and their customers or employees. Beyond these interactions, there exists an inter-organisational perception of the organisation's role, its place in the market, and its relation to competing and complementary companies (Aspara et al., 2013). This perception is covered by the construct of an organisational field. In an organisational field of sustainability transformation, new policies introduced by governments in response to the goals of sustainable development are implemented through sustainability programmes and projects. An obligation to participate in such programmes causes organisational change, which includes new routines, new products, and new ways of conducting business. The media plays the role of the informer and critic and provides the platform for negotiation of sustainability meanings for the other participants in the field: organisations, the government and the general public.

Sustainability programmes as a mechanism of sustainability transformation are shown in Figure 6. Environmental and identity crises are the triggers (Maitlis & Lawrence, 2007) and inputs in interactions, strategic framing, organising, and

subsequent field structuration processes, which happen in the context of sustainability programmes. Transformations of organisational and institutional fields are the outputs.

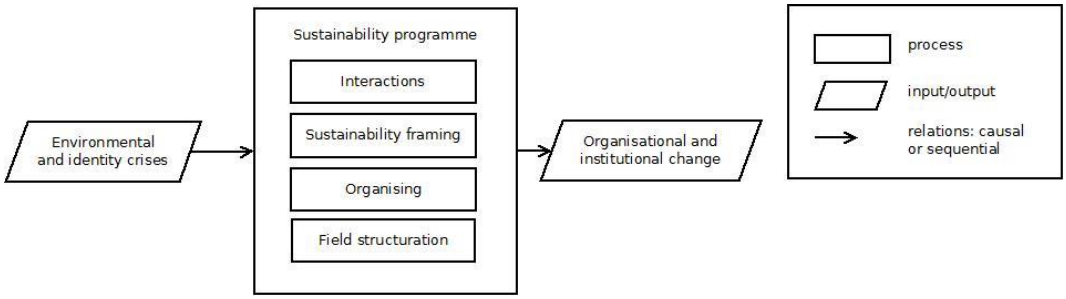



*Figure 6. Sustainability programmes as strategic change mechanisms*

Further discussion requires clarification of the meaning of a sustainability programme. A programme is "a plan of things that are done in order to achieve a specific result" ("program," 2016). Programmes are used to coordinate and manage project-based activities (Pellegrinelli, 1997) and provide an overarching goal to a group of projects (Lycett, Rassau, & Danson, 2004). Programmes often have the goal of an organisational change or implementation of a strategy (Lycett et al., 2004; Pellegrinelli, 1997). Sustainability programmes, then, are concerned with sustainability objectives, sustainability frameworks, and sustainability projects. The sustainability programme term adopted in this study aims to define a subset of programmes claiming to achieve sustainability objectives and socio-economic change through programmes.

In this research, the scope of a sustainability programme is viewed as an organisational field. The concept of a field has three main advantages in this context. Firstly, it draws attention to the framing participants as field actors. Secondly, it allows the studying of the forces shaping the field without prior knowledge of their origin. Thirdly, it allows tracking the development of a programme even if the objectives were reached or are no longer valid. The long-term and multi-stakeholder nature of sustainability programmes means the possibility of the re-negotiation of the objectives of the programme and the meaning of sustainability within it.

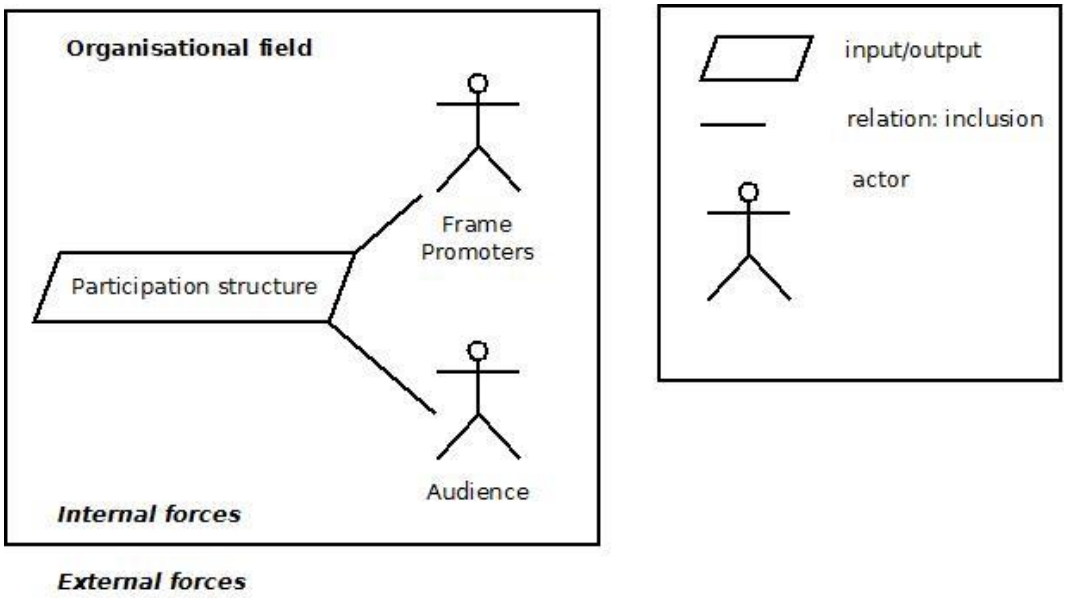



*Figure 7. An organisational field of a sustainability programme*

An organisational field view on a sustainability programme is offered in Figure 7. Actors in framing can be classified as frame promoters (or creators) and the audience (Scheufele, 1999). Frame promoters include actors who construct and articulate new and modified frames of sustainability within a programme. They also include those members of the general public who engage themselves in sensemaking and provide their feedback by offering new frames (Gioia & Chittipeddi, 1991). The audience includes organisational actors who engage in challenging, supporting, and clarifying the frame, that is, in sensemaking (Maitlis & Christianson, 2014). The frames of the audience and frame promoters are often different. When new ideas appear, these frames may or may not converge through communication (Scheufele, 1999). This convergence or non-convergence may have a critical influence on outcomes when a coordinated action[4] for common good is required.

Sensemaking processes within a field are affected by the field's structure, particularly its actors, their roles and powers. For example, the way frame promoters present the problem of sustainability often has the goal of making the

[4] A sustainability programme is an example of a social action for common good.

intended audience see things differently (Kaplan, 2008). This influence can be problematic. Within sustainability programmes, if a participation structure is not defined, leaders may provide a dominant frame, which receives little contestation (Boström, 2012). There is also a possibility that one party may try to shield their framing from the other party's influence, or be less assertive in admitting the conflict (Cornelissen & Werner, 2014). These processes affect meaning construction as they silence sensemaking and concentrate more on sensegiving.

Frame strategists are also known to use different processes to gain support from others. These framing processes include frame amplification, frame alignment, frame conflict (Benford & Snow, 2000; Gray et al., 2015), frame contest (Kaplan, 2008), and so on. These framing processes are a result of internal forces working within an organisational field. A dominant frame provided from outside the field, such as a new policy or regulation, is a manifestation of external forces. The combined effect of the forces working on the field transforms the field through organising and structuration. This transformation is continuous, however more stable stages can be defined, as discussed earlier (see 2.2.2 Stages of meaning construction). Once commonly accepted, frames are reinforced and reproduced by the field actors (Goffman, 1974).

This process is also known as field structuration. Field structuration refers to the establishment of consistent patterns of interaction and understanding (Schussler, Ruling, & Wittneben, 2014). In an example of a sustainability programme as a strategic change initiative, existing organisational forms are challenged and understanding of sustainability develops through the interactions of actors in an organisational field. This allows previously suppressed meaning and distant values to emerge in the new frames. The multiplicity of frames make a shift in the established understanding possible (Kaplan, 2008). Conflicting groups may merge and agree on acceptable meanings and common values. Alternatively, the conflicts may perpetuate, change their focus, or change their supporters. These interactions have the potential to create more suitable institutional practices, thus changing the institutional field and wider social practices and norms.

## 2.4 Framing Analysis and Levels

Problem-framing is not entirely objective (Werhane & Freeman, 1999). Tversky and Kahneman (1986) argued that problem framing is dependent on the expectations and norms of a decision-maker. Such expectations and norms are dictated and endorsed by existing social institutions. As the existing social institutions are often misaligned with the global aspirations for sustainability, it is logical to expect a discrepancy between the objectives of sustainability and the actual ability of decision-makers to define and frame problems. This research was based on the assumption that such a discrepancy could be traced in framing communication. Such tracing was expected to reveal processes and mechanisms involved in the transformation of the institutional field.

Framing can be studied on the individual, group, organisational, field, and institutional levels. In their review, Cornelissen and Werner (2014) suggested to classify these levels as micro, meso, and macro. Table 1 provides brief definitions.

*Table 1*

*Framing Levels*

| Level | Framing process | Description |
|---|---|---|
| Micro | Cognitive framing, framing effects, and frames of reference. | This level is concerned with the underlying individual processes that are further manifested on meso and macro levels (Tversky & Kahneman, 1981). |
| Meso | Collective action and strategic framing. | This level includes interactions for sense-making and sensegiving; frame promoters and the audience are the actors on this level (Cornelissen & Werner, 2014). On the meso-level, framing can be synonymous with sensemaking (Gray et al., 2015). |

| | | |
|---|---|---|
| Macro | Field frame, frame-alignment/contests, institutional frame | On this level, framing results in the emergence and settling of broad cultural templates of understanding and behaviour (Cornelissen & Werner, 2014). |

Despite the definition of levels, which is based on previous research, many real-world situations and research problems are spread across the levels. Framing is recursively connected across levels. Interactive framing is a part of sensemaking, which leads to organising and emergence of institutional fields. At the same time, dominant frames, cultural templates, and values of the existing institutional fields and institutions constrain micro- and meso-level framing processes by providing readily accessible meanings and processes of meaning negotiation. Meso-level framing often has the goal of a strategic change. But strategic frames can be provided and promoted by individual institutional actors, such as organisational and political leaders, journalists, or scientists. Such frames, then, are the result of micro-level cognitive framing, they target meso-level change, and are constrained by the existing institutional field (Weick et al., 2005). Meso-level change results in the emergence of macro-level frames, particularly, field frames. A field frame is defined as "a jointly constructed cultural template within an institutional field that, when it settles, provides the basis for socio-economic change" (Cornelissen & Werner, 2014, p. 185). Field framing is characterised by the processes of meaning construction based on cultural-cognitive analyses (Cornelissen & Werner, 2014).

Field framing happens between the actors of the field and involves assimilation or contrasting of cognitive frames, and negotiation of the frame meaning (Cornelissen & Werner, 2014). Field-level frames emerge as metaphors, undergo the process of conventionalisation, elaboration and interpretation of meaning, creating new metaphors and meanings (Cornelissen & Werner, 2014). Field-level frames may become institutional frames through wide diffusion in an institutional field (Lounsbury et al., 2003).

In the field of sustainability programmes, the contextual meaning of sustainability

is open to discussion. The novelty of sustainability problems feeds the discourse, giving rise to conflicting opinions. The competition starts between strategic actors who promote their understanding and plans of action using framing (Kaplan, 2008). Over time, some new frames get accepted and some old frames remain. Accepted frames guide individual and collective action (Snow, Rochford Jr, Worden, & Benford, 1986). Disputed frames remain the target of sensemaking processes, particularly frame contests and frame alignment (Cornelissen & Werner, 2014). On the level of field frames, alignment is characterised by the alignment of values, interests, beliefs, goals, ideology, and activities (Snow et al., 1986). This alignment contributes to the settling and institutionalising of the organisational field through socio-economic change (e.g., Cornelissen & Werner, 2014; Lounsbury et al., 2003).

Field-level framing analysis is suitable for a study of concrete interactions in the broader context of belief systems (Lounsbury et al., 2003), such as value-systems. Field frames were used previously in the analysis of sustainability programmes such as recycling (Lounsbury et al., 2003). Shared value-systems form the basis for consensus and settlement between opposing groups in a field-framing process (Fligstein & McAdam, 2011). Thus, values in this thesis were important for two reasons. Firstly, values contribute to framing and its outcomes. Secondly, values underpin contextual meanings of sustainability. Many authors have concentrated on values in sustainability as well as on framing of sustainability; however, not much work has been done on merging these two constructs in a systematic way.

### 2.4.1 The potential of framing analysis

Framing analysis is a useful technique to explore real-world situations. At any given time in a discourse, multiple frames of an issue may be present simultaneously. These frames may be complementary or conflicting (Van Gorp & van der Goot, 2012), united under one consensus frame (Candel, Breeman, Stiller, & Termeer, 2014) or "talking past each other" (Hoffman, 2011, p. 3). Candel et al. (2014) argued that a consensus frame usually appeals to shared values. Frames are also affected by the level of knowledge. In complex issues of sustainability, a lack

of knowledge was shown to result in a wide range of meanings in sustainability frames (Fünfgeld & McEvoy, 2014; Wilhelm-Rechmann & Cowling, 2011). Jerneck and Olsson (2011) found that framing analysis allowed problems with the existing understanding to be revealed and enabled new meanings to be developed through reframing.

Framing analysis has been shown to provide other benefits, too. Candel et al. (2014) showed how framing analysis can be used to disentangle areas of disagreement within converging framing as well as to deduct differing frames. Such analysis has the potential for a better understanding of conflicts and ways to resolve them. Similarly, Hoffman (2011) used framing analysis to show that the arguments between climate change deniers and supporters cannot be settled because they argue about incomparable, though similar, topics. An example of an organic farming frame described by Van Gorp and van der Goot (2012) demonstrated that value judgement could be applied to the metaphorical meaning of a frame instead of its underlying meaning. In their analysis, this resulted in an incorrect meaning ascribed to organic farming. Organic farming was associated with traditional values and mistrust of modern science though, in reality, organic farmers relied on modern science (Van Gorp & van der Goot, 2012). Framing analysis can be used to disentangle communication strategies and to gain a better understanding of values behind them. It also allows discernment of underlying assumptions.

Framing analysis allows insight to be gained in convoluted cases interlaced with values. For example, Waller and Conaway (2011) used framing analysis to elicit value-laden strategies used in a controversy surrounding the use of offshore labour by Nike. Social values formed the basis of the media frame that criticised Nike's labour conditions. In response, Nike's communication used the same values to counter the media attack and reframe the issue. The media-attack frames used emotional amplification strategy (Gray et al., 2015) to engage the support of the audience. In response, Nike used several value-framing strategies. Firstly, they used value-frame alignment with the media, specifically, the focus on the social

values. Secondly, Nike used emotional reduction strategies by shifting the attention from cheap labour to women's empowerment in developing countries. Nike has also used an appeal to values by publishing Nike's core values on their website, thus contradicting the publicised accusations of lawlessness and exploitation. Lastly, Nike has also sought amplification of the frame scope (Gray et al., 2015) through engagement with workers for human rights. Despite the victory that Nike obtained over social institutions including the media and the court system, the framing analysis showed that not only has Nike reframed the standards of work conditions but it also did so using episodic frames to draw a picture of its beneficial effect on the circumstances of women in Asia (Waller & Conaway, 2011).

By classifying the roles of framing actors, framing analysis allows a better understanding of the underlying motivations. For example, Jerneck and Olsson (2011) used framing analysis to identify the victims and the responsible actors in the problems of world health. This identification of the roles of actors enabled a better understanding of the problems and pointed to the opportunities for better solutions. Framing analysis provides the foundation for understanding and evaluating frames. In particular, distinguishing actors in framing is instrumental in judging the framing motivations. Other important and useful frame elements include problem definition and treatment recommendation, urgency and importance of problems to particular actors and word choices (Gasper, Portocarrero, & Clair, 2013).

### 2.4.2 Shared frames and frame divergence

In complex and new problems, multiple frames of an issue may exist simultaneously. The multiplicity of frames is not only a rhetorical device, it is also a means of constructing a common cognitive understanding (Cornelissen & Werner, 2014). For example, Fünfgeld and McEvoy (2014) focused on subconscious frame divergence that appeared in response to an ambiguous frame of climate change adaptation. They argued that frames are given meaning based on values and other contextual factors. The frames diverge because these values

and factors are different for different people. The first step in understanding frame divergence is the differentiation of these underlying factors, including values (Fünfgeld & McEvoy, 2014).

Different sets of accepted frames are common for organisations operating in different sectors. Le Ber and Branzei (2010) described an opportunity to work with divergent frames. Their research was pertinent to multi-organisational fields. In their case study, organisations with different value priorities worked together to create a shared frame, deliberately fusing their values. Le Ber and Branzei (2010) described four stages of the frame fusion: frame negotiation, elasticity, plasticity, and fusion. Frame fusion is a mechanism of emergence of a common shared frame. The framework of frame-fusion is an alternative to the sensegiving-sensemaking version of emergence of common frames and strategic change (Gioia & Chittipeddi, 1991).

### 2.4.3 Cross-level framing in social change

The example of frame-fusion is strategic framing applied across sectors. Strategic framing may work also across levels of framing. The media constructs frames based on symbolic meanings that resonate with cultural values; such resonance is a prerequisite to shared interpretation that unites individuals and results in action and social change (Wright & Reid, 2011). Frames in the media and political communication often guide and organise collective action (Snow et al., 1986). Kaplan (2008) provided an extensive discussion of framing used by organisational actors to gain support for strategic projects within their organisation. In Kaplan's (2008) discussion, the need for the strategic change and discussion emerged as a response to the rapidly developing technologies affecting organisational future. Such environmental change is often a trigger for sensemaking (Cornelissen & Werner, 2014). Kaplan (2008) discussed how the existing organisation's culture and history, the professional culture of the employees, their past experiences and knowledge affected the construction of frames. Further, these frames became the basis of strategic project choices.

Cornelissen et al. (2011), based on the experience of organisational strategic change, proposed that successful strategic framing does not have to be in line with the currently held values within a group, instead the change itself may be framed in terms of a common cultural understanding of change. This suggestion was also in line with theorising about the propensity of societies to promote and moralise values that help to maintain the society against its threats (Lindenberg & Steg, 2013). Such promotion and moralising ensure that individual values are subjugated to widely accepted cultural norms. Stressing social impacts as opposed to personal impacts of climate change was found to result in a more positive attitude to climate change mitigation (Spence & Pidgeon, 2010). This provides evidence that under certain conditions individuals tend to behave in a socially beneficial manner, setting aside their personal motivations. However, this is not the case all the time. Ironically, the old reified practices often prevent individuals from behaving in a socially responsible manner (Barr et al., 2011).

Another level of social and institutional coercion, which is particularly pertinent to sustainability problems, is the level of the global society. The global society works as a coercive force to align national societies to international practices. An example of such superposition of forces was described by Tengblad and Ohlsson (2010). They found that the global pressures of corporate social responsibility (CSR) resulted in the transition of corporate culture in collectivist societies towards individualistic values and global goals.

Despite the recognised impact of social coercion, individuals, particularly, managers have significant impact on organisational change towards sustainability. Hahn et al. (2014) defined three processes of sensemaking that accompanies such change: managerial scanning, interpreting, and responding. Their approach to classification of frames, namely, a business case frame and a paradoxical frame, was similar to Brulle's (2010) dichotomy. Brulle’s (2010) depiction of economic modernisation was underpinned by the assumption that optimisation of economic, environmental, and social aspects increases financial performance. This assumption also underpinned the business case frame. This assumption was

criticised by Brulle (2010) and also by Plec and Pettenger (2012) who criticised technocratic solutions that do not address social and economic roots of sustainability problems. A paradoxical frame is based on the acceptance of the inevitable trade-offs of sustainability transformation (Hahn et al., 2014). Though the authors did not mention values (Hahn et al., 2014), it is reasonable to infer that a business case frame is rooted in traditional business values of economic rationality. In this thesis, economic rationality was analysed as a value or a combination of values underpinned by "a desire for wealth and larger bundles of goods and services" (Hausman, 2003, para. 7) and based on the assumption of the rational social choice (for a review, see Hausman, 2003). A paradoxical frame, on the other hand, is more open to the transformation of business values by considering a wider range of sustainability issues and ambivalent interpretations of sustainability. The authors also argued that both frames are not likely to cause a significant change (Hahn et al., 2014). A business case frame cannot do so as it is based on the goals of business prosperity and can only deal with known and controllable issues (Hahn et al., 2014). Sustainability cannot be considered known and controllable. In other words, the business frame functions on the previously constructed meanings. A paradoxical frame, on the other hand, does not provide a ready meaning (Hahn et al., 2014). Instead, it is characterised by ambivalent meanings or divergent frames of sustainability. Such meanings provide an unacceptably risky basis for action.

### 2.4.4 Values and other factors in strategic sustainability framing

The lack of factual knowledge that surrounds sustainability problems means that values often become the basis for decisions and planning (Peer & Stoeglehner, 2013). However, in the reviewed research, no agreement existed on how to recognise those values. Many authors resorted to using conceptual categories such as sustainability-oriented values (Axsen & Kurani, 2013) and values underlying pro-environmental behaviour (Barr & Gilg, 2006; Corner et al., 2014; Lindenberg & Steg, 2013; Van de Velde, Verbeke, Popp, & Van Huylenbroeck, 2010). Further deliberation associated these values with the self-transcendence grouping in

Schwartz's value classification (Corner et al., 2014) or self-transcendence plus self-direction and openness to change (Axsen & Kurani, 2013). The self-transcendence group includes benevolence and universalism. Benevolence is important to contain peace and good relationships within groups; universalism is required to maintain peace on a larger social scale.

Self-transcendent and community orientated values are associated with environmentally protective actions, while self-enhancement and individualistic values are associated with the absence of environmental concerns (Corner et al., 2014; Evans et al., 2013; Price et al., 2014; Steg et al., 2014). However, values of the adult population are not likely to change unless they are deliberately targeted. This is usually a slow process. Thus, two options are possible: either to target self-transcendent values with the hope that individuals who have such values will engage, or to target any other existing values, framing environmental action to appeal to the existing values. However, the authors also highlighted that it is seldom that members of the public are locked into a particular value-set; it has been shown that people are receptive to self-transcendent messages even if their primary values are materialistically-orientated values (Corner et al., 2014).

Support for environmental actions can be achieved through framing sustainability initiatives to appeal to the self-enhancement values (Corner et al., 2014). This framing is done by assigning a monetary value to a sustainability action. A frame appeals to the self-enhancing values when the monetary value of the sustainability action is promoted; it appeals to the self-transcendent values group when the intrinsic value of nature is emphasised. For example, the following value-framing strategies have been used in environmental engagement campaigns:

1. Existing values are identified, and the campaign targets these values. The challenge here is that the values of a society are diverse, so the campaign should be congruent with these diverse values.

2. A campaign aims to increase self-transcendent values (Corner et al., 2014).

The first approach was promoted by De Boer and Aiking (2011). They argued for

combining both altruistic (self-transcendent) and self-interest values as the basis for the creation of a global food security frame (one of the goals of sustainable development is addressing hunger). Such an approach, they argued, would appeal to a larger part of the population.

The second approach is a critique of the first; it is also a critique of the omnipresence of self-enhancement motivations in societies and institutions. Sustainability engagement through framing issues in terms of self-enhancement benefits was confirmed; however, several authors argued that this approach is short-sighted and does not promote sustainability transformation (Brulle, 2010; Plec & Pettenger, 2012). Promoting the self-enhancement framing of environmental goals is usually temporary (as long as the financial incentive exists) and morally questionable because the motivation for environmental action is not moral but financial. Another problem with self-enhancement framing is that by encouraging self-enhancement behaviour it reifies it in expectations and cultural norms. If sustainable cultural norms are envisioned as a goal of sustainable development, it is reasonable to use self-transcendent values in framing, thus encouraging self-transcendent behaviour and norms. Corner et al. (2014) confirmed the potential usefulness of this strategy with an example of behavioural spillover, that is, the propensity to continued environmentally-friendly behaviour after receiving pro-environmentally framed priming. On the individual cognitive level, self-transcendent values combined with self-direction were found to have a positive effect on individual's motivation to change to a more environmentally-friendly lifestyle (Axsen & Kurani, 2013). These effects were observed in a tight link with the context, including temporary or permanent openness to change and feedback from the community. However, despite behavioural and even lifestyle change, values were found to be more resistant to change. In an empirical study with a sample of university students, value change based on previous priming and behaviour was not confirmed (Spence, Leygue, Bedwell, & O'Malley, 2014). So, despite the motivation to use self-transcendent value-framing as the mechanism of wider social and cultural change, the scope of this change is still hard to estimate based on the existing research. The ultimate

importance of the social value transformation is also questionable. For example, Gasper et al. (2013) showed how vastly different values in reasoning led to surprisingly similar policy outcomes. This outcome could be explained by other factors playing dominant roles in the decision-making. At the same time, evidence was found that on the pan-cultural level, value systems already prioritise self-transcendent values (Schwartz & Bardi, 2001).

Given the largely unpredictable influence of values in framing, other authors attempted to combine values with other strategies and contextual factors to gain a better understanding. Van de Velde et al. (2010) used a framework in which personal characteristics were mediating factors that influenced the effectiveness of frames and their impact on attitudes and behaviour. Personal characteristics involved values, prior knowledge, and a perceived need for information. Other commonly observed factors of influence included gain or loss, fear, age, gender, distance, and identity (Gifford & Comeau, 2011; Spence & Pidgeon, 2010; Van de Velde et al., 2010). The influence of these factors was found to be a complex function of their combined effects. For example, a lack of fear reduced the impact of a gain frame; gain frames elicited more positive attitude towards climate change mitigation, and so on (Spence & Pidgeon, 2010).

## 2.5 Theories of Values

An overview of the value concept is necessary prior to further discussion. This section focuses on theories of values and classification of values. This overview provides the background to the further discussion of the involvement of human values in sustainability. The seminal work of Rokeach (1979a) provided a comprehensive editorial of articles about human and social values, and the possibility of value change in society. A more recent review by Agle and Caldwell (1999) developed a systematic framework of value levels research and categorised the work that had been done up to that date.

In relation to the discussion in this research, three questions are important in the

understanding of values. Firstly, how can values be recognised and distinguished from other related concepts? Secondly, how are different values related to each other? Thirdly, what do we know about values and social change? The answers are explained in the following three sections. The first question is both theoretical and methodological. This chapter focuses on the theory; the methodological review follows in Chapter 3 - Methodology.

### 2.5.1 Meanings of values

Values are socially constructed abstract ideals that define goals and behaviour and provide judgment and evaluation standards (Leiserowitz, Kates, & Parris, 2006). Valuing often pre-empts rationality, in other words, values are not necessarily linked to rational gains. Many expressions of values appear to be rational. For example, it seems perfectly natural to value one's own life. However, this value becomes questionable if a person believes that the end of life signifies something better. Other expressions of values may seem less rational. It is common for people to value random things for their sentimental values, memories associated with them, and so on. For example, a person may value a stone because it was picked up at the seashore on a memorable vacation. Society considers valuing perfectly arbitrary things rational once an evaluative explanation is given (Habermas, 1984). These evaluative explanations link a random value to a socially acceptable value. Valuing the stone becomes rational once the sentimental value has been explained. In another example, Habermas (1984) argued that someone wanting a saucer of mud could be considered irrational only until the explanation had been given that the mud provided a rich river smell that the person enjoyed. These examples link two generally worthless objects - the stone and the mud - to two socially acceptable value systems. The stone is linked to the value of memories; the mud is linked to sensory pleasure. The values of the stone and the mud did not exist without the individuals who saw the value and the society that accepted the rationality of the value claims. Thus, values are socially constructed. They are expressions of human needs shaped by the common action of internal psychological and external sociological forces (Rokeach, 1979a). Values need

communicative interactions to be rationalised.

Value identification requires studying the context and communication for the following elements:

- expressions of goals and desirable events and behaviour;
- rationalisation of goals, decisions, behaviour, evaluation of events, motivation, validation, punishment, or praise;
- linkages between the immediate goals or wishes and long-term beliefs, objectives, and desirable states.

Further, the discussion clarifies how actors within societies arrange and prioritise values in value systems as part of their worldviews (Matutinović, 2012).

### 2.5.2 Organisation of values

This section answers the second question about the interrelationships of values. In isolation, expressions of values may appear random and irrational (see examples in the previous section). However, organised by the level of their priority in a hierarchical structure, values usually pertain to a goal that is sufficiently stable. Values within a social or cultural value-system are goals guiding universal human needs of biological safety, social safety and group survival and welfare (Schwartz, 1992).

Hierarchically-ordered values (also called values' priorities or values' strengths) are arranged into value systems. A value system "is an organized set of preferential standards that are used in making selections of objects and actions, resolving conflicts, invoking social sanctions, and coping with needs or claims for social and psychological defences of choices made or proposed" (Williams, 1979, p. 390).

Basic human values form a motivational continuum that can be broken down into basic value types for analysis (Cieciuch & Schwartz, 2012). The most widely used

motivational classification of values is described by Schwartz (1992, 1994) and consists of ten basic value types:

1. Conformity corresponds to restraint of actions that are likely to upset others or violate social norms.

2. Tradition defines respect and acceptance of cultural or religious values.

3. Benevolence can be defined as caring for personal acquaintances, family, and friends, that is, people with whom one is in frequent personal contact.

4. Universalism manifests in caring and protection for all humans and nature.

5. Self-direction is a propensity towards an independent thought and action.

6. Stimulation is based on the biological need for variety and is manifested in social values of excitement and novelty.

7. Hedonism refers to appreciating pleasure and gratification of the senses.

8. Achievement explains the drive for personal success in society.

9. Power corresponds to striving for status, dominance and control over others.

10. Security underpins the need for safety and protection.

These ten value types are considered universal because they underpin motivations that are present universally across cultures (Schwartz, 1992). The differences between value systems manifest themselves in the priorities and valences of the values. It is also important that the ten values above represent the universals in content and structure of values with the underlying goal of representing the whole range of possible human values in a comparable way. It also means that non-universal values and value types can be distinguished. For example, the value of spirituality is a common value globally (Schwartz, 1992) so it is universal from the structural point of view. However, it is manifested in different goals and

behaviours, thus it is not universal from the content point of view. Spirituality can be coded through other universal values and their combination is different in different cultures (Schwartz, 1992). This situation is likely to be similar in the case of sustainability as a common value system having different contextual value content. Arranging values into a value system or a value hierarchy is based on positioning conflict values on the opposite poles of the desirability spectrum, and complementing values near each other (Schwartz, 1992). For example, self-direction is in conflict with conformance but can complement hedonism and achievement. Thus, it is likely that within a value system, if self-direction is desirable, hedonism and achievement would be desirable as well, while conformance would be considered unimportant or undesirable.

### 2.5.3 Values and change

Sustainability objectives require sustainable societies, organisations, political institutions, cultures, and individuals (Starik & Rands, 1995). This requirement is a departure from the status quo through a multilevel transformation. In 1998, Elkington suggested that the global society was undergoing sustainability transformation with the focus on the values of quality, long-term goals, transparency, and responsibility towards stakeholders. This transformation was discussed by many authors as a paradigm shift, worldview transformation, and the change of underlying values (Corner et al., 2014; Elkington, 2004; Fox, Tost, & Wade-Benzoni, 2010; Gladwin, Kennelly, & Krause, 1995). Understanding the mechanics of such transformation requires answering the following questions: Do social values change and how? What are the signs of such change and transformation? How does the change in values affect societies?

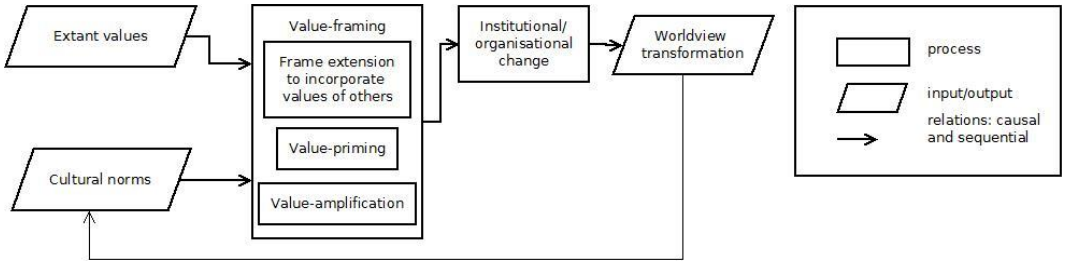



*Figure 8. Value-framing as a mechanism of change*

Values are usually defined as long-term, mostly static attributes (Connor & Becker, 1979; Schwartz, 1992). However, a change in a value system is possible. In psychology, value change is initiated through revealing the value incongruence and conflict in an individual value set, thus inducing dissatisfaction and change (Connor & Becker, 1979). An analogous strategy can be used on the level of social movements, where the target is not just one individual but a group (Ball-Rokeach & Tallman, 1979). Another mechanism of value change is through framing as cognitive priming (Döring et al., 2015). In this case, priming is done by attracting attention to particular aspects of reality. This value-framing or value-priming works by increasing the priority of certain values, such as self-transcendent values. Value-framing draws on existing cultural values or cultural norms and often brings attention to extant values with the intention of promoting change. The changes are experienced not only in attitudes but in actual behaviours. And the repetitive behavioural change is reified in common behaviours, cultural norms, and subsequent institutional change. This is shown in Figure 8. When a social change is pertinent, parties promoting change use value-frames to formulate their argument in support of a new worldview or paradigm (Ball-Rokeach et al., 1990). For example, value-frames were used in the argument about the legitimacy of abortion (Ball-Rokeach et al., 1990), in the abolitionist movement in the USA (Williams, 1979), and in the environmental action campaigns (Bardwell, 1991).

In sustainability projects and programmes, competing parties promote their own interpretations and frames. This competition, among other things, can be the manifestation of a conflict of value systems. Competing parties seek support by

using frame extension to incorporate the values of their competitors or opponents (Snow et al., 1986). In such a case, values provide a common ground for shared meanings and peaceful discussion about the sustainability transformation options (see Figure 8).

### 2.5.4 Value-framing

Value-framing was mentioned above as a mechanism of strategic change. A value-frame is a criterion composed of values and used to evaluate events, people, and issues (Ball-Rokeach et al., 1990). The central function of value-framing is an evaluation of choices (Ball-Rokeach et al., 1990) and attitudes (Kates et al., 2005). In political communication, value-framing "is the process of associating a value and a political issue in a certain direction" (Shen & Edwards, 2005, p. 798). Values are used in framing by politicians and the media (Brewer & Gross, 2005; Cornelissen & Werner, 2014; Corner et al., 2014; Hallahan, 1999; Jasperson et al., 1998) and in strategic decision-making by organisational actors (Kaplan, 2008). Values in framing or value-frames have been previously examined in the area of political communication (Ball-Rokeach et al., 1990; Barker, 2005; Brewer & Gross, 2005) and political opinion (Brewer & Gross, 2005; Iyengar, 2005; Shah, McLeod, & Yoon, 2001). The usefulness of value-framing has been acknowledged in situations characterised by the absence of other cues for sensemaking (Barker, 2005) and in cases that involve a significant social transformation, such as the case of the pro- and anti-abortion movement (Ball-Rokeach et al., 1990). Such circumstances are commonplace in sustainability programmes.

In the framing literature, value-frames were also described as "value-resonance". The value-resonance term was used to describe the alignment of values in communication frames with the values of the audience (Shen & Edwards, 2005). For example, Shen and Edwards (2005) provided an analysis of the impact of media value-frames on citizens' cognition and opinion. An equivalent to value-framing was also called "value amplification" and was described as a factor affecting participation in a social movement (Snow et al., 1986).

However, the existing literature did not answer the question of whether value-framing is the most suitable construct in analysis of values in sustainability framing. Additionally, more concise definitions of value-frames and value-framing were required. Taking this consideration into account, a broad outlook on the role of values in framing, including the influence both within and across frames, was adopted.

## 2.6 Sustainability Framing and Values

This research views sustainability as a transformation required for sustainable living, that is, living that requires addressing human needs at present while ensuring that the opportunities remain for future generations to address their needs. Needs are linked to values as motivations to secure human biological requirements, coordinated society, and group survival (Schwartz, 1992; Schwartz & Bilsky, 1987).

Previous research on climate change and environmental initiatives showed that public engagement is dependent on how the messages are framed (Spence & Pidgeon, 2010) and how this framing is aligned with the audience's values (Bolderdijk et al., 2013; Corner et al., 2014; Steg et al., 2014). Values in framing messages and in cognitive frames of the audience are important because people tend to make decisions based on their values. However, values in isolation are not sufficient to explain actions. Additionally, an interpretation or framing of a situation by a participant is important in understanding actions within the context (Sonenshein et al., 2014). Values are likely to have more influence in cases of conflicting evidence (Sniderman & Theriault, 2004) or in non-transparent situations (Tversky & Kahneman, 1986). In sustainability issues, both conflicting evidence and a lack of transparency are common. Additionally, the outcomes of decisions are not immediate and not co-located with the action; this situation further impedes learning from the previous choices (Kahneman & Tversky, 1984). Values of the audience, then, remain "the most important factor" in sustainability decisions (Nováček, 2013, p. 5). Values both unite and divide the audience when a

frame is presented. In the presence of various value priorities within the audience, public engagement is unlikely if the sustainability framing favours the values of only one group (Bond et al., 2010). However, a frame composed around a common moral theme ties the audience together in support (Ball-Rokeach & Tallman, 1979).

Values have been called the inner dimension of sustainability (Horlings, 2015) and the "missing pillar" (Burford et al., 2013, p. 3035). Values help people to make sense of sustainability and influence their engagement with pro-environmental action (Corner et al., 2014). With the inclusion of values, the initial conceptual background (Figure 2) was refined with the value roles in the inputs, processes, and outputs (see Figure 9). In Figure 9, values are a part of culture; sustainability is a value system as the desired end state. Values are an inner dimension of sustainable development, they are part of the institutional and organisational transformation, and value-framing is a particular way of framing sustainability issues.

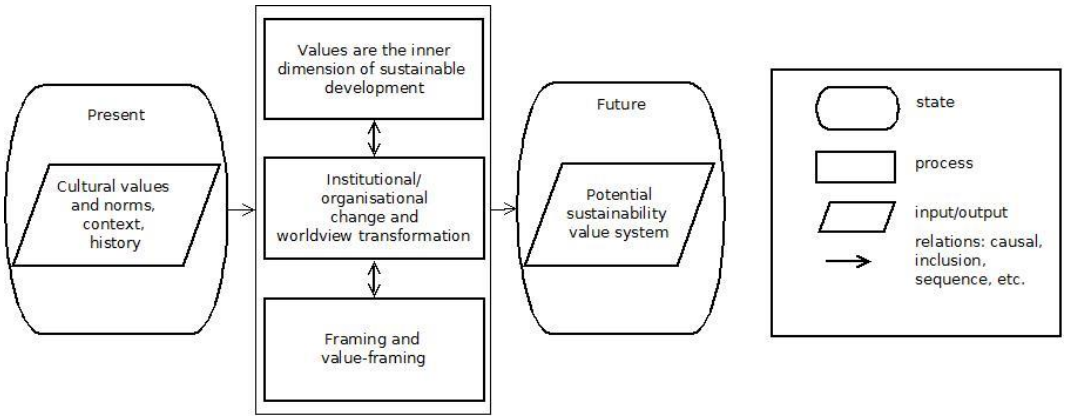



*Figure 9. Values in the conceptual background of sustainability framing*

### 2.6.1 The prospect of sustainable values

The diagram above (Figure 9) clarifies what is known about the contribution of values to sustainability transformation. The next question is whether particular values are pro- or contra-sustainability. In their recent research, McGrail, Gaziulusoy, and Twomey (2015) investigated citizens' visions of future resilient

cities and different frames of transitions to these future cities. Based on the participants' responses, the values could be classified as those leading to the solution (pro-sustainability) or leading to the problem (contra-sustainability). Values in the sustainability problem included individualism, existing socio-economic values (no details provided), values associated with leisure and consumption (hedonism), and the priority of work and mobility values (self-direction) (McGrail et al., 2015). Values in sustainability treatment recommendations included communitarianism, communication, and the value of outdoors (nature) (McGrail et al., 2015). In both problems and treatment recommendations, the priorities of values were important. For example, self-direction values, which included the focus on work and mobility, were considered important but were also perceived as contributing to the problems of sustainability. Overall, the shift of priorities towards higher reliance on the community was seen as part of the solution.

However, these results were based on perceptions. In practice, values are non-deterministic in behavioural choices (Matutinović, 2012). Schwartz and Bardi (2001) found that on the global level, societies tend to value the same basic values. Multiple conflicts present in societies confirm that for many societies the vision of sustainability does not include the best good for the maximum number of people; thus, the similarity of values does not lead to the similarity of behaviour. Despite the role of values as definers of desirable goals and behaviour, their influence on the actual behaviour is a result of multiple contextual factors. The interpretation of values may also be a source of confusion as the concept of values is abstract and multidimensional, and value interpretations are contextual. These interpretations are reified in institutions and may show their constraining effect on meaning construction (both sensemaking and sensegiving).

### 2.6.2 Themes of values in sustainability framing research

The summary of the role of values in sustainability framing is presented in Table 2. Three main themes of values' roles have been identified. In the first theme, the role of values as inputs is to contribute towards the initial understanding and

frame creation. In the second theme, the role of values as a tool of strategic framing is to increase salience and clarify the meaning of a frame. From this perspective, values are not strictly stable; framing participants can change their value priorities both in response to strategic framing and based on thinking and circumstances. In the third theme, the role of values is to reflect the social transformation and the new frames associated with it.

*Table 2*

*Values in Sustainability Framing Research*

| Themes and sub-themes of values' roles | Sustainability implication | Processes | Examples of discussion |
|---|---|---|---|
| Input. Values define choice in conditions of uncertainty. | In a case where detailed information is lacking, values provide the basis for planning. | Decision-making and behaviour | Empirical (Peer & Stoeglehner, 2013; Van de Velde et al., 2010). Conceptual (Hahn et al., 2014) |
| Input. Social values as guides for frame creation. | Provides a collection of culturally acceptable frames that are based on pre-existing knowledge, traditions, norms, and institutional practices. | Meaning construction, framing | Empirical (Barr et al., 2011; Bond et al., 2010; Peer & Stoeglehner, 2013; Wright & Reid, 2011). Conceptual (Corner et al., 2014). |
| Process. Values in strategic change. | Values guide meaning construction, particularly learning and understanding in a participative environment. Such meaning construction results in frame emergence, divergence, or convergence. | Meaning construction and negotiation, interactions, organising | Empirical (Bond et al., 2010; Candel et al., 2014; Fünfgeld & McEvoy, 2014; Peer & Stoeglehner, 2013; Spence & Pidgeon, 2010; Wilhelm-Rechmann & Cowling, 2011). |

| Themes and sub-themes of values' roles | Sustainability implication | Processes | Examples of discussion |
|---|---|---|---|
| | | | Conceptual (Miller et al., 2014). |
| Process. Values shape communication with the goal of gaining allegiance and modifying behaviour. | Frame exposure consistent with values of individuals (cultural or personal) can increase the propensity to action. Linking such value-framing to identity is another strategy to amplify the effectiveness of frames. Besides values, other factors included in framing (fear, distance, gravity, gain or loss) can also impact the behaviour. | Sensegiving | Empirical (Hoffman, 2011; Spence et al., 2014; Van Gorp & van der Goot, 2012; Waller & Conaway, 2011; Wright & Reid, 2011). |
| Output. Values change or values should change. | Fusion of economic and social value-frames or negotiation of an agreed upon value system assist coordinated work and communication. Framing assists the emergence of sustainability ethic. | Organising | Empirical (Axsen & Kurani, 2013; Gifford & Comeau, 2011; Le Ber & Branzei, 2010; Peer & Stoeglehner, 2013; Tengblad & Ohlsson, 2010). Conceptual (Cornelissen, Holt, & Zundel, 2011; Lindenberg & Steg, |

| Themes and sub-themes of values' roles | Sustainability implication | Processes | Examples of discussion |
|---|---|---|---|
| | | | 2013). |
| Output. Values should change. | Social value systems should change to allow sustainable living. | Policy-making | Empirical (Plec & Pettenger, 2012). Conceptual (Brulle, 2010). |
| Output. Values may stay the same but sustainable behaviour should be achieved through framing and recombining the values. | Framing can bring extant to the problem values into the frame, thus shifting the perspective, creating a new understanding, and facilitating behaviour change. | Sensegiving | Empirical (De Boer & Aiking, 2011; Gasper et al., 2013; Jerneck & Olsson, 2011; Spence et al., 2014; Spence & Pidgeon, 2010; Tengblad & Ohlsson, 2010). |

### 2.6.3 Agreements and disagreements on the role of values in sustainability framing

The meaning of sustainability is contextual and needs to be developed in every context. The conceptual review and synthesis allowed the areas of agreement and disagreement on the role of values and framing in sustainability meaning construction to be distinguished. This summary is presented in Table 3.

*Table 3*

*Agreements and Disagreements on the Role of Values and Framing in Sustainability*

| | Agreement | Disagreement |
|---|---|---|
| Values | 1. Values are the basis for framing.<br><br>2. Values affect sustainable choices, behaviour, and attitude. | Are particular values important for sustainability or can any contextual combination of values be used to promote sustainability? |
| Framing | 1. Different frames of sustainability exist, some of them are implicit. Often the implicitness contributes to the lack of understanding.<br><br>2. Framing analysis is a useful tool for advancing understanding of sustainability issues. | Should the public be presented with a purposefully designed framing of sustainability to elicit a particular behaviour change or should stakeholders make sense of it themselves through learning and knowledge exchange? |

Based on the summary in Table 2 and the areas of contention in Table 3, gaps in knowledge were identified and summarised in Table 4**Error! Reference source not found.**.

*Table 4*

*Research Gaps in Values and Framing of Sustainability*

| Research gap | Description and motivation |
|---|---|
| The change of the role of values with time | How does the role of values in sustainability framing change with time? In particular, how does it change from the time of the emergence of a problem in the minds of frame creators till the time when the frame and the problem are no longer relevant? Do specific values remain associated with the understanding sustainability or do they move out of focus together with the problem? |
| Values and other factors in the framing of sustainability | What is the relevant contribution of values compared to other factors (fear, gravity, proximity, gain and loss, etc.) in the framing of sustainability? What conditions define the prevalence of the value-based mechanisms over the other factors? |
| Factors of value change | The change in value systems is seen as a part of sustainable development; however there is insufficient research on the factors that can initiate the change in values (Steg et al., 2014). |
| The implications of values that are not relevant to action | In framing research, values are mostly discussed as tools for engaging the audience. However, other contextual values may have important implications for the understanding of sustainability; such values may |

| Research gap | Description and motivation |
|---|---|
| | include curiosity, the need for clarity, and so on. |
| The role of values across media sources | What is the role of values across media sources? Do values provide continuity between the discussions in various media sources? |
| Dominant value-frames | If dominant value-frames are easier to promote (Ball-Rokeach et al., 1990), where do these frames come from? Do they come from policies, organisations, powerful political unions, or from elsewhere? |
| Cross-level research | The role of values in framing on individual, organisational, institutional, and social levels is different and the lack of research integrating across these levels has been acknowledged by Cornelissen and Werner (2014). The questions are open regarding the relative contribution of framing in different levels towards sustainability transformation. |
| Sustainability framing in programmes | The potential of participative and ongoing sustainability framing for sustainability programmes is currently poorly understood (Boström, 2012). A research targeting a better understanding of sustainability framing in this context can be beneficial for the better design and more successful implementation of programmes. |

## 2.7 Model for Analysis of the Role of Values in the Framing of Sustainability

One of the most valuable perspectives that value-framing offers in the context of a sustainability programme is that of values affecting framing and vice versa. Values affect understanding and perceptions of sustainability, thus shaping the frames chosen to conceptualise sustainability. Chosen frames of sustainability then affect social values by bringing attention to less popular values and increasing their salience. These themes of values in framing are classified in Table 5.

*Table 5*

*Themes of Values in Framing Processes*

| The role of values | Audience frame | Promoter frame | Interaction frame |
|---|---|---|---|
| Values as an input to framing | Theme 1. Framing as an existing understanding is based on values, culture, and existing institutions. | | Theme 2. Established value frames are reified in existing institutions. |
| Value as a tool to achieve a framing goal | | Theme 3. Frame creators use the audience's values strategically to gain support and affect behaviour. | Theme 4. A functioning society requires commonly accepted values and frames. Participative meaning construction facilitates the creation of common frames. |

| The role of values | Audience frame | Promoter frame | Interaction frame |
|---|---|---|---|
| Value as a result of framing | Theme 5. Sensemaking processes ignite change in the salience and priority of existing values. | Theme 6. Sensegiving uses new value priorities. | Theme 7. Social value systems are transformed as the result of new meanings and behaviours. This transformation results in further institutional change.<br><br>Theme 8. New behaviours change existing cultural practices, including those of organisations and institutions. These changes affect social values. |

Table 5 is the basis for the value-based model of sustainability framing presented in Figure 10 with the numbers in square brackets corresponding to the numbered relations in the figure. Sustainability is a desirable end state and the logical result of sustainable development [2]. As a desirable end state, sustainability is a value system that defines framing and meaning construction in sustainable development [5]. Values serve as inputs to the processes of sustainable development and transformation [1]. Values help people to make sense of sustainability and affect the construction of framing messages [3]. Local goals of sustainability and sustainable development need "to be framed, filled with content, and interpreted from time to time and place to place" (Boström, 2012, p. 13) [4].

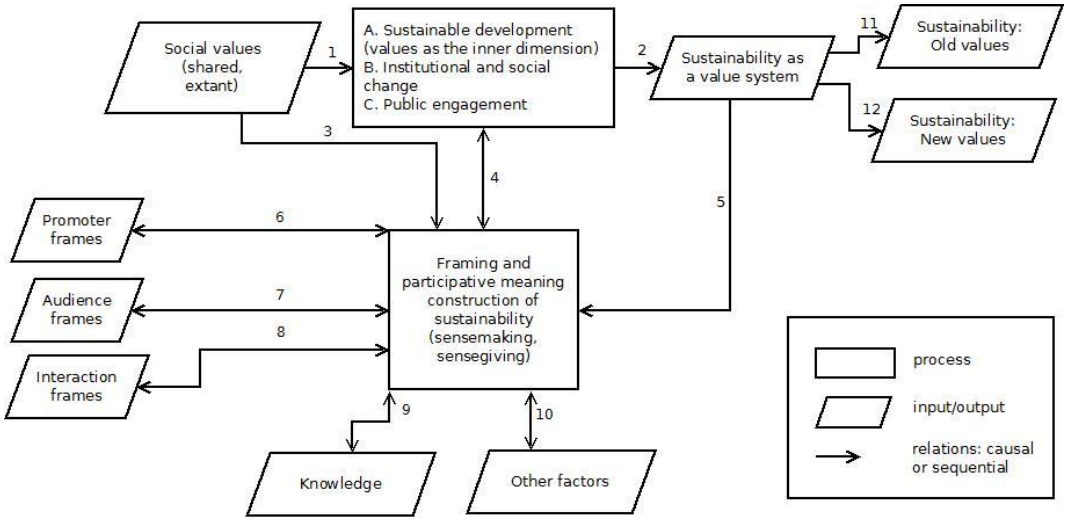



*Figure 10.Value-based model of sustainability framing resulting from the synthesis of previous research*

The interactional nature of sustainability transformation has been highlighted by many authors (Bond et al., 2010; Brulle, 2010; De Boer & Aiking, 2011; Wilhelm-Rechmann & Cowling, 2011). The interactions include promoter frames [6], audience frames [7], and interaction frames [8] inputs and outputs of framing. The initial knowledge [9] and other factors (fear, proximity, gravity of impact, knowledge, income, and identity) [10] are added as important inputs and outputs for meaning construction. A distinction in the vision of the sustainability value system is added because the opinions in previous research literature differed on

whether sustainability entails a new value system [11] or if the old value system [12] is sufficient but needs to be implemented in a more efficient way in the modernised institutions.

From the research perspective, the proposed model offers both opportunities and challenges. The opportunity is in using the construct of values more extensively in framing analysis and research on sustainability meaning construction. From the framing analysis perspective, values offer an instrument of frame comparison (Ball-Rokeach et al., 1990). The challenge is the combination of an explicit and implicit value presence in frames. Explicit values are clearly stated, for example, when an issue is presented as an economic or social problem. Implicit values originate in contextual knowledge and cultural practices. The research complication is two-fold. Firstly, the researcher's understanding of the implicit values is likely to differ from the understanding of framing participants, moreover, the variation is likely to occur among the participants themselves. Both observational and participatory research can only provide part of the picture. Secondly, the presence of explicit values does not guarantee the absence of implicit ones.

In this research an observational perspective was adopted and the model was tested in a case study of the FiT programme in Los Angeles. Based on the identified complication of the assessment of implicit values, the study was limited to explicit content, that is, the expressions of values in communication that could be matched to the definitions of values. The following research questions guided data collection:

1. What frames do institutional actors use to communicate the requirements of sustainability within a sustainability programme?

2. What values do they use to legitimise these frames?

3. Through what mechanisms can these values in frames contribute to the meaning of sustainability?

# CHAPTER 3 - METHODOLOGY

In this chapter, the methodology of the empirical study is developed and described. Firstly, the research gap is reintroduced. Then, the research perspective is explained. Criteria for the real-world setting and the description of the selected case and the sources of data follow. Next, a review of previously used research techniques in values and framing research is provided. The concluding section of this chapter summarises the methodological approach developed for this analysis.

## 3.1 Knowledge Gap

The goal of this research was to contribute to the development of a value-based interpretive theory of framing as part of sustainability meaning construction. The construct of value-framing was used previously in communication research (Corner et al., 2014; Evans et al., 2013; Hallahan, 1999; Shen & Edwards, 2005) and research on strategic framing (Ball-Rokeach & Tallman, 1979, 1979). However, the application of this concept to meaning construction is new and under-researched. From the conceptual and theoretical review presented in the previous chapters, it is also conceivable that the influence of values in framing is broader than a contribution within a frame as in a value-frame. The contribution of values is overarching, cutting through micro-, meso-, macro-levels of framing, and individual, organisational, institutional, cultural, and global levels of values. This research's goal was to advance the understanding of the role of values in framing across levels. The selection of this research's goal was motivated both by the practical need and theoretical lack. The practical need exists in developing contextual meanings and knowledge of sustainability by the stakeholders of sustainability programmes. The theoretical need is to develop a comprehensive theoretical perspective on the role of values in the interactive framing process of sustainability meaning construction as part of sustainable development.

Additionally, this research contributes in several other ways. The empirical study

described frame elements and value aspects of frames that emerged in the process of sustainability meaning construction. These elements and aspects were viewed as building blocks in frame formation. Thus, this research contributed to the understanding of frame formation. It addressed the lack of research across framing levels (Corner et al., 2014). This research was situated in the meso-level of field framing but it also reviewed the implications for the macro-level and accounted for the contribution of the individual-level cognitive frames. This research advanced framing analysis methodology, thus contributing to the goals of sustainability science as a bridge between "knowledge, theory and methodology" (Jerneck & Olsson, 2011, p. 255).

## 3.2 Ontological and Epistemological Position

Researchers strongly identify with certain values, beliefs, and personal preferences. Research framing, direction and outcome depend on ontological and epistemological beliefs of the researcher (Rudestam & Newton, 2007). Methodology usually follows from these assumptions.

Ontology is the study of what exists, what is reality and what it is made of, and how things are related in the most general ways (Hofweber, 2014). Historically, science has developed as a study of facts underpinned by a positivist position of the objective reality that exists separately from people's knowledge of it; the researcher's values were discarded and objective interpretations of facts were sought (Marcum, 2014). However, the development of social sciences and further integration of social science with natural sciences in fields like ecology and policy-making ignited a change. It was acknowledged that science itself is a social phenomenon (Bourdieu, 1999). It is developed by people who are personally interested in scientific pursuits; it requires cultural and social support for its development; it is expected to comply with important social values (Merton, 1973). As an institution, science is characterised by its dominant values (Rokeach, 1979a); the same applies to the institutions of government, media, business, and non-profit organisations. In this research, social reality was analysed as a socially

constructed phenomenon interlaced with values.

The natural world is complex and dynamic (Funtowicz & Ravetz, 1993) - in the full scope, it is incomprehensible to a human mind. Traditional “normal” science attempts to find explanations for the world by simplifying, reducing the scope and breaking the system of study into smaller elements (Kuhn, 1970). This strategy is also characteristic of “hard” systems methodology (Checkland, 2000). However, analysing parts of the world as separate systems is inadequate for describing a human, institutional and organisational activity that has the main focus on relationships between these systems (Checkland, 2000). Descriptions and understanding of the complexity of the real world are based on an epistemological position adopted (Schlindwein & Ison, 2004).

The main epistemological questions are: What are the sources, conditions and limits of knowledge (Steup, 2014)? Language recorded in text or another medium is the main means of acquiring knowledge because “for members of the same culture the limits of their language are the limits of the world” (Habermas, 1984, p. 58). Thus, language, culture, and worldviews are tightly linked. Language is the tool of interpreting (Gadamer, 1989) and a means of achieving and decentralising understanding, transforming the understanding into the common knowledge and the basis of worldviews (Habermas, 1984). From the perspective of communicative action theory (Habermas, 1984), knowledge is attained through communication or observation of communication. The expression of meaning resides in words and the use of language: “Language is the medium in which substantive understanding and agreement take place” (Gadamer, 1989, p. 385). Observation of communication in the written media was the choice for obtaining knowledge in this empirical study. The written media was selected as the most stable “contemporaneous with each present time” (Gadamer, 1989, p. 391) type of communication. Written texts can be returned to and referred to multiple times, they can be read and re-read to attain a better understanding. Though knowledge is reflected in written communication, it exists within social, technical, cultural, and historical frameworks (Ravetz, 2006). Thus, concepts gain their meaning

within a particular context (Laurence & Margolis, 1999). In such situations, the concept of sustainability gains its meaning within its context, which is characterised by the commonly accepted and extant frames and values. Meaning construction is reflected in the written media and they are influenced by it. This allows the use of written texts for analysing the presence of frames and their elements. Another way to look at sustainability meaning construction is through the social constructivism theory, which implies that knowledge is constructed through interactions between individuals (Ackermann, 2001). These interactions are reflected in written communication.

This research was conducted in a hermeneutic phenomenological tradition with the intention of describing and interpreting the phenomenon of framing of sustainability within its context (Groenewald, 2008). The context was important because human values and morals fall into the "soft" system view of the world, in other words, the system that is indivisible and ill-defined (Checkland, 2000). A phenomenologist approaches that system with an open mind and "does not… simply begin with the ontological presupposition of an objective world; he makes this a problem by inquiring into the conditions under which the unity of an objective world is constituted for the members of a community" (Habermas, 1984, p. 12). Thus, a phenomenological approach is best suited to find the underlying logic, "depth of meaning contained in words" (Gadamer, 1989, p. 406), inconsistencies, and the evolving understanding.

## 3.3 Research Scope

The topic of values in sustainability transcends several disciplines: psychology, sociology, business, sustainability science, philosophy, and so on. In this research, this topic was approached as a socially constructed phenomenon. Because the knowledge of these disciplines is also socially constructed, this approach allowed the influence of multiple disciplines to be accommodated. In order to contain the discussion within a particular topic, this research was based on an example of an organisational field centred around one sustainability programme and analysed

through written communication. This research design allowed the researcher to circumvent some problems and provided some opportunities:

- It allowed the researcher to observe the discussion of sustainability within the limited geographic, time, and action boundaries.

- It provided a concentrated discussion and meaning construction among a limited range of actors united by their interest in the sustainability programme. In comparison, meaning construction that is not tied to a programme could attract a continuously changing range of actors with the new actors repeatedly learning the basics without contributing much to the meaning construction.

- It allowed the researcher to investigate frames' development and value transformation along with the stages of programme development.

The discussion of values in relation to sustainability programmes is based on theories of values and framing. These theories are discussed in Chapter 2 - Conceptual Review. Based on the conceptual review, sustainability was viewed as a socially constructed phenomenon. Social changes accompanying sustainability transformation were viewed from the new or modern sociological institutionalism perspective (Meyer, 2008; Scott, 2004). Organisations and other participants in the programme were viewed as part of an organisational field.

## 3.4 Research Design

The case study is a research design suitable for examining a contemporary phenomenon within its context (Yin, 2003). In this research, the phenomenon under study was the framing of sustainability within a transforming organisational field, whose change was due to a new policy/regulatory requirement and the organisational decision to address this requirement with a sustainability programme. The change was a trigger for framing and sustainability meaning construction. This framing was reflected in various communication media. The

organisational field included organisations, the community as programme stakeholders, media, regulators, government, and scientific institutions.

### 3.4.1 The choice of the amount of case studies

Case study research is especially useful to understand the dynamics of a single setting (Eisenhardt, 1989), such as the organisational field in this research. Framing was studied as the main dynamic of change (Benford & Snow, 2000). Von Krogh, Rossi-Lamastra, and Haefliger (2012) recommended the use of a single case study for research on a phenomenon of particular significance to the representatives of industry or academia and observers. The significance can be both practical and theoretical, such as the change and creation of a new institution, and change in markets and societies. In this research, the purpose of the single case study was to explore sustainability meaning construction in the phenomenon of transitioning of the utility and its stakeholders to the new solar market. This phenomenon is significant in the modern utility business as explained in 4.1.2 A utility death spiral as an example of the transformation of an organisational field**Error! Reference source not found.**. As Scott (2005) noted in his review, conceptual models of institutions are easily carried not only across fields and sectors but also across national borders. Thus, the example in this study can offer insights to the other utilities and societies undergoing a similar transformation.

A single case was preferred over multiple cases. In multiple case design, the contribution of contexts in different cases may be challenging, if not impossible, to isolate in meaningful ways. In the case of an organisational field, the contributions of culture, organisation's structure, legislation, and other contextual factors affect both the setting and its dynamics in complex non-linear ways. Thus, a single case is especially suitable for a context-bound phenomenological approach.

Instead of comparison across cases, this research used three main sources of framing for cross-source comparison. These sources included communications from science and business, programme owners as representatives of government

business, and mass media. The sources were used as different lenses on the same phenomenon. Despite the suitability of a single case study for the purposes of phenomenological exploration, it is important to highlight its limitations. The transferability of the findings of a single case study depends on the context, in which the intention is to apply such findings (Noble & Smith, 2015).

For the study of the FiT, the context that can be common with the other comparable phenomena is the context of the utility transformation towards distributed generation and the changes in the society and regulations that accompany such a transformation. This context is also sufficiently similar to other public-orientated sustainability programmes covered in the media that involve the changes in the management of an organisation, public policies, and the general social identity transformation. The differences of context will be geopolitical, cultural, social, and environmental. The case of Los Angeles is sufficiently broad as it represents a big cosmopolitan urban area in a democratic country. The population of Los Angeles, 1.2 million in 2016, fits into the most common city size bracket according to the *World's cities in 2016* report (The United Nations, 2016). As for many other cities around the world, the issues of equity, sustainable water and energy, economic development, and climate change efforts are highlighted in the Los Angeles's plan (City of Los Angeles, 2015). However, it is also worth noting that understanding of sustainability, willing public participation, and the possibility of an open debate regarding public policies represent very dissimilar issues in many other parts of the world. Moreover, very culturally cohesive and mono-religion cities are also unlikely to be characterised by similar public discourses.

Case study design is a particular way of defining cases (Gerring, 2004). It does not prescribe methods of analysing data; these methods can be quantitative, qualitative, or mixed (Eisenhardt, 1989). Case study research allows one to view a phenomenon through many lenses (Baxter & Jack, 2008), bringing rich qualitative evidence to mainstream deductive research (Eisenhardt & Graebner, 2007). Such a combination is important for sustainability research, which is intended to be

useful for practitioners. The distinct feature of a case study as compared to a laboratory experiment is that the case is viewed as part of its context (Eisenhardt & Graebner, 2007). In research on sustainability, the context of a sustainability programme within its organisational field is of vital importance as programmes and organisations operate within their social and natural environment (Marcus, Kurucz, & Colbert, 2010).

### 3.4.2 Criteria for case selection

Selecting a case is a crucial consideration that defines how well the research goals could be addressed. For qualitative hermeneutic case research, the research is not expected to be generalisable to the population; instead, it has to provide analytic generalisability (Yin, 2013). Analytic generalisation means identification of underlying constructs in the researched phenomenon that are likely to occur in other situations (Yin, 2013). Analytic generalisability results from the ability of a researched case to point out the areas not covered by existing theories, to show inconsistencies and deviations from the accepted explanations, to develop hypotheses for extension of existing theories, and to find ways of integrating existing theories in a way that can explain phenomena previously not explained. In other words, the case should provide the maximum information of that particular kind that has the potential to extend or improve existing theories (Flyvbjerg, 2006). Such maximum information is often obtained from cases that are unique and particularly representable of the phenomenon of interest. For example, Kaplan (2008) has studied cognitive frames in a framing context using an example of an organisation undergoing an acute case of strategic contestation. In her case, though the organisational context is not replicable, she argued that the insights can be extended to other cases of "turbulent" (Kaplan, 2008, p. 748) change environments characterised by uncertainty and the need for strategic action.

Another example in previous research is even more similar to the aspirations in this study. In their effort to develop a new perspective on institutional change and creation of new industries, Lounsbury et al. (2003) selected a case of recycling.

They combined historical evidence of key events, legislations, coalitions, and changes in organisations and analysis of interviews of recycling activists, government reports, media coverage, Congressional Hearings, and other available documents to show how institutional emergence is bound in political struggles over socially accepted meanings. Despite the case in their research being representative of events surrounding recycling in the USA, the authors argued that it demonstrated well the roles of field frames and their role in the interactions of various actors in institutional change (Lounsbury et al., 2003).

In another example, Weick (1993) used a case of firefighters described in a book to theorise about problems that modern organisations face. Firefighters in a life and death event of fire were compared to a critical case of a temporary organisation faced with a critical task, which may have serious consequences for the organisation's survival (Weick, 1993). This case was used as a thought experiment where the outcomes of past events were compared with the results of theorising; Weick (1995b) observed that this is "a fairly common tactic in theory construction" (p. 388).

In this research, the intention was to perform a thought experiment (Weick, 1995b) to validate the model developed in the previous chapters (Figure 10). Additionally, case selection was guided by the following considerations:

- Creswell (2013) recommended selecting a case based on time and place. This consideration was also confirmed by Bell and Morse (2013) who emphasised the importance of time and space boundaries in undertaking sustainability research. To cater for these requirements, case selection was limited to urban sustainability programmes[5]. Compared to the other sustainability projects that may have well-defined time and space range, urban sustainability initiatives also assure high awareness of the community on many levels, especially compared to industrial or

[5] Urban sustainability can be analysed on a project or programme level; these levels are essentially the same from the research point of view as they are characterised by well-defined scope, timescale, resource allocation, and outputs (Bell & Morse, 2013).

environmental projects that might only appeal to certain professional/educational levels.

- Baxter and Jack (2008) recommended limiting the choice of cases by time and activity. The activities in this research concerned organisational change as part of a sustainability programme. These activities had to take place at a time accessible to the researcher.

- Miles and Huberman (1994) recommended considering definition and context as part of case selection. These parameters defined what kind of data was relevant and had to be included in the study.

The goal of this section was to define who and what should be included in this research (Miles & Huberman, 1994). Beyond the factors identified above, an important factor in selecting the case was sufficient framing data in the media: news media, government and science communication. It was also important that the framing was concerned with an issue related to sustainability. The issue had to be novel and change inducing, as these are the usual triggers for sensemaking and framing.

Though the case in this research was selected at the level of a programme, more granular levels could be pursued to explore meaning construction, such as organisational or individual. Compared to the organisational level, a study of a programme misses many details of organisational meaning development, its pathways and constraints, managerial influence, power contests with an organisation, and other processes that were previously well-researched (e.g., Gioia & Chittipeddi, 1991; Weick, 1993). In comparison to the individual level of meaning construction, the research on the level of a programme misses the rich psychological context of an individual, the details of cognitive processes, interaction with other individuals, emotional and physical states, and other associated details; these aspects of meaning construction in the context of this study would not allow to capture of the high-level picture of the programme development within the society.

## 3.5 Research Strategy

After the case has been selected and its boundaries defined, Baxter and Jack (2008) recommended considering additional case study elements, such as research questions, propositions, the application of a conceptual framework, and criteria for interpreting findings. The research questions have already been discussed (2.7 Model for Analysis of the Role of Values in the Framing of Sustainability**Error! Reference source not found.**). The propositions were expected to be derived from the data as this study was the starting point of theory development (Eisenhardt & Graebner, 2007). The intention of the case study was to test and, potentially, improve the value-based model derived from the conceptual review and the synthesis of the previous studies (Figure 10). Thus, the value-based model of sustainability framing was simultaneously the conceptual framework for the case study and the criterion for interpreting its results.

Research strategy defines how to collect and analyse data. In particular, it defines steps, methods, techniques, and their joint workings. In case study research, a variety of strategies are possible (Baxter & Jack, 2008; Eisenhardt & Graebner, 2007). The selection of such a strategy defines the further application of the research findings (Green, 2002). Therefore, even before answering the research questions, the first question that this research had to address was how to analyse values, frames, and value-frames in different communication media?

Social research offers several well-known methodologies for data collection and analysis. Surveys are probably the most well-known way to do social research and are usually done on their own or as a part of an experiment or a case study. The distinctive feature of surveys is that they are intrusive into the natural routine of the participants. They also depend on what information the questions contain and how they are phrased (Lang & Lang, 2002). A survey itself frames the situation through its questions by defining what is salient to the situation at hand. Questions asked, and every word in them, prime the respondents to a particular way of thinking (Lakoff, 2004). Survey questions devised by researchers can be considered as another indication of the state of a society and, as such, become a

source of bias (Lang & Lang, 2002). A survey is also vulnerable to the depth of consideration that the respondents give to its questions (Lang & Lang, 2002). Respondents may guess the intention of the researcher and provide the answers that are expected (Harris, 2001). Thus, surveys as a frame and an indication of the state of a society are probably unsuitable for studying frames within the social context.

Additionally, the use of surveys in eliciting values is also problematic. Boyd et al. (2015) experimentally proved that self-reported surveys do not provide an accurate picture of respondents' values; in particular, they do not give an accurate indication of people's behaviour. The authors recommend using free text and provide an example of such usage in their investigation of Facebook comments and free text descriptions.

An alternative social research methodology is observation, which includes ethnography, case studies, archival research, and participant observation. Previous research in framing in strategic organisations used ethnography to uncover frames (e.g., Gioia & Chittipeddi, 1991; Kaplan, 2008). These researchers used direct observation, with neither research nor the research phenomenon being independent of each other (Lang & Lang, 2002). The ethnographic approach has proven to be suitable for framing research; however, the research setting in this study was inherently different. Ethnography concentrates on the process of frame emergence, whereas this research was concerned with frames that have been reflected in written texts. These frames allowed the researcher to examine the emergence of meaning. Written communication also provided descriptions of the context of such meaning emergence.

Another problem relevant to both survey and ethnographic approach is time. Social change happens over years, making direct observation costly and unrealistic. Survey-based design can be repeated over the years to capture change, but the less tangible elements of qualitative design are likely to get lost and become incomparable after some time, even if performed by the same individual.

Communication research offers a third opportunity for social research where the researcher, though influenced by the media, is not intrusive into the natural flow of events and especially into the meaning construction. All aspects of communication are pertinent to meaning construction; through written texts, social actors participate in meaning encoding and decoding (Jensen, 2002). This meaning encoding involves transferring understanding into written frames; decoding involves reading and assimilating the information from the written frames with the cognitive frames of the reader. Thus, these processes are inherently interactive: "The concept of framing provides a fruitful theoretical foundation for the discourse analysis of interaction" (Tannen, 1993, p. 4). Encoding and decoding processes parallel sensegiving and sensemaking correspondingly.

Social movement actors actively engage in meaning production through framing and this process happens with the active participation of media, government, and other social institutions (Benford & Snow, 2000). The experience of meaning is always a verbal process (Gadamer, 1989); this verbal process is preserved for future reference in a variety of written communications. Lang and Lang (2002) emphasise the difference in impressions between the observers of an event and the observers of the media covering the event. Thus, interpretation of the written communication requires a hermeneutic approach to the extraction of meanings and values. This contextual interpretation requires consideration of multiple media sources.

With the emergence of the Internet, an increased amount of framing messages and framing activity is happening in multiple online sources (Snow et al., 2014) as well as in traditional printed media, which is often available online. This brings multiple opportunities for research but also additional challenges, such as an over-abundance of information, the skewness of sampling towards what is discussed by online participants, and behavioural differences of Internet usage. The sources considered for this research are discussed further in 4.2 Selection.

The sources of written communication are not equally important because their

audiences differ significantly. For example, the audience of mass media is greater in numbers than the audience of specialist blogs and differs from the audience of the social media; the audience of scientific communication has more relevance in decision-making; and the audience of regulatory communication is more likely to participate in a programme. The trustworthiness of sources is also very different, with only 4% of Americans trusting social media compared to 22% trusting local news organisations online (Mitchell, Gottfried, Barthel, & Shearer, 2016). The approach to data sources prioritisation is also discussed in 4.2 Selection.

Another difficulty of media analysis is that some ideas get transferred, some are accepted, some are modified, some are rejected. This happens through a complex communicative, socio-structuration process as mass communication is the main means of social cohesion in modern societies (Jensen & Jankowski, 2002). This cohesion is reliant on the predominant values in society.

Based on this short review, the selection of methods and techniques in this research strategy had to fulfil the following requirements:

Requirement 1: Communication sources had to be analysed in a consistent and comparable way, in other words, the extracted frames had to be comparable.

Requirement 2: Knowledge of values had to be derived in a reliable and trustworthy way.

In order to make an informed choice in selecting particular techniques, a review of previously used methods was done. This review is described in the next section, 3.6 Previously Used Methods of Framing and Values Research.

## 3.6 Previously Used Methods of Framing and Values Research

The purpose of this section is to provide an overview of the methods previously used to study framing and values. This section starts with a review of the existing methods of values and framing analysis or value-framing analysis in the communication and management literature on topics related to sustainability meaning construction. Further, an analysis of their strengths and weaknesses is provided. The analysis was done with the focus on the postulated goals of this research, advantages, disadvantages, and the appropriateness of different methods for the context of this research. This review and analysis became the basis for a new methodology for analysis of value-frames in printed and online texts (media). This methodology was tested in the hermeneutic analysis of the sustainability discourse surrounding the Feed-in-Tariff programme in Los Angeles.

The search for previously used methodologies was performed on communication and management journals. The selection of journals and books was based on the suitability of the general journal's topic and its impact factor. The communication journals included: *Environmental Communication, Journal of Communication, New Media and Society, International Journal of Press/Politics, Communication Research,* and *Management Communication Quarterly*. In communication journals, the search was performed for sustainability and values keywords. The search in the *Communication Research* journal returned no results on values. Values' research was more prominent in management journals: *Management Communication Quarterly, Journal of Management Science,* and *Organizational Research Methods*. Articles relevant to meaning construction that came up in the search were also included. An overview of the most relevant articles, additionally filtered by a relevant source of data (newspapers, web pages, research reports) and relevance to a sustainability topic (environment, climate change, globalisation) is presented in Table 6.

*Table 6*

*Previous Methods for Values and Frames Analysis in Text*

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| Environmental Communication (Feldpausch-Parker & Peterson, 2014) | Focus on framing. | The authors combined qualitative coding with quantitative code counting.<br><br>Sample:16 web-pages. | The authors analysed categories that appeared most frequently in the text statements. The codebook was created using categories from the socio-political evaluation of energy deployment (SPEED) framework and also based on authority. The codebook's goal was to ensure consistency. The unit of analysis was a sentence. Further, the codes were quantitatively counted to define their influence. |
| Environmental Communication (Almiron & | Framing as the media representation and | The authors combined two methods:<br><br>1) A content analysis to examine how | The authors used a coding sheet recording newspaper name, date of publication, title, authorship, section of publication, length (in |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| Zoppeddu, 2014) | the unavoidable bias of journalists. | climate change and related articles about meat eating were framed. The content analysis was quantitative and based on the presence of key phrases and references to the climate change debate.<br><br>2) A critical discourse analysis to examine the coverage on the linguistic level. This analysis was conducted on a subsample of articles. Critical discourse analysis focused on opaque and transparent structural relationships of dominance, power and control in language.<br><br>The sample was 138 articles from 5 leading Spanish and 5 leading Italian newspapers (leading was defined by the maximum | words), cited sources (only regarding the studied correlation), relevance (whether the impact was the central topic of the article or just mentioned in more or less depth), and the focus (whether the emphasis was on meat eating or on livestock). Relevance was decided mainly by the headlined topic or, if ambiguous, by the text (the topic or perspective that received more attention in the text in terms of the number of words). |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| | | amount in circulation) from Nov 2006 till September 2013. The Food and Agriculture Association's (FAO) report *Livestock's Long Shadow* dated 2006 marked the start date for the sample. | |
| Journal of Business Ethics (Harris, 2001) | Content analysis and value elicitation. Value "courage" | The author used content analysis.<br><br>The sample was 610 articles from 4 major daily newspapers with a worldwide geographical spread. The articles were collected in 1996 because the study was done in 1997. | The research explored the meaning of "courage" in newspapers. The unit of analysis was a phrase. A dictionary was developed. Five coders cross-checked coding on 22 articles to calculate reliability. |
| Journal of Intercultural Communication | Values in speech transcripts | The authors used content analysis based on 10 Schwartz's values and synonyms from the thesaurus. They also used tone as a | The coders could read a sentence (unit of analysis) twice and then associate the sentence with a value based on Schwartz's Value |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| (Waheed, Schuck, deVreese, & Neijens, 2011) | | "positive" or "negative" rating.<br><br>The sample was 48 political speeches of six political leaders in developed and developing countries after September 2001. | Survey's (Schwartz, 1992) definitions. |
| Personality and Individual Differences (Saroglou, Delpierre, & Dernelle, 2004) | Values in previous academic studies | The authors performed a meta-analysis of correlation between religiosity and values; the analysis was done using statistical methods based on the numbers of the previous studies.<br><br>The sample was 21 previous studies from the 1990s (until 2003). Presumably, the start date was based on the year when the model was published by Schwartz in 1992. Most studies used data collected from students but | The authors searched previously published research for the correlations between religiosity and Schwartz's values in different countries. This article was included due to the conceptual similarity between sustainability and spirituality as a value system (Schwartz, 1992). Another motivation was the use of meta-analysis. |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| | | also included other adults. | |
| Journal of communication (Wan, 2008) | Frames and emotion-frames | The author performed a value survey followed by an experiment with resonating framing messages. In this study, the participants were interpreting the framing messages and the effect of such interpretation was measured. The sample included 335 students who were given three types of messages: promotional, medical, and a combination of medical and promotional. | The study focused on emotional and cognitive frames deployed with the participants to achieve behaviour change through cognitive resonance. Cognitive resonance included values, beliefs, cultural programming, and emotions. The resonance was measured through a custom-developed index. This article was concerned with the strategic change communication, value alignment, and emotional impact. |
| Organisational Research Methods | Values | The authors used the laddering method for value elicitation in interviews.<br><br>The sample was senior managers in two | The values were defined in a qualitative way, they were derived from the interviewees' preferences; such preferences were framed into |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| (Bourne & Jenkins, 2005) | | large multinational organisations. | personal constructs (Kelly, 1955) by the interviewer. The insights from the laddering value-elicitation method can be used in qualitative content analysis by eliciting opposite ranges of values in frames. This was used in frame analysis to elicit the ranges of opinions. |
| Proceedings of the Ninth International AAAI Conference on Web and Social Media (Boyd et al., 2015) | Values | The authors used online surveys to measure values (Schwartz Value Survey) and compare with values inductively elicited from text using the Meaning Extraction Method (MEM).<br><br>The sample was130000 Facebook users among them 1260 completed the survey. | The participants' texts were analysed for the occurrence and co-occurrence of certain words that were organised into themes according to the MEM technique. The findings revealed that personal values can be reliably identified from Facebook comments using the MEM. |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| Management Communication Quarterly (Gill & Wells, 2014) | Values and frames. | The authors used qualitative analysis with the focus on identifying themes and contradictions. The sample included the organisation's website and the publicly-available texts on the website. | The article provided an example of analysis in a context similar to the context of this research. The authors described the context of an NGO organisation; the organisation needed to be legitimised by adopting the frames acceptable and culturally suitable for the audience. This frame adoption allowed the NGO to overcome the initial discord between the vision of the organisation and the vision of the audience. |
| Environmental Communication (Collins & Nerlich, 2014) | Public deliberation as collective sensemaking in comments about climate change | The authors used quantitative corpus linguistics. Semantic annotation technique was used to find emerging themes that become popular.<br>The sample was one discussion thread on the | The authors researched the advancement of understanding of climate change through online discussions. Corpus analysis included frequencies and keywords and made the analysis more objective. Semantic annotation technique was done automatically, based on the allocation |

| Publication, Author and Year | Relevance | Method, Methodology, Sample | Description |
|---|---|---|---|
| | | topic of climate change taken from the Guardian containing 1679 comments | of words to different themes using Wmatrix tool available at http://ucrel.lancs.ac.uk/usas/. |

Additionally, some insights were gained from textbooks: *Frame analysis: An Essay on the Organization of Experience* (Goffman, 1974), and *A Handbook of Qualitative Methodologies for Mass Communication Research* (Jensen & Jankowski, 2002). In assessing value research and framing research, it is appropriate to investigate the sources of data used previously. This information was further used in the decision about source selection for this research. Because this research was not planned as an observation or an experiment, only recorded sources of data are reviewed in Table 7.

*Table 7*
*Sources Used for Value and Frame Analysis*

| Source | Data |
|---|---|
| (Xenos, 2008) | Blogs analysed together with newspapers, and blog comments. The selection was based on the Keyword usage in the title or lead paragraph. |
| (Feldpausch-Parker & Peterson, 2014; Gill & Wells, 2014) | Website pages. |
| (Stutts & Barker, 1999; Wan, 2008) | Tailored messages and selected video. |
| (Collins & Nerlich, 2014; Matthews, 2015) | Blog and online comments. |
| (Waheed et al., 2011) | Political speeches. |
| (Atanasova, 2015) | Television, movie-series, online newspaper articles. |
| (Almiron & Zoppeddu, 2014) | Newspapers together with a FAO report. |

The procedural quality of the research is often enhanced through the development of codebooks and metrics. Codebooks relate to content classification and metrics relate to structural classification. Most of the codebooks and metrics were developed based on the previous literature, logic, and research interests. Examples are presented in Table 8.

*Table 8*

*Codebook and Metric Examples*

| Source | Codebook or metric |
|---|---|
| (Waheed et al., 2011) | Codebook included 10 values from SVS and evaluated with positive to negative rating metric. |
| (Boyd et al., 2015) | Codebook based on SVS and value synonyms. |
| (Collins & Nerlich, 2014) | Codebook topics included reciprocity, argumentation, and topicality. Data metrics includes questions, opinion justifications, pejorative language, acknowledgements across or within lines of political opinion, calls to action, mono-logic statements. |
| (Feldpausch-Parker & Peterson, 2014) | The codebook was created based on categories from the SPEED framework and improved by adding authority categories. |
| (Harris, 2001) | The codebook included “obstacles”, “tools”, and “type”. A dictionary and a detailed data analysis sheet were developed to enhance inter-coder reliability. |

Frames in media have been analysed in relation to many convoluted and politically loaded issues, such as

- race (Entman & Rojecki, 2001),

- climate change (for a review, see Schäfer & Schlichting, 2014),
- foreign policy (Entman, 2004),
- tragic incidents (Entman, 1991),
- legitimacy and identity (Gill & Wells, 2014), and
- women's rights (Ball-Rokeach et al., 1990).

The review above shows that many techniques in framing and values analysis are used across different methodologies. The boundaries between different methodologies are not always clear and the development of a suitable methodology for framing analysis with the focus on values can benefit from many methods borrowed from qualitative and quantitative worlds, manual and computer-aided techniques. Further, typical problems of identification of values and frames in texts are discussed.

De-contextualisation is the key problem for studying human communication (Jensen & Jankowski, 2002). Creed et al. (2002) provided an insight into the dangers of de-contextualisation: "Frame sponsors can make clever jujitsu moves and adopt the very same language of their opponents to coopt, redefine, or reclaim it" (p. 42). Based on this, analysis of an explicit manifest content is likely to find no difference between frames of opponents as they try to adopt the language of one another. This problem can be solved by focusing on the latent content, which can be studied using a qualitative hermeneutic and interpretive approach (Pollach, 2012). In this approach, a researcher is a participant in sensemaking of frames (Creed et al., 2002). This allows the researcher to analyse latent content in texts (Pollach, 2012); this is not possible using quantitative techniques. Qualitative techniques are also suitable for analysing manifest content (Pollach, 2012). The incorporation of the context was also important in this research because the case under study was an organisational field where complex interactions occurred within its context and contributed to structuration of the field, in other words, the field itself was inseparable from its context. Quantitative methodologies are often

blamed for the lack of depth; this is problematic for framing research where the frame of the audience becomes assimilated with the frame of the communicator through the process of common meaning construction. In this research, this lack of depth of quantitative research was viewed as a serious limitation. However, it is important to note that elements of quantitative methodologies can be useful in framing analysis and this is discussed in 3.8.1 Content analysis section.

The typical critique of qualitative analysis is researcher's bias. Quantitative methods remove the researcher's bias in some stages of the research, mostly on the methodology implementation stage. The process of devising a methodology for a particular research question is usually based on qualitative reasoning, even in otherwise quantitative research. It is possible to prove that researcher's bias is inevitable wherever analysis is done (Creed et al., 2002). The researcher's bias is not necessarily a concern, its influence depends on the declared goals of the research and also on the disclosure of the researcher's position.

The problem of overabundance of data is usually a concern in studies of discourse (e.g., Almiron & Zoppeddu, 2014). In recent decades, automated methodologies complementary to communication research have emerged, such as automated corpus analysis (Pollach, 2012) and linguistics with its attention on the use of language (Jensen, 2002). These automated technologies allow analysis of large amounts of data. They also may contribute to the understanding of the context. However, in cases where the context is highly variable, these techniques are not suitable. Framing analysis can be viewed as an alternative approach to reduction of the analytical workload without the reduction of coverage (Tannen, 1993). Another way to deal with the overabundance of information is by selecting well-defined criteria for text inclusion/exclusion in the analysis.

Table 9 below summarises problems and recommendations for solutions identified in existing methodologies.

*Table 9*

*Methodological Problems and Suggested Solutions*

| Problem | Solution |
|---|---|
| De-contextualisation. | This problem is characteristic of quantitative methods and can be solved by using qualitative methods. |
| Research bound to one framing level. | Frame develops across diverse levels (Entman, 2010). Integration across levels should be achieved by analysing frames together with cultural norms. |
| Researcher's bias. | Quantitative techniques solve the problem of the bias at the stage of methodology implementation. In qualitative techniques, the researcher's role within the context is accepted as inevitable; the quality, then, is assured by following a well-developed procedure and clarifying the logic of steps and decisions to the reader. |
| Frame bias. | Frames bias can be uncovered by comparison with the factual data. |
| Comparability. | Comparability can be achieved by using a set of indicative measures such as positive/negative outlook on a certain issue. |
| Static research snapshot. | The solution is in time disaggregation. Time disaggregation allowed Entman (2010) to find a news slant in the coverage of a presidential campaign. |

| Problem | Solution |
|---|---|
| An abundance of information. | Corpus linguistics methods or a subset of data can be used for large sets of data (Almiron & Zoppeddu, 2014; Collins & Nerlich, 2014). Framing analysis can be used as an alternative to discourse analysis (Tannen, 1993). |

## 3.7 Quality Criteria

In the research strategy adopted, the considerations of the research quality were assessed on several levels: overall research design, qualitative data analysis, and framing analysis.

### 3.7.1 Quality in qualitative research

Research quality is characterised by different requirements, depending on the philosophical position of the researcher (Lincoln & Guba, 2000). In a quantitative positivist inquiry, criteria of validity and reliability are used. Though these measures are not relevant in interpretive qualitative research, drawing parallels between quality criteria in quantitative and qualitative research allows for a better understanding of both the intentions of different research designs and their fundamental differences. Validity criteria are applicable to the technique or instrument of measurement; validity is used to judge whether the instrument measures what was intended and whether it measures it accurately (Golafshani, 2003).

Lincoln and Guba (2000) proposed replacing the quantitative criteria of internal and external validity with trustworthiness (also credibility (Lincoln & Guba, 1982)) and authenticity. Authenticity in a constructivist paradigm takes the meaning of fairness; the fairness is established by carefully reviewing various

positions that may exist (Morrow, 2005). In this research, fairness was ensured by using multiple citations in the descriptions and comparing frames across documents (see 3.7.2 Source bias). The researcher's position provides a significant contribution towards fairness as well, besides, this position is characterised by multiple identities that the researcher contains within herself (Lincoln & Guba, 2000). This is discussed in 3.7.3 Reflexivity.

Reliability defines whether the results of the study are reproducible (Golafshani, 2003). It was proposed to replace reliability by dependability (Lincoln & Guba, 1982), that is, the criterion that involves a detailed audit of methodological procedures, influences, and decisions (Morrow, 2005). The methodological procedures and reasoning for such procedures are described further in 3.8 Methodological Development. It is, however, important to note that in qualitative research, researchers themselves are a research instrument.

### 3.7.2 Source bias

Documents inevitably contain the bias of their author. This bias is evident on several levels: in the choice of the topic, choice of the words, opinion, coverage, and so on. Naturally, this bias is a problem in studies that intend to provide an objective view of events. However, this was not the intention in this research. On the contrary, authors' biases were viewed as important sources of information on meaning construction. In studies that intend providing an objective representation of an event, data triangulation techniques are used by including different types of documents by different authors (Groenewald, 2008). Triangulation is using multiple sources of data focused on the same phenomenon; triangulation is used to deepen understanding (Woodside & Wilson, 2003). In this research, different sources of media, such as government communication, websites, policies, newspapers, and social media, were available for triangulation. Though objectivity of events representation was not sought in this research, the triangulation techniques allowed the elicitation of data source bias. This bias was further analysed for values and the evidence of meaning construction.

### 3.7.3 Reflexivity

Researcher's bias is a typical concern in quantitative research. However, in an interpretive approach, the unique position of the researcher is a methodological advantage as the researcher becomes the instrument of the research (Lincoln & Guba, 1982). A researcher's understanding of the context enables the capturing of important elements of discourse such as frame significance, double meanings of words and phrases, metaphors, indirect meanings, jokes, and so on. Van Gorp (2010) discussed an example of the word "frankentree", which is a combination of "Frankenstein" and "tree"; such combination creates a sense of something beautiful becoming a monster. This interpretation, he maintained, builds upon cultural and personal symbols and emotional memories, such as the horror experienced reading the novel about Frankenstein (Van Gorp, 2010). Further discussion of the genetic modification titled "frankentrees" carried on this symbolic and emotional meaning, but only to the degree that was familiar to the reader.

Discussions on sustainability can be emotionally and symbolically charged. In such cases, Cassell and Symon (2004) argue that the researcher should concentrate not on the objective accuracy, but on the meaning. However, this meaning is subjective and is not independent of the researcher (Groenewald, 2008). To pass this meaning to the readers and convince them of the validity of such meaning, the researcher has to explain how meanings were derived and positive or negative connotations assigned (Creed et al., 2002). In this research, the credibility was assured by tracking the research process itself using a reflexive memoing process throughout the coding and part of the analysis. Memos were used to keep track of the emerging classification and ideas about the structure of the data. Together with the categories, memos formed the basis for the emerging theory (Partington, 2000). Memos added credibility to the data by allowing other researchers to reproduce the research and understand how the conclusions were derived. Memos are also used as a criterion of dependability and reflexivity (Morrow, 2005), allowing the researcher to track the influences and the emergence

of meaning from the researcher's point of view. The researcher also maintained a decision log to document decisions that changed the direction of research and analysis. A decision log is usually viewed as a tool to enhance dependability of the research (Morrow, 2005). This log was reviewed iteratively to maintain the logic of the research strategy. The credibility was also enhanced through a detailed study of the context of this research and the evaluation of the researcher's relation to the context of the study (see Appendix B).

### 3.7.4 The quality of value analysis

Values' elicitation research is usually based on interpretation. This interpretation can be part of the design. In the case of value surveys, certain attitudes or behaviours are interpreted as corresponding to values. The examples include the Rokeach Value Survey, the Schwartz Value Survey, and other applications in the previous studies (e.g., Leiserowitz et al., 2006; Matutinović, 2012). In the case of an experiment, recorded material is interpreted as manifesting certain values (e.g., Wan, 2008). Values may be recorded as they are mentioned by the research participants (e.g., Bourne & Jenkins, 2005) and further interpreted by the researcher. Values may also be inferred from texts (e.g., Rokeach, 1979a; Weeden, 2011).

On the issue of value elicitation, the credibility is usually enhanced by using a dictionary of value definitions. In this research, however, the naming of particular values was not of significant concern, instead, an approach similar to the one described by Bourne and Jenkins (2005) was adopted. The naming of values was taken from the explicit mentioning in the frames. The additional qualitative analysis was performed to group these explicitly mentioned values into value types that were analysed as constructs (Kelly, 1955). This analysis was done by finding the most opposite or the most similar interpretations within the same value type. In devising value types, previous research on values and the dictionaries defined there were used; the bulk of the definitions was retrieved from Schwartz's classification (Schwartz, 1992, pp. 6–7). Value elicitation was done qualitatively and thus the quality was assured by the depth of descriptions in the chapters

dedicated to the results. The process of value elicitation was also tracked and is presented in 4.3.5 Value-mapping.

### 3.7.5 Framing quality

In the framing analysis, credibility and dependability were enhanced by using a more granular approach to analysing frame elements instead of holistic frames. Typically, the quality of qualitative framing analysis is assessed along the following criteria:

- The richness of frame capture;
- The depth of the exploration of frame layers;
- The representation of the initial frames, in other words, whether the frames in analysis are reflecting the frames in data sources;
- The logic of frame interpretation and analysis;
- The exposition of contradictions;
- The practical worth, in other words, whether practically useful inferences are made for future change and discourse.

Creed et al. (2002) suggested using these quality criteria to assess the validity of frame analysis.

Matthes and Kohring (2008) pointed out that in a qualitative (hermeneutic) approach to frame analysis, it is difficult to establish how the frames were elicited from the text. Frame analysis seeks to understand how elements of text link together in packages of meaning (Creed et al., 2002). Thus, a frame is not an indivisible representation of an aspect of the reality, rather, it is a combination of elements that hold together the logic of such representation. Looking at a frame from this perspective allows clarification of the framing analysis method (Matthes & Kohring, 2008) by extracting the elements of meaning from the text and composing them into a frame analytically. This approach was developed by

Matthes and Kohring (2008). They proposed using the following elements to define a frame: problem definition, causal attribution, moral evaluation, and treatment.

This research has adopted this definition as the starting point and extended it through qualitative analysis. This is discussed in 3.8.3 Framing analysis method extension.

### 3.7.6 Generalisability and transferability

Transferability of qualitative research is sometimes mentioned as an alternative to external validity or generalisability of results (Lincoln & Guba, 1982). Not all authors adhere to the usage of this term; the term "generalisability" is also used with the understanding that in qualitative research, generalising is sought to theory and not to population (Yin, 2003). This is similar in recommendations for case study research. Generalisability of case study research is established by comparing the research findings with the extant literature and existing theories (Eisenhardt, 1989; Yin, 2003, 2013). Thus, generalisability starts with a careful case selection with the target of obtaining the maximum information that can advance the theory (Flyvbjerg, 2006). In this research, a case was used to validate and improve the conceptual value-based framing model (Figure 10). The selection of the case was, thus, driven by the scope of the model. The details of case selection are provided in 3.4.2 Criteria for case selection.

Transferability of this research depends on the context. Shenton (2004) recommends that in order to make the context comparison possible, the researcher must provide detailed information about the boundaries of the context, such as geographic location, data sources, time interval, and so on. This information is covered in the current chapter. It is also recommended that the researcher elaborates on the contexts where the research findings would not apply and the reason for that (Shenton, 2004). Such reasoning provides readers with sufficient information to decide on the range of applicability of the findings. This is discussed in 8.1.2 Applicability of this research.

## 3.8 Methodological Development

A research on values and framing in sustainability meaning construction requires a suitable methodology for frame identification. This methodology should account for the context, allow interpretation of written text, and elicitation of meaning from it. Framing analysis provides a suitable framework as "a potent, precise approach with which to analyse the inner dynamics of the often complex and wide-ranging debate on issues in the corporate and public realm" (Waller & Conaway, 2011, p. 89).

Waller and Conaway (2011) also found that framing analysis is suitable for a wide variety of media sources that may be involved in the discourse surrounding sustainability programmes. These sources depend on the communication media used by the institutional actors involved and may include written, audio, and visual sources. Even within the written category, the sources include a variety of news articles, reports, web pages, blogs, comments, advertisements, press releases, and so on. One natural concern is the consistency of analysis across sources. Firstly, bridging across different ways of expression, namely, written, spoken, video-recorded, or pictured, is complementary but not directly comparable. Different ways of expression attract different audiences, and require a different amount of time to process. Most of the previous studies concentrated on one type of expression for comparability. Secondly, different ways of expression vary in durability and discoverability. Even though the proliferation of cameras and recording devices allows audio and video recording of any conversation or taking a picture, such recordings are difficult to discover and make sense of without additional textual description. This is especially true when some time has passed after the recording. Thus, written text remains the dominant source of creating and disseminating knowledge.

Discourse analysis and quantitative content analysis are alternatives for analysing of communication. Pan and Kosicki (1993) explained the differences between framing analysis, discourse analysis, and quantitative content analysis. The quantitative content analysis assumes that the meaning resides within a text and

can be extracted by studying the text only (Van Gorp, 2010). The scope of framing analysis is much larger, as this analysis sees a text as the reflection of meanings that exist in the context. Discourse analysis includes the context, but it neglects the structure of text formation and consumption, the "cognitive shortcuts" (Pan & Kosicki, 1993, p. 58), or elements of meaning that are used both by the writers/frame producers and the audience to invoke larger meaning structures present in the context.

Framing analysis is the methodology or framework used in this research. Within this methodology, different methods and techniques can be used to achieve the goals of framing analysis in a specific context. These options are evaluated in this section based on the requirements of this research. Firstly, the problems identified in Table 9 are discussed. Then, the choices made are discussed. These choices include qualitative versus quantitative analytical techniques; criteria for elicitation of values and frames; and assessment of the quality of this research.

Table 9 identified the problems: de-contextualisation, time disaggregation, researcher bias, frame bias, information overload. De-contextualisation was addressed by adopting a hermeneutic phenomenological approach and studying the context through extensive reading and web search for secondary data (the data that was not used as the basis for framing analysis). At the same time, the problem of cross-level research was addressed through collecting data from diverse data sources that reflected framing of different field actors, including media, government, science, and the public.

The hermeneutic phenomenological approach raised the question of the researcher's bias. The epistemological and ontological position of the researcher has been discussed in 3.2 Ontological and Epistemological Position. The researcher's bias in the particular context of this research was minimised by exploring an unfamiliar socio-cultural environment. Creed et al. (2002) argued that the balance between emic and etic validity depends on the research questions asked. If the goal is a kind of uninvolved analysis, the researcher may seek more of emic validity by avoiding misrepresentation of the analysed texts; if the

research seeks to change the status quo, it has to find acceptance by the other analysts (Creed et al., 2002). Alternatively, internal contradictions uncovered in the framing analysis may be used by a single researcher to argue for credibility (Creed et al., 2002). These suggestions were followed in this research. Carefully studying the context for factual information and comparing it with the information presented in the frames were used to uncover internal contradictions. This factual information was found in the secondary data.

A balance between etic and emic validity was sought by following a structured approach for frame analysis, value extraction, and comparison. Comparability of frames was addressed using insights from the Personal Construct Theory (Kelly, 1955) and the laddering method of such construct elicitation (Bourne & Jenkins, 2005). This was done by examining different frame elements to make a decision about the way in which they are different or similar and what the alternative reasoning could be. The alternative reasoning, which was sometimes not discussed, provided important insights into how meaning construction was silenced.

Frame development over time was explored using time-disaggregation as recommended by Entman (2010). The programme under study has been active for several years, thus, allowing time disaggregation.

The problem of the overabundance of information was solved by adopting a framing analysis approach instead of discourse. This decision was made at the outset of the study. Additionally, the sources' selection was guided by the criteria of availability, comparability, and coverage. This is discussed in 4.2. Selection.

Based on the review in Table 6 and the summary above, content analysis is one of the most used methods for text analysis. However, content analysis refers to a whole range of techniques including quantitative and qualitative ones (Mayring, 2000). This is explained in the next section.

### 3.8.1 Content analysis

Values' and frames' elicitation has often been done using content analysis (Bales & Couch, 1969; Ball-Rokeach et al., 1990; Entman, 1993; Kabanoff et al., 1995; Rokeach, 1979b). Based on their review, Cornelissen and Werner (2014) concluded that framing analysis is most commonly done using thematic content analysis and assuming that words, slogans, catch phrases, and metaphors comprise the frame and carry the meaning. Content analysis is assumed to be able to reveal value change over time and the magnitude of such change through the change in value rankings (Rokeach, 1979a). Rokeach (1979a) described a value extraction instrument in which values were elicited from scientific texts by two independent judges and assigned to one of the terminal or instrumental value types of the Rokeach Value Survey (RVS). An example of this elicitation is presented in Table 10. A similar content analysis has been performed in several other studies (Bales & Couch, 1969; Kabanoff et al., 1995; Weeden, 2011). Overall, value elicitation from a text is usually done by inferring values from attitudes (Matutinović, 2012; Weeden, 2011), choices (Barker, 2005), actions and motivations (Bruin, 2013).

Content analysis has the advantage of non-obtrusive, naturally occurring sources of values; it is well-suited for historical analysis (Kabanoff et al., 1995). However, the difficulty with content analysis, and particularly with its usage in historic texts, is that the researcher is not physically present during the events described in the documents. Thus, the researcher has a limited ability to interpret the applicability of the developed value types to the text (Matutinović, 2012). Besides, the engagement of the researcher with the context is problematic too: Researcher's bias results in the inability to see the phenomenon past the pre-conceived interpretation (Van Gorp, 2010). As this research's goal was an interpretive theory-building, it was more appropriate to use a phenomenon of whose context the researcher did not have a preconceived opinion (Eisenhardt, 1989).

*Table 10*

*Value Inference Example*

| Values in text | Inferred value type from RVS |
|---|---|
| Efficient, Competent | Capable |
| Prudent, Restraint | Self-controlled |
| Ingenious, Creative | Imaginative |

### 3.8.2 Qualitative versus quantitative analysis

Though content analysis is suitable for extracting both values and frames, there is an epistemological difference that should be accounted for, especially as the traditional content analysis relies on quantitative techniques, such as inter-coder reliability, cluster analysis, counting, and so on. Such quantification was not an objective of the current research. Rather, this research used detailed reasoning, descriptions, and an elaborate research protocol as the criteria of quality. In this research, a qualitative approach to content analysis was adopted. Qualitative content analysis is a bundle of techniques characterised by a combination of interpretive techniques with the advantages of quantitative content analysis (Mayring, 2000). The advantages include rules and procedures that define the data transformation into analytical units, pre-developed communication models, categories derived from the research questions, decisions about inclusion of aspects of communication and socio-cultural background (Mayring, 2000). These quantitative techniques were adopted in this research and an elaborate protocol developed based on them. This protocol ensured an intersubjective comprehensive procedure that provided a qualitative alternative to validity and reliability (Mayring, 2000).

Another difference between a qualitative and quantitative approach to content analysis is that quantitative content analysis is based on the assumption that meanings reside in text and thus can be extracted by anyone who can read (Pan & Kosicki, 1993; Van Gorp, 2010). On the contrary, the underlying assumption of hermeneutic qualitative content analysis is that meanings are socially constructed in the interaction between frame creators and the audience, and frames in a text are merely the documentary evidence of such process. A qualitative methodology allows the accommodation of a social and cultural context, in which communications occur (Jensen & Jankowski, 2002).

Based on the need to accommodate the context and ensure that values and frames are interpreted rather than purely associated with certain words, a qualitative approach to content analysis was the most suitable for this research. Purist qualitative scientists advocate a completely unstructured approach to qualitative analysis. However, such an approach is rather unpredictable when the research goals are concerned. In this research, a complex combination of values, framing, and sensemaking was in the focus. To keep track of various concepts and processes, a structured methodological approach was beneficial. This structure was not meant to restrict the emergence of codes and themes. On the contrary, the structure was developed as the research proceeded and the need for new components of the method became apparent. Maintaining the methodological structure also allowed the identification of deficiencies of existing methods, especially methods of framing analysis.

### 3.8.3 Framing analysis method extension

Matthes and Kohring (2008) suggested basing framing analysis on the elements that form the part of the definition of a frame: identification of a problem, recommendation for treatment, moral evaluation, and causal interpretation. These elements were discerned from the definition of a frame developed by Entman (1993). Other authors also viewed a frame as a package of elements (Pan & Kosicki, 1993; Scheufele & Tewksbury, 2007; Van Gorp, 2007).

However, as the goals of this research included the establishment of the role of values in framing, additional changes were deemed necessary. Firstly, the methodology developed by Matthes and Kohring (2008) isolated values' influence in the "moral evaluation" element. In this study, reading and coding the data revealed that values underlie not just the evaluation, but all the other elements of the frame as well. To offer an example from the analysed data, the problem of tortoises' relocation from their natural habitat because of the construction of a solar plant was, likely, a significant issue for a person with a high value for the environment. For someone who valued achievement, this issue, probably, would not appear problematic. Based on this reasoning, the element of moral evaluation was abandoned with the intention of discerning values across all elements of frames.

Secondly, additional frame elements used in framing research were found useful in eliciting the role and contribution of values. Benford and Snow (2000), in their discussion of framing in social movements, identified an element of culpable (blamed) actors. The sources of blame often became the sources of contention (Benford & Snow, 2000) and, thus, resulted in active sensemaking, which was relevant to this research. Thus, culpable actors needed to be included in the frame elements. In addition to culpable actors, other actors' roles were distinguished and included in this research methodology.

Within sustainability programmes, diverse population groups with different identities, interests, and values are involved. Sustainability is an interpretatively flexible issue (Boström, 2012), its meaning is co-constructed by institutional actors based on their values expressed in needs, priorities, and goals. At the same time, the values of individuals interact with the values in the framing of sustainability messages in the media to reinforce the relevant aspects of self-identity and increase the salience of certain behaviours and choices (Steg et al., 2014). However, as in the case of culpable actors (Benford & Snow, 2000), frame actors are also parts of the frame. Lakoff (2006) suggested that the typical structure of a frame in the media can be disseminated into a structure of a heroic

story with culpable actors being the *villains* and the other roles distributed among *victims* (disadvantaged participants) and *heroes* (actors responsible for alleviating the situation). In a heroic story, a moral value is achieved through some sort of a victory (Lakoff, 2005, 2006). Another way of classification of the actors is to classify them as frame promoters and the audience. However, this classification was unnecessary in this research because the audience remained fairly constant in the context of the programme and the frame promoters were associated with the data sources. Thus, frame actors were analysed in this research using a frame element of "actors' roles". This frame element contained *villains*, *victims*, and *heroes*.

To summarise, frames were analysed as a package of elements containing: *problem definition*, *treatment* (or solution), *causal interpretation* (or reasoning), and *actors' roles* (*villains, victims,* and *heroes*). The role of values was evaluated across these elements for each frame.

As data sources in this research included news articles, additional insights for framing analysis were adopted from the previous framing analysis of news. Pan and Kosicki (1993) have developed an approach to news article framing analysis. In their methodology, the authors recommended defining four structural elements: syntactic, thematic, script, and rhetoric.

A syntactic element refers to how the words and phrases are organised into sentences. A script structure refers to the story components: the beginning, the climax, and the ending. Some of the news stories do not follow the structure of a story and instead are arranged around some theme; this theme can be explicitly mentioned or implied. In these cases, multiple events, opinions and people may be described as part of one news article. In such cases, thematic structure analysis is applicable. Rhetorical structure refers to catchwords, metaphors, images, exemplars, and depictions targeting to make certain aspects more salient. In this research, analysing articles based on this approach has been done on a subset of articles; however, it has proven to be unsuitable for the goals of this research. Nevertheless, the framing devices associated with the structural element (Pan &

Kosicki, 1993) have proven to be useful (see Table 11).

Van Gorp (2007) also recommended analysing the word order as a frame element and Scheufele and Tewksbury (2007) suggested analysing the word choice. All these framing devices have been considered in the initial open coding. Some of them proved to be more useful than others.

Depictions, for example, were used particularly to analyse the basis of terms "sustainable", "sustainability", "clean [energy, jobs, and so on]", and "green". Other often utilised framing devices were quoting and attention to emotions. These were analysed across frames per data source.

*Table 11*

*Framing Devices*

| Structural element | Framing device |
|---|---|
| General | - Quoting authority<br>- Quoting experts and empirical data<br>- Quoting deviant (negative frame) |
| Script structure | - Attention to drama<br>- Attention to characters<br>- Attention to emotions<br>- Attention to action |
| Thematic structure | - Hypotheses<br>- Reasoning (empirical evidence, causal statements) |
| Rhetoric structure | - Metaphors<br>- Exemplars<br>- Catchphrases<br>- Depictions<br>- Visual images |

# CHAPTER 4 - METHOD

This chapter explains the method used to conduct the study. At the beginning, the case under research is described. The discussion then proceeds to the selection of sources, after which the procedure for the sources' analysis is described. The chapter concludes with the details of how the results of the analysis were used for the development of the theory.

## 4.1 Case selection

Based on 3.4.2 Criteria for case selection, the Feed-in-Tariff programme in Los Angeles, initiated by the Los Angeles Department of Water and Power (LADWP), was selected as an example of an organisational field to test the model developed based on the meta-theoretical study (Figure 10). The programme and its socio-political setting is described in the following section.

### 4.1.1 The Feed-in Tariff programme in Los Angeles

The LADWP was the largest Californian municipal utility by the number of customers in 2014 (EERE, 2015). The idea of the programme developed in response to both regulatory requirements for renewable energy and the city's own plans of economic and social development.

Renewable Portfolio Standard (CPUC, n.d.) required that California generates 33% of its electricity from renewable energy by 2020. A significant part of that renewable energy was expected to be solar. The previous mayor of Los Angeles, Antonio Villaraigosa, responded to these requirements by setting a goal of 150 MW of local solar power. The FiT programme was a direct response to this requirement. The Los Angeles pLAn (City of Los Angeles, 2015) reinforced these requirements with the plan to grow local solar generation to 900-1500MW by 2025 while improving the local economy and social equity. The FiT goal of 150MW by 2016 would have contributed 10-17 % towards this plan.

The LADWP, together with the CLEAN LA Solar coalition, initiated the FiT programme on January 11, 2013, with the intention of securing up to 100 megawatts (MW) of solar power, which would be bought by the utility at a fixed rate of up to 17 cents per kilowatt-hour (kWh) for electricity generated. In the first allocation, 20 MW were reserved for small projects of less than 150 kilowatts (kW) each. The programme was further expanded to 150 MW in March 2015.The FiT offered a case of framing and meaning construction underpinned by different values because the FiT was implemented as a joint effort of organisational actors:

> *The Los Angeles Business Council has been a strong advocate for the FiT program – or Clean LA Solar, as we like to call it – and has worked with environmental groups, community-based organizations and our local universities to make this happen for environmental and business reasons. A solar FiT can accrue significant benefits for the city. (Leslie, 2012, para. 4)*

The programme was initiated soon after the Solar Incentive Program (SIP), which was launched in 2000 (LADWP, n.d.-d). The intention of the FiT was to provide opportunities for the groups of the population who could not participate in the SIP. The discussion of solar development was "warmed-up" by the SIP, and the FiT created more controversy around solar power as part of sustainable development of the city. The questions discussed included the solar contribution to the development, the roles of different actors within the organisational field of the LADWP, and the sustainability of the approach.

The FiT place in the solar development had to be viewed in conjunction with the other solar incentives offered in Los Angeles and California (EERE, 2015). The need for the FiT arose due to the previous incentives being insufficient, particularly for meeting the regulatory requirements for the LADWP in the Los Angeles basin. The FiT was expected to complement the SIP (Garcetti & Edwards, 2014) because the FiT targeted businesses and owners of large buildings, whereas the SIP attracted residential solar installations. The criteria for the differentiation was based on the size of the installation; the FiT targeted only

installations over three kilowatts, too big for an average family house. The FiT was also expected to complement the SIP geographically with the installations in the poorer neighbourhoods of Los Angeles driven by businesses, whereas the SIP was suitable for higher-income households.

The FiT was the largest urban rooftop solar programme in the U.S. at the time of its implementation (DeShazo & Turek, 2014). Being the largest programme, the FiT in Los Angeles provided an attractive case study by ensuring better coverage in the media. The intention of the programme to install solar within the Los Angeles basin ensured higher density of participation within the area. Higher density meant more interaction and discussion happening locally and reflected in the local written media. Limiting the scope to one programme helped to reduce the spread of meaning construction to sustainability in a bounded context. At the same time, the variety of solar options available, such as net metering, the FiT, off-the-grid solar, community solar, solar leasing, within the same context, provided ample opportunities for discussion.

Meaning construction involves sensemaking and sensegiving. Though sensemaking happens in the minds of participants, it is transferred to the spoken language and ultimately preserved in written text. Sensegiving can be traced in legislation, minutes of meetings, press releases, and so on. Such texts provide convenient historical documents containing insights that can be used in future programmes. The FiT itself was designed based on the experiences of several feed-in and net metering incentives in Germany, Spain, and the USA; these experiences defined the commonality of the context: “Every FiT program has three qualities in common, price certainty, simplicity, and accessibility” (DeShazo & Matulka, 2010, p. 44).

The goal of this research was to analyse framing in written sources. Van Gorp (2010) reasoned: “[I]t is important to maintain some distance from the personal thinking patterns in order to grasp the striking and natural characteristics of a (sub)culture.” (p. 93). It was an advantage to look at the programme, whose socio-cultural context was unfamiliar for the researcher (as compared to, for example,

similar initiatives in South Africa). This allowed the isolation of the information that could be obtained through texts from the information that the researcher already had - such information could be a source of bias (Creamer, 2015). Such approach is in line with the constructivist theory of learning where separateness is viewed as a "necessary step toward reaching deeper understanding" (Ackermann, 2001, p. 9).

Though the LADWP has initiated several solar power incentives, the FiT programme was one of the most recent and had a suitable time interval: 2012-2016. The timeline of events associated with the FiT inception and development is provided in Appendix A. The initial plan of the programme was to have 150MW installed by 2016; however, this plan was not realised. (This is discussed further in Chapter 5 - First-Order Findings. Cross-source Framing Summary and Comparison.)

The Feed-in-tariff programme was an example of a disruptive change (Shannon, 2016; Tayal, 2016) that undermined the utility business model. The traditional utility business was a monopoly. In the case of Los Angeles, the LADWP was still a distribution monopoly. The utility business was based on profits from electricity sales; a portion of this profit was used to maintain and develop the distribution network. However, the need to buy electricity from customers had a significant detrimental effect on the profits. Additionally, the portion required for the network maintenance was not recovered from the sales, meaning a significant drop in revenue with the increasing penetration of renewables. At the same time, the network maintenance became costlier because the network was not designed to accommodate power flows in two directions: from and to the utility. It was designed to flow only from the utility to the customers. This new technical ability required installation of new power voltage management devices, which added cost to the utility. Usually, utilities fight rising costs by increasing tariffs. However, increasing tariffs would lead to the installation of more renewables, and the cycle continues from this point on. This phenomenon has been labelled "utility death spiral" (Tayal, 2016). In order to prevent its own "death", the utility needed to

undergo a transformation of its business model. Moreover, the majority of utilities around the world have to undergo similar transformations, thus this case is not an isolated business change but a case of larger institutional change. This change is explained in more detail in the next section.

### 4.1.2 A utility death spiral as an example of the transformation of an organisational field

The utility death spiral refers to the situation when distributed generation makes the cost of electricity higher for the remaining utility customers, thus encouraging them to start generating themselves (Felder & Athawale, 2014). A utility death spiral is a good example of an organisational field undergoing a transformation - this transformation is a departure from a common structure of electricity network as a generation and distribution monopoly. By studying this transformation, this research contributes towards the body of knowledge on transformation of organisational fields.

The organisational field is the totality of actors within and around organisations that constitute a recognised area of institutional life. These include suppliers, producers, consumers, regulatory organs, competitors, and so on (DiMaggio & Powell, 1983). Also included in this research are media and scientific organisations that participate in regulation and communication activities. DiMaggio and Powell (1983) note that established organisational fields tend towards structural homogeneity. This tendency was notable in the established utility business worldwide. The LADWP had the monopoly protected by the regulations. The business model was very stable and this was seen in many other utilities in the USA and around the world. However, with the diversification of energy sources, the introduction of renewables, and the emergence of independent power producers, the utility business is facing an identity crisis where the stability is either gone or threatened, and the regulations no longer provide full support to the monopoly (e.g., Shannon, 2016; Simshauser, 2014; Tayal, 2016). DiMaggio and Powell (1983) argued that in this process of the re-establishment of institutional fields, institutional actors make rational decisions to constrain choices

in the future by providing an accepted structure. They called this process isomorphism and propose three mechanisms: 1) coercive isomorphism restrains the actions through political influence and legislation, 2) mimetic isomorphism arises from the drive to remove uncertainty, 3) normative isomorphism is driven by professionalization (DiMaggio & Powell, 1983, p. 150).

Because the focus of this research was in developing a theoretical perspective on the role of values in the framing of sustainability, the analysis focused less on the details of the industry, actors, and actual contextual values and more on how the values were used in the creation of frames. This is an important clarification because though the context was crucial to developing the understanding of the usage of values and frames, its importance was in calibrating the research instrument, that is, the mind of the researcher (Lincoln & Guba, 1982). Such calibration allowed the researcher to abstract the findings from the context.

## 4.2 Selection of Sources

The different sources highlighted the difference in the coverage of issues. This is not to be confused with the difference in the dominant opinions that these sources represented. It is important to mention that some texts (the primary sources) were used for framing analysis; others were read as part of the context learning (the secondary sources). This classification was based on the suitability of sources for framing analysis and the comparable coverage. The suitability for framing analysis required that the elements of frames were present and accompanied by some discussion. For example, government communication in the form of legislative documents was analysed and found not suitable as it did not provide any reasoning and was phrased in a way that made it appear devoid of values. The coverage criteria included comparable geographic, time, and thematic coverage. For example, Facebook data contained value-framed discussions, however, it did not allow historical search and thus could not be used on a par with the other media sources.

Chong and Druckman (2007) maintained that compelling studies of framing analysis use the following steps:

1. Identify an issue or an event to study – frames can only be identified in relation to the issue or the event.

2. Isolate a specific attitude, for example, overall attitude towards welfare reform or reasons for people to be on welfare.

3. Identify an initial set of frames inductively and form a coding protocol.

4. Select sources for content analysis, these sources may include the same used in step 3 but are usually extended by more sources. Typically, scholars analyse major mass media sources such as news, magazines, websites, and television.

The first step was discussed in detail in 1.1 Problem Statement and Context**Error! Reference source not found.**. The second step was clarified by the topic of this research, that is, the attitude towards sustainability was in focus. The initial set of frames was not developed. Borah (2011) warned against looking for a predefined set of frames, as this set may work as a priming causing the evidence to be found for what is being searched. Instead, she recommended taking a consistent approach to frame identification. This was achieved by using, firstly, a well-structured qualitative analysis. This procedure is described in 4.3 Data Analysis. Secondly, frame analysis was based on the coding and themes emerged in qualitative content analysis (see 4.3.6 Framing analysis). Thirdly, the value analysis was based on the codes and documented in the value-mapping structure (see 4.3.5 Value-mapping).

In this section, the selection of sources of data is discussed. The sources were selected to represent communication from the main organisational actors. These actors were classified as science and research, government, and public media. The scientific institution involved in the issue of the FiT programme was the Los Angeles Business Council in collaboration with the UCLA Luskin Center. The

main organisation was the Los Angeles Department of Water and Power (LADWP); as a public utility, it has also represented government. The media was represented by one of the main newspapers in the Los Angeles region, The *Los Angeles Times*.

The data was collected online, mostly from publicly available sources, with the exception of the *Los Angeles Times* issue archive, which was accessed through the ProQuest database. Preference was given to the online sources as publicly available and, thus, having no restriction on the range of the audience. In the case of written communication, online access is preferred by the public in the USA: "News watchers overwhelmingly prefer television, while readers prefer the web" (Mitchell et al., 2016, p. 5). Feldpausch-Parker and Peterson (2014) also noted that contemporary governments use mostly their websites to communicate to the public. Thus, the LADWP's information and the news about the FiT programme were collected from their respective websites (the LADWP's website and the FiT programme's website). The sources of data are summarised in Table 12. The discussion of the data sources' choice follows.

*Table 12*
*Classification of Sources*

| The FiT programme | Public media | Science and research | Secondary sources |
|---|---|---|---|
| LADWP's News<br><br>The news of the Clean LA Solar | The *Los Angeles Times* | The reports of the Los Angeles Business Council (LABC) | *pLAn* (Los Angeles' sustainable city plan)<br><br>The LADWP's website<br><br>California legislative bills<br><br>Los Angeles |

| | |
|---|---|
| | Department of Building and Safety regulations |
| | LADWP's Facebook page |
| | LADWP's twitter feed |
| | Twitter feed in Los Angeles related to solar |
| | Information about solar rallies |

### 4.2.1 Scientific communication

The LABC[6] was presented as the main supporter and promoter of the FiT; this was confirmed by the quotes listed on the CLEAN LA Solar programme's website: "Clean LA Solar coalition and LABC worked together to bring this program together" ("LA's groundbreaking FiT program shines with energy into the next phase," 2014).

In a press release, the LABC was named one of the strongest "advocates" for a "viable" Feed-in Tariff programme (UCLA, 2014). The LABC's analytical work on designing and evaluating the FiT was done in collaboration with its academic partner, the UCLA Luskin Centre. Other organisations, such as various environmental groups, community-based organisations, and universities, were

[6] Most of the work discussed here was conducted by the LABC Institute, which is the research and education arm of the LABC founded in 2010. The date of the Institute foundation explains why the first report was attributed to the LABC and not the LABC Institute. In practice, however, the work has been done by the same working group (LABC Institute, n.d.). For brevity and consistency, this working group will be referred to as the LABC in this thesis.

involved in making the FiT possible (CLEAN LA Solar, n.d.-a). As a business-orientated organisation, the LABC had a significant focus on economic evaluations. The involvement of the scientific institutions added a focus on rationalising.

### 4.2.2 Public news media, social media, and the programme's news media

News media are often used for framing analysis. The news is updated frequently, thus capturing the situation in its immediate cultural context. Such capture is essential in a constructivist interpretive approach. In this research, a diverse selection of news media sources was considered with the goal of finding representation of various organisational actors: science, the utility, government, media, and the public. However, only a subset of the considered sources met the criteria for framing analysis. Other articles that were available in news sources were used as secondary data to enhance the understanding of the context; they were not included in framing analysis because there was no data available to estimate their relative contribution to the meaning construction in the selected programme context.

Scientific communication related to the FiT has already been discussed in the previous section. However, the LABC's website has also provided a section covering news. This section was further divided into the collection of news coverage from the other media and the subsection of LABC's press releases. The subsection of other media news contained a varied selection of articles with only some coverage of the FiT. Most of these articles were a subset of the articles selected from the CLEAN LA Solar website. This overlap signified that the work of the CLEAN LA Solar and the LABC was not independent. However, as the selection of the articles was FiT-related only on the CLEAN LA Solar website, these articles were analysed as the news representation of the programme; this is discussed at the end of this section. The press releases provided more targeted information. However, a preliminary analysis of the press releases showed that they were directly related to the reports produced by the LABC; thus, the press releases did not contain any additional information.

Social media has the potential to reveal public opinions. Social news media has risen in popularity despite remaining a source of low trustworthiness (Mitchell et al., 2016). In addition to the problem of trustworthiness, social media introduces several other sources of bias. Firstly, social media may be used as a source of uncensored propaganda (Berger, 2015). Secondly, social media is a biased sample, whose relationship to the audience targeted in the research is difficult to estimate. Thirdly, there are several methodological concerns. Most of the social media sources do not allow time and location bound search (like Facebook); some are not available to general public view (like LinkedIn). Social media is often characterised by improper grammar, slang, special language, which presents the difficulty of understanding not only to the researcher but also to the audience targeted in the research. In the analysis of social media with the goal of understanding of sustainability, the issue of understanding the language of social media should be addressed first.

Despite the challenges, the methodological development of social media analysis is one of the most promising areas of research. A lot of work has been done recently on automated processing of social media posts (e.g., Kouloumpis, Wilson, & Moore, 2011; Kumar et al., 2016; Severyn & Moschitti, 2015). In particular, the advances of sentiment analysis provide an opportunity to complement the objectives of this study with the sentiment analysis of social media. Further development of computerised semantic analysis may allow for automated framing to be combined with an automated analysis of social media.

In the current study, social media was mainly used as a secondary data. Only Twitter was used as it allowed a public view and geographic and time interval search. Twitter was searched using the search combination:

> *solar energy OR power OR electricity OR rooftop OR panel lang:en near:'Los Angeles' within:15mi since:2012-01-01 until:2016-11-02*

The results returned were used as secondary data as the brevity of the messages

did not allow discernment of frames. The secondary data was obtained from the Twitter feed through links in the messages. Such data was useful to explore news that was not captured in other sources, thus increasing the understanding of the context. The LADWP's twitter feed was also read as part of gaining familiarity with the context. Most of it was about community participation with only a few items related to the FiT and its achievements.

The main data reflecting public opinion and suitable for framing analysis came from newspaper articles. The qualifying criteria for a newspaper selection were:

- Popularity, measured as the number of readers (subscribers or buyers)
- Archival coverage for the period from January 2012 till November 2016. 2012 marked the date when the pilot FiT project was started by the LADWP.
- General coverage, that is, a broad target audience without specification for business, politics, culture, and so on.
- English language. Los Angeles area had Spanish periodicals and a substantial Spanish-speaking population but English was commonly understood by Spanish-speaking residents whereas Spanish was not understood by the English-speaking population.

For the news analysis, all existing newspapers in the Los Angeles area were evaluated. The most popular newspaper in Los Angeles matching the requirements above was the *Los Angeles Times.* The *Los Angeles Times* was included in the framing analysis as a representative of mass media covering a broad range of opinions including the general public, businesses, non-profit organisations, government, and so on.

Other sources of news were directly relevant to the FiT programme and were available online. These included the LADWP Newsroom (LADWP Newsroom, n.d.) and the news on the CLEAN LA Solar website (CLEAN LA Solar, n.d.-b).

The CLEAN LA Solar programme was another name for the FiT programme; this name was more commonly used by the CLEAN LA Coalition and the LABC as a member of the coalition. This selection of news sources provided a variety of data and opinions. The news on the LADWP Newsroom website was also viewed as government communication because of the LADWP's status as a public utility.

### 4.2.3 Government communication

Government communication data collection had two goals. Firstly, this search was meant to obtain complete legislative coverage related to the FiT programme in Los Angeles. Thus, the sources included federal and state (California Energy Commission) policies and local government communication of the LADWP, the Department of City Planning, the Office of the Los Angeles City Mayor, and other city departments. The information was also acquired through a search of the Department of Energy (DOE) website, a Google search for solar policies in California, feed-in tariffs, net metering in California, and so on. The information was filtered manually, based on the relevance to the researched topic.

Secondly, the verification of the information in the primary data sources was sought. The selection was made through the references found in the primary data or through a Google search in cases where issues were not described in the already collected data and required further clarification.

This data provided secondary information, which was not used for framing analysis but was important for the understanding of the background. The search was done in November 2016 when all the data was collected.

### 4.2.4 Data management

Document selection has followed a three-step procedure:

1. First step – data identification and collection.

The *Los Angeles Times* articles were selected for the time interval from January

2012 till November 2016 based on the search terms “Solar” and then only those articles relevant for the FiT were selected manually.

The *LADWP News* website was also filtered by search string “Feed-in or FiT”. Also added were the articles about Beacon property as this was the site of the LADWP’s 50MW FiT plant development. Articles about Mojave Desert were added as a secondary source due to its relevance to LADWP’s plans to meet its solar regulatory obligations.

The Clean LA Solar newsfeed was collected without filtering because “Clean LA Solar” was another name for the Feed-in Tariff programme.

All LABC’s reports related to the FiT were collected.

2. Second step – data classification.

All collected documents were listed in a spreadsheet and all documents were stored in folders attributed to the source.

Sources were classified as primary and secondary. The list of the secondary data source is presented in Table 12. The secondary sources were examined to get acquainted with the context.

3. Third step - qualitative framing analysis.

Qualitative coding was done with QDA Miner and results recorded in an Excel database. Xmind Mindmap software was used to build relationships and hierarchies of frames and values.

## 4.3 Data Analysis

Data analysis in case study research is an iterative process (Eisenhardt, 1989). It is presented here in a sequential order for clarity purposes. However, it should be understood that the actual procedure was iterative: theory development, data comparison, and insight development processes were ongoing throughout data

collection and analysis with the decisions and changes being documented in memos and decision logs. One example of the change in the analysis was the emergence of the significant role of emotions in framing and meaning construction. The paucity of research on emotions in meaning construction has recently been pointed out by Cornelissen, Mantere, and Vaara (2014); this paucity explains why the emotional impact was not considered in the initial conceptual framework development.

The following steps were used in data analysis:

1. The data collection instrument was prepared and the data was collected (described above in 4.2 Selection).

2. A data dictionary (also called a codebook) was created in the process of the qualitative analysis; however, it was kept in mind that the codes should be relevant to frame definitions (as described further in 4.3.6 Framing analysis) and to values. The value-mapping instrument was developed after the codes emerged from the data (see 4.3.5 Value-mapping).

3. Data matrix worksheets were prepared in Excel. It also became apparent in the process of the analysis, and validated from the literature, that frames usually fit into a hierarchy, in other words, the main master-frame, branching out into supporting and opposing frames, parallel frames, and so on (Van Gorp, 2007). A mindmap was used for this hierarchy analysis (further discussed in 6.3 Structural Arrangement of Problems in Frames).

Data analysis is described in the following sections.

### 4.3.1 Codebook development

The codebook was developed in the process of the analysis using QDAMiner. QDAMiner enforces categories to be developed before the codes, but those categories were used more to simplify the process of coding (as a clarification of a code). The initial categories were used to divide codes for different types of

analysis in the future. Evaluations/values were analysed based on Schwartz's value classification (see 4.3.5 Value-mapping). The *frame* category was used to highlight frame elements. Framing devices (i.e. depictions, emotions, quotations) were used to classify descriptions associated with values or frames. The *quotes* category was used to analyse which actors were used as authority figures. The *sustainable* category was used to keep track of what was associated with sustainability, sustainable living, sustainable solutions, and so on. The categories were refined later to match different data sources. The general path for the analysis was:

Code->Category->Pattern->Theory

Codes and Categories were further reorganised and restructured based on the research questions, as recommended by Harris (2001). This was done with the help of memoing, as described by Glaser and Strauss (1967). The patterns were compared to the value-based framework devised earlier (Figure 10). The results of this comparison became the basis for the value-based theory of sustainability framing.

### 4.3.2 Qualitative content analysis

Different authors offered different steps in analysing qualitative data (Denscombe, 2014; Elliott & Timulak, 2005; Groenewald, 2008). The pragmatic approach of using what seems to be most suitable for analysing the large textual data was used. Elliott and Timulak (2005) recommended the following steps in data analysis (these continue the steps discussed in the previous section):

1. Data preparation. At this step, the data was loaded into QDAMiner.

2. Delineating and processing of meaning units. This corresponds to 4.3.3 Open qualitative coding.

3. Finding an overall organising structure for the data. This roughly corresponds to 4.3.4 Axial coding though the initial idea of the structure

was developed in the conceptual framework.

4. Generation of categories, also called codes and themes, and organisation of the categories in frames. This is discussed in 4.3.5 Value-mapping and 4.3.6 Framing analysis.

5. Abstracting the main findings.

The data preparation stage included a selection of suitable documents and a preliminary analysis by loading the data into QDAMiner. The preliminary analysis did not reveal any cases requiring additional data collection.

In step 2, meaning units were elicited from the documents. Different sources recommended using a different unit for content analysis. A sentence is typically used for general documents (Kabanoff et al., 1995) and spoken data (Bales & Couch, 1969); and a paragraph - for media articles (Jasperson et al., 1998). This distinction is based on the different definitions of the minimal unit of meaning, which can be a paragraph or a sentence. In the content analysis performed with the aid of a software package, it seems most appropriate to use a sentence as the minimum unit of analysis for all documents. However, qualitative content analysis can benefit from a larger unit of analysis, such as a paragraph, which allows symbolic and emotional meanings to be inferred (Yiannis & Griffiths, 2004). In this research, both approaches were considered; eventually, the unit of analysis was selected to be a phrase because some of the codes could be assigned to a phrase with the rest of the sentence or paragraph being irrelevant for the code. Other codes were logically assigned to several paragraphs containing a single meaning unit. For example, the explanation of causal links often required several sentences or paragraphs.

Meaning units were assigned codes in QDAMiner. It is described further in the next section 4.3.3 Open qualitative coding.

In steps 3 and 4, reorganising of the codes and categories was done, based on the themes that emerged from connections between codes and based on the theory.

This is explained in 4.3.4 Axial coding, 4.3.5 Value-mapping, and 4.3.6 Framing analysis. Step 5 was informed by the previous steps and the results of the conceptual and literature review. It is described in 4.4 Theory Development. All along, memoing was used to assist with the process of sorting values, creating structure, finding connections, contradictions, links, and possible causal links (Glaser & Strauss, 1967).

The result of this data analysis produced a hierarchy of frames of sustainability. As a second result, the analysis identified the pathways of value influences in frame elements and their variability according to the source.

### 4.3.3 Open qualitative coding

Open qualitative coding was done based on common sense, the previous conceptual and the literature review, and the research questions. The goal was to find values and frame elements, as the building blocks for the next stages of the analysis. Despite the effort to fit the codes within frame elements and value types, some codes emerged that were hard to classify – those were still recorded.

Value coding was done based on a strategy of associating words and phrases with a value (Rokeach, 1979a). An example of such association is provided in Table 10. However, unlike the linguistic approach used by Rokeach (1979a), an interpretive hermeneutic technique was used in this research. The researcher applied codes to the text based on the understanding of the context. In this situation, the difference from a purely linguistic approach is that value codes were associated with phrases as embedded units of text instead of being associated with disembodied words.

### 4.3.4 Axial coding

Codes were fitted into categories while merging codes that were too similar. In preparation for axial coding, unused codes were deleted. Unused codes appeared because more suitable generic codes were found in the process. The text fragments were recoded to use more generic codes.

Some of the codes were created to cover definitions and relationships between programmes and stories. These codes were necessary to understand and represent the context. These codes were excluded from the framing analysis but were used in the contextual descriptions.

Then the codes that were used very seldom were scrutinised. If it was not immediately possible to reallocate them to a more generic code, memos were written (Glaser & Strauss, 1967). Then codes that seemed significant were left and related to the more commonly used codes and categories. Some of the infrequently used codes signified emerging or suppressed cultural interpretations, or even missing cultural interpretations. Thus, they were important in the analysis.

Also, because the reports and the news articles were coded separately, an attempt was made to bring the remaining codes into the common list. Only a few codes were then left having no counterparts between the news media (the *Los Angeles Times* and the FiT's media) and the LABC's reports. These differences were noted in memos. The news media had extra codes, such as *leadership* and *power*. The *cost* code was merged with the *long-term financial security* code in the reports but not in the news. In the *frame* category, the *reasoning* and *co-benefits* codes existed in the reports because they provided reasoning behind the stated co-benefits, whereas the news just stated the existence of co-benefits. The code *problem: aesthetic* existed only in the news media; this topic was omitted in the LABC's reports. The code *outcome: economic* existed only in the reports because the news media did not concentrate on predictions, it concentrated on the current events. The code *problem: participation* existed only in the reports. Though the code was discussed in the news, it was discussed there as a treatment option, therefore the news contained *treatment: participation* instead. This difference existed between the reports and the news because chronologically the discussion in the news happened after the reports proposed the treatment. Similarly, the code *problem: compliance* in the LABC's reports became *treatment: compliance* in the FiT's media. Additionally, the FiT's media and the *Los Angeles Times* included *interpretation: culture*.

The general pattern was that the LABC's reports provided problems and suggested treatments, articles from the *Los Angeles Times*, the LADWP, and the Clean LA Solar discussed treatment recommendations. The *Los Angeles Times* also discussed new problems that emerged due to the FiT implementation.

### 4.3.5 Value-mapping

Based on the goals of this research, an accurate mapping of the codes to the previously derived value ontologies was not targeted. Instead, the goal was to consistently name similar values to interpret their role in frames.

Value-mapping has emerged as a part of the axial coding analysis when value codes were aggregated into value types. The three pillars of sustainability, that is, environmental, social, and economic (World Commission on Environment and Development, 1987), have been associated with different dominant values (Corner et al., 2014; Evans et al., 2013; Price et al., 2014; Steg et al., 2014). Thus, these three pillars were considered as value lenses as values can be seen from economic, environmental, and social points of view. Additionally, long-term and short-term value orientations were analysed as value attributes. This decision was based on the possibility of characterising a value as short-term or long-term. Value types were sought based on the ten motivational values (Schwartz, 1992). However, some of the values were used frequently but did not fit into the ten motivational types. This was the case with values that could be coded using a combination of the ten universal values (Schwartz, 1992); however, such coding was not necessary for this research. Therefore, significant values that did not fit into Schwartz's value categorisation were treated as types of their own. This is presented in Table 13.

*Table 13*

*Value-Mapping*

| Code | Schwartz' value type | Explanation of association | Value lens |
|---|---|---|---|
| Compliance | | Compliance was associated with conformity and security as "obedient"[7] and preserving "social order". | Social |
| Effectiveness | | Effectiveness was related to achievement as "capable" and "successful" achieving goals. In this research, one of the main themes was the opposite of effectiveness, namely, ineffectiveness. | Social, environmental, economic |
| Efficiency | | Efficiency was related to achievement as "capable" and "successful"; to benevolence as "responsible", and to universalism as "protecting the environment". | Social, environmental, economic |
| Cost saving | | Cost saving was similar to efficiency but only relevant to the economic lens. | Economic |

[7] Values in quotation marks are taken from "Postulated Associations of Single Values with Motivational Types of Values" table (Schwartz, 1992, pp. 6–7)

| Code | Schwartz' value type | Explanation of association | Value lens |
|---|---|---|---|
| Long-term financial security | | Long-term financial security was relevant to security and to power as "wealth". It was concerned with the economic value lens. | Economic |
| Inclusiveness | | Inclusiveness was a manifestation of universalism as "social justice". In this research, social justice was considered mostly related to the residence of Los Angeles, therefore, this value type was differentiated and named local benevolence. | Social |
| Empowerment | Self-direction | Empowerment was understood as self-direction value applied to others. The association was based on "freedom", "independent", and "choosing own goals". | Social |
| Aesthetics | Universalism | Aesthetics was concerned with "a world of beauty", thus, pertaining to universalism. | Environmental |
| Environment | Universalism | Environment was concerned with "Unity with nature", thus, pertaining to universalism. | Environmental |

| Code | Schwartz' value type | Explanation of association | Value lens |
|---|---|---|---|
| Economic development | | Economic development could manifest different values, thus, it was left a standalone value type. | Economic, social |
| Excitement/pride | Stimulation | Excitement and pride were values associated with stimulation as "an exciting life". | Social |
| Fairness | | Fairness could be associated with security as it contributed to preserving "social order" but it was also associated with universalism as "equality". | Social |
| Transparency | | Transparency was associated with the informed choice, specifically rationality and self-direction as the freedom to make an opinion. It also pertained to fairness as the transparency was required for fair competition. | Social |
| Uncertainty avoidance | Security | Avoiding uncertainty was viewed as a contribution to "social order" and "national security", thus, pertaining to security. | Social |

| Code | Schwartz' value type | Explanation of association | Value lens |
|---|---|---|---|
| Equality | | Equality is one of the values in the universalism value type. In this research, equality was considered mostly related to the residence of Los Angeles, therefore, this value type was differentiated and named local benevolence. | Social |
| Learning | Self-direction | The necessity of learning was associated with self-direction as "curious", "choosing own goals", and "independent". | Social |
| Power | Power | This code coincided with the power value type. | Social |
| Leadership | Achievement | In this research, leadership was used in the sense of "influential", "ambitious", and "successful", thus, pertaining to achievement value type. Power could be associated with leadership, however, that was not the case in this research. | Social |
| Hard work | Achievement | Hard work was relevant to achievement as "capable". | Social |

| Code | Schwartz' value type | Explanation of association | Value lens |
|---|---|---|---|
| Economic/ financial | | Economic and financial values could not be permanently linked to a motivation value or a combination of those as they provided an abstraction or a measure applicable to many values. | Economic |
| Trustworthiness | | Trustworthiness was used in the discussion of dishonesty. Dishonest promises were deemed to affect open competition. Thus, this value was similar to fairness. | Social |

| | | |
|---|---|---|
| Economic rationality | The value of economic rationality was defined as an abstract goal of "wealth and larger bundles of goods and services" (Hausman, 2003, para. 7), which should be achieved by rational social choice (for a review, see Hausman, 2003). The LABC's analysis for the FiT design was based on the assumption that individuals and businesses were driven by the values of economic rationality as defined here. The important implication of the economic rationality values is their potential contradiction with environmental values: "Ecological thinking… had emerged as the most important challenge to the hegemony of economic rationality" (Brulle, 2010, p. 88). However, the potential of convergence of the values of economic rationality and the environment also exist (Hoffman & Ventresca, 1999; Norton, 1994). | Economic |

One extra clarification is required for the benevolence value type. In the original interpretation, benevolence is concerned with the relation to the in-group members, with whom the contact is frequent (Schwartz, 1992). The relationships within the wider society are, thus, relevant to the values of universalism (Schwartz, 1992). In this research, the definition of "in-group" was meaningful as the totality of residents in Los Angeles. In Schwartz's definition, such grouping would qualify as a wider society. However, in this research, the distinction between the residents of Los Angeles and the global society was appropriate. This allowed the researcher to emphasise the closeness of the residents in the context of the discussed organisational field and to distinguish the residents from the global society and nature as the constituents relevant to sustainability on a global scale. Thus, the definition of benevolence in this research was adjusted to include the residents of Los Angeles as in-group members and was re-labelled "local benevolence"[8]. The definition of the universalism type was used in reference to the global society and nature.

### 4.3.6 Framing analysis

Framing analysis was the consequence of the previous coding stages, namely, the open qualitative coding and the axial coding. However, due to the iterative nature of qualitative research, some frames became apparent earlier. These frames were explicit and clearly demarcated by the authors. These frames often appeared in the LABC's reports. Other frames were implicit and spread over the text or texts. Implicit frames needed to be assembled from their elements using framing analysis based on the previously assigned codes. Naming a frame always includes a subjective interpretation; the goal of naming was to express the central structural idea in the frame (package) (Van Gorp, 2010). In this research, the frames were named based on the problem they were addressing.

Framing analysis was done in three steps:

[8] It would be equally reasonable to label this type "local universalism" based on Schwartz's definitions. However, such word combination would be lexically incongruous.

1. Initial coding revealed the elements of frames, namely, problem, causal interpretation, treatment, actors' roles, and values.

2. Frames were derived based on the initial coding or the explicit frames (clearly depicted by the authors).

3. Frame elements were compared to the other code and categories derived in the qualitative analysis, and to the other frames.

These steps were not necessarily sequential as framing analysis is iterative (Van Gorp, 2007). The iterations of analysis also allowed the researcher to discern the frames that contained only some of their elements. For example, some frames only explained the causes, others – only the consequences. However, all frames had to provide a specific interpretation to qualify as frames (Van Gorp, 2010).

In step 3, the dominant (master) frame was identified and frame hierarchy was developed by comparing relations among frames. Some of the frames were discussed as preceding the programme. They usually presented the FiT as a solution. Other frames discussed problems that emerged due to the FiT programme. These frames were the result of interactions and framing that happened after the outset of the programme. These relations formed the basis of the hierarchy that is presented in Figure 11. At the same time, it became clear what problems were left undiscussed. Such problem silencing also provided important information for the analysis (Stenborg, 2013).

Defining frames and constructing frame hierarchy was the inductive part of the theory development.

## 4.4 Theory Development

The goal of this research was to develop a foundation for a value-based theory of sustainability framing. Developing such a theory consists of recognising patterns of relationships among constructs and finding a logical explanation for them (Eisenhardt & Graebner, 2007). In case study research, the emerging theory is

driving data collection, simultaneous analysis, and comparison to the existing literature (Eisenhardt, 1989). Thus, the process was iterative and the decisions driving the theory emergence were documented using memos and a decision log.

In this research, the number of cases was one, meaning that only within-case patterns emerged and the analysis compared those (Eisenhardt, 1989). However, as different sources were used for frame elicitation, cross-source analysis was also used. This is documented in Chapter 5 - First-Order Findings. Cross-source Framing Summary and Comparison.

At the stage of theory development, the research constructs were refined and propositions and questions for further research were developed. The results were compared with the initial conceptual framework (see Figure 10). Deviations of the case data from the conceptual framework allowed refinement and extension of the emergent theory (Eisenhardt, 1989). This is documented in Chapter 6 - Second-Order Findings. The Underlying Conceptual Structure.

# CHAPTER 5 - FIRST-ORDER FINDINGS. CROSS-SOURCE FRAMING SUMMARY AND COMPARISON

In the empirical part of this research, framing data was collected from different media sources; this data was analysed for values used in the reasoning and the role of values and framing processes in contextual sustainability meaning construction. It is important to clarify that sustainability meaning was viewed as a contextual understanding of sustainability needs, problems, and solutions and not as an abstract philosophical idea of sustainability. In hermeneutic research, data collection and its analysis are often simultaneous and repetitive. In such a case, separation of the results and the discussion can be difficult to comprehend as these processes are intertwined. To allow easier comprehension, the approach used by Gioia and Chittipeddi (1991) was adopted for the presentation of the results, specifically the results were discussed as first- and second-order findings. First-order findings include the description of the data and the story that emerged from the data; second-order findings reveal the underlying theoretical constructs that shape the data (Gioia & Chittipeddi, 1991).

This chapter presents the first-order findings as a summary and comparison of framing across sources. It was stated earlier (1.2 Purpose Statement) that the intention of this research was to contribute to understanding of framing across levels. However, based on the actual data, only meso-level and macro-level could be meaningfully distinguished. On the meso-level, the applicable construct was strategic frame as the use of rhetorical devices to gain support (Cornelissen & Werner, 2014). On the macro-level, the applicable constraint was field-level frame as a set of commonly accepted assumptions that provide a basis for socio-economic change (Cornelissen & Werner, 2014). The first-order findings show evidence of meaning construction, which consists of sensegiving and sensemaking. Sensemaking and sensegiving can be tracked by comparing frames across sources and analysing frame developments over time. In particular, the

following differences in frames were considered indicative of meaning construction: (a) variation of the topicality of the discussion over time; (b) transformation from explicit to implicit meaning; (c) presence and absence of a particular problem in different sources; and (d) difference of interpretations. Frames, framing devices, and values that emerged in each source category are discussed in detail in Appendices D-F. This chapter builds upon this discussion and focuses on interactions and meaning constructions across sources.

This chapter is organised in a way that makes meaning construction evident in the development of the programme's framing. Firstly, the framing is described in a chronological order. Then, its position within the sustainability discourse is elaborated. Next, comparison of the frames is discussed. Finally, important themes of similarities and differences are identified and their implications are discussed.

## 5.1 Time-Bound Framing

The LABC initiated the discussion of the FiT by publishing the report with the analysis of the Feed-In Tariff options in Los Angeles in 2010. This report also provided the initial frames, which were further adopted and discussed in the other sources.

Discussion over the years has developed along with the progress of the FiT and is summarised in Table 14. From Table 14 below, it is clear that the bulk of the discussion happened in the early years of the implementation, that is, in 2012-2014. These were the years when more institutional actors became engaged and participated in meaning construction. This engagement added concrete contextual definitions to the general problems of regulations and local economic development identified in 2010. 2012-2014 marked the time when the programme was novel, change-inflicting, and threatening identities. In the final years (2015, 2016), the meanings settled and organisational practices solidified. The discussion evolved around achievements and some of the old problems, which remained unresolved.

The main problems were identified by the LABC and included the regulatory requirements and the objectives of local development. These problems became implicit in the discussions of the other organisational actors. The implicit problems could be seen in the discussion of treatment options, including emission reduction, local job creation, health improvement, cleaner air, and local investments.

*Table 14*

*Development of Topics over the Years*

| Year | Topics in the LABC's reports | Topics in the FiT's media | Topics in the *Los Angeles Times* |
|---|---|---|---|
| 2010 | Discussion of the main design options proposing regulatory enforcements, economic reasoning, and support for local economic growth [LABC-1]. | | |
| 2011 | Discussion of the complementarity of the goals of solar market development and the goals of affordable housing and utilisation of the solar-trained workforce [LABC-2, LABC-3]. | | |

| Year | Topics in the LABC's reports | Topics in the FiT's media | Topics in the *Los Angeles Times* |
|---|---|---|---|
| 2012 | | Emission reduction as an environmental benefit. Identification of problems that the FiT is expected to solve: ageing infrastructure, the need for transformation of the energy sector, cost-efficiency, utilisation of existing rooftops, and compliance. The FiT as a fulfilment of the dream of a sustainable city. Encouragement of participation and pride. The FiT as a solution to compliance requirements, the transformation of the energy system, green jobs development, cost-efficient green energy, and inclusion of disadvantaged customers and businesses in solar. The problem of ageing infrastructure. | |

| Year | Topics in the LABC's reports | Topics in the FiT's media | Topics in the *Los Angeles Times* |
|---|---|---|---|
| 2013 | | Emission reduction as an environmental benefit. Compliance. Long-term financial goals. Local investments and investments in the green economy ("green" was equated to lower GHG emissions). Problems of the FiT costing. Focus on social inclusion. Interpretations of future outcomes. Leadership through celebration of achievements, focus on being the nation's leader in solar development. The future in a cleaner, more sustainable city. Cost saving through efficiency. Work for community engagement: workshops and telecasted meetings. | Benefits of the FiT: job creation, inclusiveness, the development of green business. The problem of the lack of transparency. |

| Year | Topics in the LABC's reports | Topics in the FiT's media | Topics in the *Los Angeles Times* |
|---|---|---|---|
| 2014 | Praise of achievements. Good progress in environmental goals and job creation [LABC-4]. LADWP's ineffectiveness. Problems with engaging lower-income population. The potential for economic and job growth, the need for career-ladder jobs, and business incentives for job creation. The necessity of prioritising projects to meet the local social development goals. The recommendation to use web technologies to increase efficiency [LABC-5]. | Emission reduction as an environmental benefit. Innovation as the source of solutions. Problems with finance. Leadership. Inclusion through participation. Local clean economy.<br><br>The problem of (in)efficiency, participation as the treatment recommendation. Praise of achievements. Long-term financial security required of the FiT. Discussion of the outcomes: clean energy and compliance. Achievements in transparency and efficiency. Achievements in educating businesses through the business training academy.<br><br>The finalisation of the critical project in Beacon. | The problems of ground-mounted solar installations. Aesthetics of green space. Regulations, LADWP's independence from the city council. Pricing and fairness of the financial burden of the FiT. The threat of solar plants to the cultural heritage. |

| Year | Topics in the LABC's reports | Topics in the FiT's media | Topics in the *Los Angeles Times* |
|---|---|---|---|
| 2015 | | Achievements of the programme. Boyle Heights development in East LA. Inclusiveness and its implications. | |
| 2016 | Discussion of the FiT's achievements verified in case studies [LABC-6]. | Achievements of the FiT: social benefits, business development, and compliance with the pLAn goals.<br><br>Acknowledgement of the achievements of the economic development and plans for more. | The unresolved power struggles between the LADWP and the city council. The celebration of a new project in the Port of LA, its efficiency and social benefits. |

Once the problems became implicit, their interpretations were not challenged anymore. These frames provided meanings that became the new norms of understanding of sustainable development in the city. Such legitimation, though, brought other problems into focus. For example, the *Los Angeles Times* emphasised many conflicts within the accepted norms that diverged from the mainstream opinions. Such new problems could, in turn, reverse the focus to the commonly accepted norms. In the researched case, such reversal was seen in challenging perceptions of Los Angeles and the LADWP. Many people saw LA as a city of "suburban sprawl, wrenching inequality and environmental distress" [LABC-5]. However, the discussion surrounding the FiT has called for a re-evaluation of this perception and the new opinion of the city as a leader in green energy development. The LADWP was perceived as a bad service provider; however, new opinions praised "LADWP's supportive posture" [LABC-4].

## 5.2 The FiT as a Part of Sustainable Development

All of the sources agreed that the FiT was a tool to achieve compliance goals and to remove emissions. The most commonly publicised definition of the FiT emphasised those goals along with other socio-economic benefits:

> *The initial two allocations will generate 862 job years, which will be part of 2,155 job years total once the entire FIT 100 program is implemented. These numbers will help bolster one of the U.S.'s fastest growing industries - a solar sector that experienced a 20% growth in 2013 with 24,000 new jobs. When fully implemented, the FIT 100 will generate approximately 130,000 MWh annually, which if used to offset coal, will avoid over 5,383 million pounds of greenhouse gases. This is equivalent to powering 21,600 homes on local renewable energy annually and displace as many as 2.7 million tons of greenhouse gas from the atmosphere all at a lower tariff rate than any comparable program in the United States.… The FIT 100 program is expected to generate approximately $300 million of direct investment for the City of Los Angeles over the*

*lifetime of the program.* [LABC-4]

This definition provided points that became new norms of understanding of the content of the FiT as part of sustainable development:

- The social component was based on job creation.
- The environmental component was perceived as equivalent to removing GHG from the atmosphere.
- The economic component was construed as the development of the solar sector, investments, and low tariffs.

Though these goals became the shared understanding, the actual implementation choices were not unanimously accepted. Instead, the ability of the implementation choices to address these goals was disputed. This is demonstrated within the descriptions of the frames in sections 5.3-5.8 and summarised in 5.10.5 Contradictions and reframing.

## 5.3 Frame: Social Participation

The LABC's analysis established that the goals of the FiT had to be achieved through social participation. This participation needed to address the right population groups through: (a) training of previously unskilled workers; (b) prioritising smaller projects; and (c) incentivising career-ladder jobs [LABC-4, LABC-5].

The LABC also maintained that participation should not be hindered by the inefficiencies of LADWP's processes. The LABC recommended building on the principles of fair competition, developing regulations that would prevent unethical business strategies, and securing funding that could guarantee profitability for the participants [LABC-1, LABC-4].

The goals of social participation were generally accepted in all the sources. Thus, though the initial framing by the LABC started on the meso-level of a strategic

frame, the frame was accepted as a macro-level field frame. The LADWP's role was also accepted as the implementation *hero*, that is, the responsible entity. However, the evaluations of actions and their outcomes differed among the sources. The details of such differences are discussed in the following subsections (5.3.1 - 5.3.3).

### 5.3.1 Local benevolence in the social participation frame

Local benevolence manifested in the goals of inclusion of the varied groups in the local community. In the *Los Angeles Times*, the goals of social participation were interpreted as the inclusion of projects of smaller size. This was also in agreement with the analysis and the proposal of the LABC.

The residents of Los Angeles were portrayed as supporters of the programme, willing to contribute to the solar development: "[a resident] wanted to help improve the environment because her daughter suffers from severe asthma" [LAT-4]. Thus the community was already prepared for participation. The LADWP reported multiple successes in community engagement; however, such successes were criticised both by the LABC and the *Los Angeles Times* as insufficient. Corporate favouritism was suspected in the research report published by the LABC [LABC-4]. The report highlighted a very positive experience of a large firm with the LADWP's employees in contrast to the negative experience of a small firm [LABC-4]. The *Los Angeles Times* also criticised big projects for their lack of concern for sustainability [LAT-9, LAT-10, LAT-13], whereas the programme's media associated them with higher community involvement through employment [e.g., CLEANLAS-10, LADWP-16]. In summary, the shared priority of local benevolence values did not manifest in the shared interpretations of actions. Instead, the values of local benevolence supported different arguments depending on the source and the actors' roles. The programme's media used local benevolence values to justify the actions of the LADWP and to present those actions as successes of the programme. The LABC's media used local benevolence to argue for the actions that were required. And the *Los Angeles Times* used the value of local benevolence to criticise the LADWP as a service

provider.

### 5.3.2 Transparency as a requirement for social participation

The programme's media reported the progress with the community engagement in a positive light. The LADWP Newsroom characterised the engagement with the community as maximum and praised the level of transparency achieved by the LADWP [LADWP-3, LADWP-13]. The LADWP's media emphasised the work that the utility had done to increase participation:

- A series of workshops to educate the customers about the new programme had been conducted [LADWP-1, LADWP-4];
- Transparency of all costs was reflected on the website [LADWP-3, LADWP-13];
- Online processes had been introduced to increase simplicity [LADWP-13].

The *Los Angeles Times* and the LABC reported dissimilar results [LABC-4, LAT-3]. The *Los Angeles Times* challenged statements in the programme's media regarding their progress towards maximum community participation. The newspaper particularly criticised the statement about the transparency quoting residents who perceived the level of transparency as insufficient [LAT-3]. The programme's media also presented the FiT as "a simple contract that business understands" [LADWP-10]. However, the feedback from the applicants revealed that many issues with the FiT process were not clear to them [LABC-4].

Confirmations of the lack of transparency were found by the researcher in the factual data. The LADWP website (LADWP, n.d.-c) was reviewed in search of information on the programme. The results of this review indicated that the FiT programme information was not available on the front page. The search for "FiT" and "feed in" produced no results, but "feed-in" returned the relevant navigation links. In other words, the programme information was easy to find only for those who knew exactly what to search for. Some of the content was outdated, and the coverage was not sufficient to get complete understanding of the programme, its

objectives, and values.

The coverage of the FiT in the other sources did not provide sufficient information to address the issue of transparency. The FiT programme's media was focused on treatment with little discussion concerning the source of problems and no critical overview of different treatment options. The problems appeared to be pre-selected and were not critically assessed. The *Los Angeles Times* covered many problems, but the frames presented by the newspaper were mostly incomplete; often they did not provide an explanation about the source of problems, options for treatment, affected populations, responsible actors, and other frame elements. Thus, the role of the news media as a public informer and a forum for opinion exchange was not accomplished in relation to the FiT. Presented with sketchy and often contradictory information, the public had limited ability to make sense of the programme as a sustainability initiative and take ownership of the sustainability issues in it. Thus, though the importance of transparency was explicitly acknowledged by the *Los Angeles Times* and in the programme's media, these media sources contributed little towards the achievement of transparency. The LABC has provided the most comprehensive presentation of frames allowing a keen reader to engage in meaning construction. However, the reports were not sufficient as they were lengthy, seldom released, and did not provide recent coverage of events. To summarise, despite the support for the value of transparency, the sources did not contribute to it sufficiently enough to ensure public participation in knowledge development and meaning construction.

### 5.3.3 Fairness in participation

The issue of fairness was portrayed differently by the different sources. For example, the LADWP's media publicised the effort that went into ensuring that its customers were educated about the programme. The LADWP Newsroom had published multiple notifications of the workshops organised to educate the public about the opportunities of the FiT especially for the less-affluent residents of East LA (LADWP Newsroom, n.d.). The FiT programme's media also emphasised the fairness of the distribution of the benefits:

> *Some of the contracts will be set aside for smaller solar producers, including residential customers with large properties, to give them a better shot at winning slots, officials said. Customers participating in other solar-incentive initiatives, such as net-metering, do not qualify for the buyback contracts, DWP officials said.* [CLEANLAS-11]

However, the LABC found indications that the progress was not as satisfactory as it could be. Even before the start of the FiT, the LADWP had already favoured bigger projects that had insignificant potential for local involvement: "Rather, the LA DWP has focused its attention on plans for large-scale solar installations in distant locations" [LABC-3]. Businesses were found to indulge in unfair competition practices, such as promising higher than realistic returns or lower costs to the hosts [LABC-4]. The LADWP, as portrayed in the LABC reports, seemed to favour big contracts by providing better service to them. The LABC's reports also highlighted that many building owners remained unaware of the programme despite the educational initiatives advertised in the programme's news [LABC-4, LABC-5]. Many complaints about the complexity of the programme were registered; the LABC argued that such complexity was bound to reduce participation [LABC-4].

The *Los Angeles Times* did not discuss the same issues. Instead, the newspaper raised the issue of fairness in the regulations supporting some of the types of solar as contributors to the state goals while discouraging others. In particular, the residential solar owners were excluded from contributing to the state solar goals [LAT-4]. That essentially meant that they had invested in solar with the hope of reducing the cost of the solar transition for the state, which was, essentially, a burden for the taxpayers. However, as their contribution did not count, they still had to contribute by paying utilities to make this transition a reality: "'We all think we're making a difference and contributing,' McCandless said. 'I'm just so angry.'" [LAT-4].

## 5.4 Frame: LADWP's Ineffectiveness

The LABC's fourth report highlighted that homeowners were not particularly keen to participate in the FiT and many potential businesses remained unaware of the opportunities of the programme [LABC-4]. The LABC did not directly blame the utility. Instead, the report presented the issues with the programme and the utility as the feedback from the businesses. The negative impression about the implementation of the programme was somewhat alleviated by the generally positive feedback:

> *Applicants were especially appreciative of LADWP's supportive posture during the application phase as well as during the site visit and interconnection study phase. Exemplary LADWP staff effort was critical in accelerating these early stages of the application process.* [LABC-4]

This frame was further elaborated in the *Los Angeles Times* where the issue grew into an apparent mistrust that was built over the long-term:

> *"I like the idea of solar, but unfortunately my experience is that the DWP doesn't support it," said Engel, who has run a small manufacturing firm on Pendleton Street for four decades. "The conversation is one thing, the reality is another."* [LAT-11]

The FiT programme's media acknowledged some of the problems implicitly by providing feedback on some of the steps taken to improve the situation. Overall, the frame can be classified as a meso-level strategic action frame. This is also confirmed by the transference of the frame as it gained support.

The issues highlighted by the LABC were the same as those addressed by the LADWP. The role of the *Los Angeles Times* was to engage the residents in further meaning construction through interviews. This activity revealed long-established problems between the utility and the residents, which were claimed to be cultural [LAT-11]. Such long-term reified conflict and dissatisfaction is one of the possible outcomes of strategic change and transformation.

In this frame, the most evident value was responsibility, in other words, the emphasis was on the service that the LADWP was obliged to provide to the residents. More generally, this responsibility was rooted in the local benevolence values, specifically, in the value of responsibility for the community. The value characteristics associated with effectiveness, namely, "capable" and "successful" (Schwartz, 1992, pp. 6–7) were only present in the programme's media. In the programme's media, the LADWP's lack of capability to address the customers' requirements in a timely matter was explained by the unexpected success of the programme [LADWP-13]. In general, the value of ineffectiveness was used by the *Los Angeles Times* and the LABC to criticise the work of the utility; on the other hand, the value of ineffectiveness was used by the programme's media to justify the utility's actions. The LABC also relied on economic values to justify its critique: "LA DWP is the least efficient utility at generating solar jobs, spending a total of $129,000 per job-year created" [LABC-3]. Values in the frame of LADWP's ineffectiveness contributed towards frame transference as the LABC highlighted the values that threatened the identity of the LADWP as the provider of "excellent customer service" (LADWP, n.d.-a) and attracted the attention of the residents as the recipients of the service.

## 5.5 Frame: Regulations

The LABC identified regulations as a barrier to solar development but also as a tool to achieve it [LABC-1, LABC-4, LABC-5]. The treatment was suggested as a combination of market mechanisms and incentives. This preference could be explained by the historical role of the LABC in policy development (LABC Institute, n.d.). In the LABC's reports, the FiT was portrayed as a powerful economic tool with social and environmental benefits. Overall, this framing occurred on the strategic meso-level despite the intention for the frame to become the basis for an institutional change.

The FiT programme's media did not discuss the implementation details of the FiT regulation, though the potential of the FiT as an economic tool was highlighted. Instead, the regulation topic in the FiT media focused on the FiT as the solution to

the regulatory requirements [LADWP-20].

The *Los Angeles Times* also highlighted the FiT as the answer to the regulatory requirements and focused on the problems with the implementation of the programme, that is, the use of ground-mounted solar [LAT6, LAT-7] and the lack of accountability of the LADWP whose decisions were overwritten by the city council [LAT-8]. An additional problem that the news discussed was the allocation of the incentives [LAT-2, LAT-4]. The *Los Angeles Times* also highlighted the community's condemnation of the lack of integrity in the assessments of the solar development that "[failed] to take into account the cumulative effects of permitted and proposed renewable energy projects" [LAT-9]. The role of regulations was to improve the assessment requirements.

### 5.5.1 Rationality of regulations

Rationality is discussed here as a universal logical reasoning system. As was discussed in 2.5.1 Meanings of values, rationality can be used to justify and explain value-based reasoning; however, it cannot always explain why a particular value is given a higher priority. The LABC's reports were based on the value of economic rationality, specifically the assumption that market actors make rational choices with the goal of optimisation of their gains. The LABC saw rational market behaviour as the underlying philosophy for the FiT regulations: "If the stakeholders agree that solar energy is an important goal, then a policy can be designed to achieve this goal" [LABC-1]. This quote demonstrates the profound belief in rationality and the power of regulation. However, the arguments highlighted in the other frames showed that it was not possible to pre-regulate everything. In particular, despite the strong focus of the LABC on designing an economically-driven programme, exactly these economic, but short-term, benefits were deemed to cause unfair competition and environmental damage [LABC-4, LAT-3, LAT-10].

The *Los Angeles Times* reported that the LADWP was also looking for a market solution based on lower purchase prices for ground-mounted solar [LAT-7]. The LADWP closely replicated the treatment proposals designed by the LABC, thus

supporting the values and assumptions of economic rationality.

### 5.5.2 Regulating the decision-making power

The *Los Angeles Times* portrayed the LADWP and the city council in a power struggle with each other. The essence of the power struggle was about the final decision in FiT applications. Both sides presented their wish to make the decision as their way to provide service to the residents [LAT-8]. The LADWP requested this power to manage the projects better. In the example discussed, such power would have allowed the LADWP to extend the deadlines for milestones in the solar applications [LAT-8]. The City Council wanted to maintain the power to perform its job for the city by overseeing the projects and ensuring that they did not create problems for the residents. This conflict remained unresolved in the media sources used in this empirical study. The recommendation for treatment included giving more power to the community [LAT-6, LAT-7]. This was an example of divergence of value-framing. Though both sides argued using the values of community, their treatment options were in conflict. Because no solution was agreed upon, the frame remained divergent.

### 5.5.3 Local benevolence and self-direction

While the question of the power in decisions was discussed between the LADWP and the city council, the *Los Angeles Times* discussed another factor in the distribution of power, based on feedback from the residents. This factor was based on the requirement for the programme to benefit the local community and the need to take the community's opinions into consideration. Additional zoning requirements were proposed to explicitly include the community's feedback [LAT-6, LAT-7]. These changes expressed the values of community empowerment that were indicative of local benevolence and self-direction.

Already in the preliminary design of the FiT, the LABC encouraged self-direction as an ability "to choose to live in a more sustainable manner, with a reduced carbon footprint" [LABC-2]. The LABC and the programme's media discussed community empowerment as the reasoning behind training and business education

for disadvantaged groups [LABC-5, CLEANLAS-3, LADWP-18]. The programme's media also interpreted a new solar development on the tribal land as an economic empowerment, "an ideal opportunity for the Tribe to create economic opportunities while preserving the land and their cultural heritage" [LADWP-14].

## 5.6 Frame: Costing of the FiT

The LABC presented the costing of the FiT programme, that is, the tariff structure, as the main tool for achieving the objectives of the programme [LABC-1]. This framing leveraged from the existing institutional arrangements, thus the frame can be classified as a macro-level frame; however, the additional strategic change aspect of the frame links it to the meso-level. This frame is an example of framing that linked meso- and macro-levels of framing.

The LABC highlighted the importance of covering the participants' cost and providing conditions that would secure financing at a lower cost. Additional cost-reducing tactics included simplifying the application process and educating the rooftop owners [LABC-4]. The cost of the FiT as a programme was proposed to cover the incentives, such as job creation [LABC-2, LABC-4]. The FiT programme's media sources did not provide discussion of the costing. The LADWP used a costing scale to manipulate the programme participation [CLEANLAS-11]. This strategy was in line with the suggestion from the LABC [LABC-1] and was not discussed in the programme's media. The lack of such discussion did not allow evaluation the LADWP's motto of "cost-effective service to the customers" (LADWP, n.d.-a). The *Los Angeles Times* highlighted more issues with the FiT costing. The cost of the programme was essentially the burden that taxpayers had to carry. In such a situation, the *Los Angeles Times* discussed the concern raised by the residents that this cost was not allocated fairly and transparently [LAT-3, LAT-4]. Thus, the values of fairness and transparency served as a binder between different frames.

### 5.6.1 Economic rationality in the tariffs' assessment

Rationality was particularly emphasised in the LABC's communication. For example, the *Los Angeles Times* discussed the FiT tariffs as a contended issue [LAT-2, LAT-4]. At the same time, the LABC presented tariffs as financial instruments securing the transformation of the economy and the society [LABC-1]. This example showed the contrast of the objective uninvolved position of the LABC and the contextually involved position of the newspaper. These positions were also underpinned by the values of the respective organisations. The direct linking of market response to tariffs structure resonated with the reductionist approach of science, while the newspaper demonstrated the socially-involved values of the media. The position of the FiT's media was a reflection of the position of the LABC [CLEANLAS-9, CLEANLAS-11]. Thus, it reflected the position of the FiT administration as a recipient of the sensegiving from the LABC.

The greater emphasis on the economic rationality was also a sign of the departure of LABC from some of its earlier social concern. The early LABC's report *Making a Market: Multifamily Rooftop Solar and Social Equity in Los Angeles* placed a special emphasis on the problem of channelling the benefits of the FiT to the tenants and the residents of affordable housing [LABC-2]. In the later reports, such focus has been dropped. Instead, the benefits for the businesses were emphasised: "Owners of multiple properties or companies can enter joint ventures for other entities to receive tax benefits" [LABC-6]. Effectively, tax benefits were promoted for the already affluent businesses instead of the initial "nurses, firefighters, police officers" [LABC-2]. Such a departure contributed to the raised questions of fairness towards ratepayers.

### 5.6.2 Fairness and transparency of the Feed-in Tariff

The values of fairness and transparency have already been discussed in relation to the social participation frame. Fairness was used to distinguish the actors benefitting from the FiT from those paying for it. The LABC and the *Los Angeles Times* discussed ratepayers as the party paying for the FiT [LABC-1, LAT-12].

The LABC found it fair because the ratepayers in Los Angeles accepted the aggressive solar goals [LABC-1]. However, the discussions in the *Los Angeles Times* pointed to the disappointment of the residents, doubts regarding the fairness of the programme, and the issues of corporate favouritism [LAT-3, LAT-4]. The source of these feelings could be traced to the initial LABC's proposals that the FiT's benefits were supposed to "accrue to local residents, particularly in economically distressed areas" [LABC-2]. The programme attracted many out-of-state businesses, this fact was not welcomed by the local residents [LAT-7]. The residents put forward an opinion that some of the solar projects did not take into account the long-term damage [LAT-6, LAT-10]. This discussion was linked to the value of transparency, and a resident's opinion was quoted in the *Los Angeles Times* suggesting full disclosure of the real programme costs and the estimates of ecological and other damage [LAT-3].

Another issue was the fairness of the competition. The LABC highlighted that the conditions of the programme did not prevent cheating:

> *[T]his dishonesty with building owners' restricts project opportunities for other firms and ultimately harms the program, as often times these projects will not proceed past the application stage and site owners will therefore be discouraged from participating in future tranches.* [LABC-4]

The participants were not always truthful and were often accused of chasing short-term financial gains:

> *[S]cattered, "cold calling"-like outreach is the potential for a small handful of firms to race out into the marketplace and try to "lock up" as many site owners as possible. Many times, this is achieved by promising unrealistic lease figures* [LABC-4].

## 5.7 Frame: Local Development

The local development frame was particularly well discussed in the LABC's

coverage. This frame both required support and targeted social change, thus this framing pertained both to meso- and macro-levels of framing. The FiT was presented as a tool for economic development, especially economic development in the LA basin, that is, the local development [LABC-2, LABC-3, LABC-5]. The LABC concentrated on previously underdeveloped areas such as East LA and argued for the possibility to improve the economic situation there and benefit the whole city through the FiT [LABC-2]. This reasoning was based on the values of universalism and local benevolence because the lack of development in one area was considered detrimental to the society at large. The economic benefits of the FiT were predicted to include cleaner air, jobs, and investments [LABC-1, LABC-5]. Furthermore, after the initial stages of implementation, the LABC confirmed that 40% of applications were received from these targeted areas [LABC-4]. However, the LABC also found that this was not sufficient as the targeted small businesses were not involved as much as expected. Their proposed correction was through creating a priority list placing the smaller projects ahead [LABC-4].

The FiT programme's media sources provided coverage of successful projects, concentrating on celebrations and highlighting the happiness of the participants. The FiT's media highlighted the educational work intended to "provide increased opportunities for small businesses to compete for contracts" [LADWP-18] The media also discussed the opinion that solar development was a key for the tribal communities to succeed economically while preserving their culture [LADWP-14].

Contrary to the FiT programme's sources, the *Los Angeles Times* used the frame of local development to highlight the deficiencies of the LADWP. Their main focus was on the size restriction of the programme [LAT-11]. The newspaper also discussed an opinion that the utility wanted to keep control over the electricity in the area [LAT-2]. Thus, all the sources focused on local benevolence as the value underpinning the need for local development. However, the sources used this value to support different evaluations and to justify different further courses of action.

### 5.7.1 Power and control versus benevolence and self-direction

Maintaining the utility's monopoly and its outdated business model was criticised both in the LABC's reports [LABC-1, LABC-3] and in the *Los Angeles Times* [LAT-2]. The LABC highlighted the necessity of transformation as a means of uplifting the economy, growing the solar market, and complying with the regulations [LABC-1]. The discussion in the *Los Angeles Times* focused on empowering the population and giving them a choice to participate in the FiT and benefit from other solar incentives, regardless of the size of their installation [LAT-2, LAT-4]. Such empowerment was motivated by self-direction and local benevolence in contrast to the values of power and control, which underpinned the desire to preserve the existing situation in the electricity market. In this case, preserving the existing state of things meant preserving the old business model and the monopoly status of the LADWP. Indeed, the *Los Angeles Times* discussed a resident's opinion that the utility was keen to preserve its power and control and might be supported by political leaders [LAT-2]. However, the FiT programme's media acknowledged the necessity of transformation by quoting the LABC: "And the more rooftop solar we have, the less reliant we will be on polluting energy sources, including DWP's coal-fired power plants in Utah and its natural gas plants closer to home" [CLEANLAS-8]. In this case, the agreement on values was not yet apparent. However, the agreement on the goals of solar development was an example of value-convergence processes.

### 5.7.2 Local development as an achievement

Highlighting the successes and the positive feedback was the tool that the FiT programme's sources used to report on the progress [e.g., CLEANLAS-3, CLEANLAS-7, LADWP-8, LADWP-9]. This was done strategically to invoke good feelings about the FiT and encourage further participation. This strategy was devised and encouraged by the LABC [LABC-4]. However, reporting only the positive often meant silencing problems.

### 5.7.3 Sustainability of the economy

In the frame of local development, the difference of opinions was underpinned by the assumptions of what was good for the economy. This difference was analysed as a construct with the assumption of the sufficiency of the market's self-regulation opposing the assumption of the need for a regulated economy. In the analysed discourse, the opinions lay somewhere in-between. The LABC expressed a strong belief in regulations and the use of financial incentives, however, they also expressed a belief in the rational self-regulating market and the necessity of its development [LABC-1, LABC-2]. In a highly regulated environment, the possibility of self-regulation of the market is restricted. The effect of the regulations' restrictions on local development was discussed in the *Los Angeles Times*: The power of the city council to veto solar development resulted in the unexpected delays in the programme implementation [LAT-6, LAT-7, LAT-8]. Another barrier to the local development was the inefficiency of the LADWP's processes, which predominantly affected the smaller projects. The smaller projects appeared to be less competitive and required more regulatory support to go ahead [LABC-4]. The LABC proposed a treatment through regulations to prioritise small projects [LABC-4]. Other market restrictions were found to be missing, such as the restriction on ground-mounted solar (see the discussion in the next section 5.8 Frame: Environment and Location).

Despite the stated intentions of project selection based on the proposer's price and the project feasibility [LADWP-2], the implementation of the FiT actually showed that the selection process needed to be more complex. In order to allow local development, especially in the economically disadvantaged areas, projects in those areas required the priority and incentives, and businesses in these areas required training [LABC-4, LADWP-18]. The development of this frame demonstrated the construction of the meaning of sustainable development from the starting point of encouraging market competition to the end point of relying on multiple market regulations. This development of understanding started from the assumptions of a rational and self-regulating market. The further evolution had to account for the differences in human motivations that are, essentially, expressions

of values. Thus, the values in the initial frame were shaped further by the values of participating institutional actors, which were expressed in actions, reified in changing regulations, and discussed in the media. These changes and the discussion demonstrated the development of the frame of a sustainable economy in this particular context.

## 5.8 Frame: Environment and Location

In their reports, the LABC highlighted the goal of the FiT to achieve solar development locally, in the LA basin [LABC-1, LABC-3]. The programme was supposed to incentivise the use of rooftops that were unused otherwise. This use would provide cost and space savings. Instead, many companies opted to install solar in open areas on the ground. Such installations were simpler and offered short-term financial benefits [LAT-6, LAT-7].

This frame got the most extensive coverage in the *Los Angeles Times* and aimed to gain support from the population and regulators. This frame can be classified as a strategic meso-level frame. The focus was drawn to two out-of-state firms. The fact that the attention was on the firms from outside LA [LAT-7] could be an indication of the prevalence of values of local benevolence over the values of equal opportunity (universalism). The FiT programme's media sources did not portray the ground-mounted solar as a problem. Instead, all installations were celebrated as part of the achievement of the programme. A similar view was promoted by the LABC and quoted in the *Los Angeles Times* [LAT-6].

Additionally, the issues of the FiT development in the desert raised another array of problems including the integrity of the desert life, damage to the communities and their lifestyles, destruction of the views and historical monuments. These unforeseen problems were also reported by the *Los Angeles Times* [LAT-3, LAT-6, LAT-7, LAT-10].

### 5.8.1 Neighbourhood solidarity

The choice to portray the two out-of-state firms as the *villains,* which planned to

ruin the tranquillity of the neighbourhood [LAT-7], appealed to the in-group solidarity and values of local benevolence.

The choice of the FiT programme's media sources to not highlight these issues contributed to the public mistrust and the bad reputation of the utility. This was evident in the demands from the community to increase transparency, report ecological atrocities, and the lifecycle cost of the solar projects. The community feedback was published in the *Los Angeles Times* [LAT-2].

### 5.8.2 Beauty and the preservation of nature

The values of beauty and natural preservation manifested together in the residents' wish to preserve both the aesthetic value of the surroundings and the natural environment [LAT-2, LAT-10]. In some cases, people equated the environment to their livelihood as the beauty and the cultural value of the environment attracted tourists into the area, bringing income to the residents [LAT-10].

## 5.9 Contributions of Values in Reasoning

Table 15 below provides a summary of value-based reasoning encountered in the analysed frames. The classification of values in the table was based on value-mapping (Table 13) and the definitions provided by Schwartz (1992, pp. 6-7). Apart from the information in the table, a considerable part of the reasoning in this empirical study was related to conformity value type. For example, empowering others can be also interpreted as being responsible. In this interpretation, its secondary motivational type is conformity (Schwartz, 1992, pp. 6-7). Clean energy is associated with the value of security with the secondary motivational type of conformity (Schwartz, 1992, pp. 6-7). Overall, the FiT was implemented due to the regulatory obligations imposed on the LADWP and the state, thus the programme itself was a manifestation of conformity.

*Table 15*

*Value-Based Reasoning*

| Fact | Interpretation | Values |
|---|---|---|
| Coal-based economy results in dirty air, excessive water consumption and pollution, emissions, climate change, and social inequality. | These effects were to be alleviated with the transition to a green economy, which promoted a vision of social inclusion, renewable energy, and local energy production [All sources]. | Caring for the local community was associated with local benevolence. Climate change effects are universal and were associated with universalism. Reducing pollution is associated with the value of cleanness, thus pertaining to security. And the concern about inequality was associated with inclusiveness and equality. |
| The solar potential was highest in the lower-income communities. | Developing a solar economy in these communities had the potential to create jobs and improve the socio-economic conditions there [All sources]. | Empowering others is a manifestation of the self-direction applied to others. Based on the perception of separateness of the advisor and the lower-income community's members, caring for such communities can be seen as a manifestation of universalism (the low- |

| Fact | Interpretation | Values |
|---|---|---|
| | | income communities are seen as outsiders) or security (these communities can cause social unrest). Alternatively, if the lower-income communities are considered as in-group members, such reasoning is underpinned by local benevolence. In addition, the value of inclusiveness underpinned the goal of social participation across income levels. |
| Before the FiT, there was no programme for apartment buildings' roofs. | The FiT enabled better roof coverage, which implied a more efficient use of resources [All sources]. | Universalism was manifested in the care for the environment at large while the care for the local resources was associated with local benevolence. Efficiency was associated with the values of achievement. |
| The FiT triggered other efficiency | Improving efficiency of the building was one of the prerequisites for installing solar. | Efficiency means better usage of resources; such preservation of resources could be underpinned by |

| Fact | Interpretation | Values |
|---|---|---|
| improvements. | Efficiency enabled energy saving and lower customer bills. Higher efficiency was also associated with the usage of the electrical grid to disperse excessive generation [LABC-1]. This reasoning also encouraged reuse of the existing infrastructure [LAT-2]. | universalism or local benevolence. Efficiency was also associated with the achievement value type because it enabled better results from the same resources |
| LADWP's inefficiencies resulted in slow processing, unexpected costs, and backlogs. | Process inefficiencies were attributed to different reasons. The LADWP's newsletter justified the utility's inefficiency by the popularity of its programmes [LADWP-13]. The *Los Angeles Times* covered the opinions of the residents about the unproductive culture of the LADWP [LAT-11]. The newspaper also reported the residents' unwillingness to participate in the FiT due to concerns of wasted | Much of the reasoning in this causal link was underpinned by the values of self-direction, namely, the values of success and capability. The LADWP used the success of the projects to justify its lack of efficiency [LADWP-13]. The LABC chose capability as the basis of the recommendations for improvements that the LADWP could achieve [LABC-4]. The value of empowerment was used in the newspaper articles and the LABC reports as the basis of enablement of residents as solar power |
| 6 | | |

| Fact | Interpretation | Values |
|---|---|---|
| | effort [LAT-11]. The LABC adopted a more cautious approach by praising the utility's achievements yet providing recommendations to increase its efficiency and effectiveness [LABC-4]. These recommendations attributed the inefficiency to the lack of automation and the complexity of the processes. | producers [LABC-3, LABC-4,]. The residents emphasised responsibilities (related to benevolence) of the utility. They also relied on the lack of trustworthiness to justify their attitude [LAT-2].<br><br>Negative emotions were reinforced by the public belief in the LADWP's continued ineffectiveness solidified in its organisational culture. |
| Tribes have available land for renewable energy opportunities | The tribes should use the economic opportunities for their development [LADWP-14]. | This reasoning was based on the assumption that the same economic goals are relevant to all communities, that is, the reasoning is in line with the values of economic rationality. It could also be interpreted as a reinforcement of the dominant western culture. |
| LA was referred to as a | The FiT was the largest in the nation feed-in | This reasoning was based on emphasising achievement |

| Fact | Interpretation | Values |
|---|---|---|
| global sustainability leader. | tariff programme, thus leading the rest of the country in terms of producing clean renewable energy [e.g., LADWP-20, LADWP-21, LAT-5]. | values and positive emotions associated with it. |
| The city allowed solar projects' compliance deadlines to be relaxed but project developers needed more time. | Council member Fuentes argued for stricter rules based on the need to hold the businesses accountable [LAT-8]. | Though the original reasoning is based on the value of responsibility, the presentation of this issue in the *Los Angeles Times* discussed the problem as a power issue. The City Council was portrayed as clinging to its power to make decisions regarding FiT projects. |
| Land use restrictions for solar development were not regulated; this endangered the preservation of open | Without a restriction, "greedy" businesses would put solar plants on every available piece of open space [LAT-7]. | This reasoning was an example of a dystopian presentation of market forces; it could be seen as a manifestation of the tragedy of the commons (Hardin, 1968). The values underpinning the argument for restricting the land use could have had different |

| Fact | Interpretation | Values |
| --- | --- | --- |
| space, agricultural, and cultural land. | | motivations, however, the motivations presented openly were based on the preservation of the environment. Such preservation is associated with universalism and local benevolence, and the condemnation of greed. |
| Solar installations were argued to be more than a municipal matter. | Solar installations were part of climate change mitigation, which was a global concern. Therefore, sacrifices from the communities were expected [LAT-7]. | This reasoning was based on the value of universalism placing its importance above local benevolence. |
| The regulation allowed private solar to be installed anywhere unless there was a possibility of health hazards. | The regulation did not protect community interests. A modification to the regulation was proposed to involve community feedback before the approval [LAT-7]. | This reasoning was explained by the wish to preserve the tranquillity of the surroundings. It could be associated with aesthetics as a manifestation of universalism. The local nature of the concern, as opposed to the care of the global environment, made the association more relevant to local benevolence. Local benevolence would also |

| Fact | Interpretation | Values |
|---|---|---|
| | | explain the concern for the empowerment of the local community, which is also associated with self-direction. |
| Ground-mounted solar would disrupt the look and feel of certain neighbourhoods. | The city council insisted that the projects in such neighbourhoods should be delayed despite opposition to the delay from the LABC and the LADWP [LAT-6]. | As the city council interfered with LADWP's decisions, it was possible that the reasoning was based on the city council's wish to maintain power. This interpretation was given by the *Los Angeles Times* [LAT-6, LAT-7, LAT-8]. |
| Solar customers were discussed as voters. | Public utilities should serve the interests of the customers, including solar owners [LAT-2]. | This reasoning was based on the attribution of power, especially the power of the public. Because the interpretation has a normative tone, it also engaged the values of conformance. |
| Lack of access to capital was a major barrier to ownership for | Cash-constrained owners required external financing to participate in the FiT. Because the FiT was regarded as a community-driven | Local benevolence and inclusiveness values were used to motivate for the regulations. Conformance values justified the use of regulations as a treatment option. |

| Fact | Interpretation | Values |
|---|---|---|
| businesses. | programme, it was a community concern to be resolved by regulations [LABC-1]. | |
| Project cash flow model was considered the main determinant of participation. | Participation and financing would not be possible without financial gain [LABC-1]. | This reasoning was associated with the values of economic rationality: Human beings were assumed to be driven primarily by economic gains. |
| The FiT provided opportunities for local economic development. | Local development was envisioned through career-ladder jobs that would develop a dynamic job market locally [LABC-5]. | This reasoning was associated with the values of economic rationality: Economic development was equated with improved wellbeing. |
| The FiT programme attracted new solar firms to Los Angeles, incentivised individuals | The FiT was perceived as the foundation for a larger solar industry. Developing a strong in-basin solar market was essential to the city's efforts to increase its solar production [LABC- | This reasoning was associated with values of economic rationality: Economic development was equated with improved wellbeing. |

| Fact | Interpretation | Values |
|---|---|---|
| to create new small businesses and provided a pathway for existing firms to expand their operations. | 1, LABC-2]. | |
| The FiT 100 achieved some positive outcomes, but its full potential was not utilised. | Scaling up the FiT programme (from its current 100 MW to 600 MW) would add certainty as well as a greater economic development potential [LABC-4, CLEANLAS-7]. | The reasoning was associated with values of economic rationality; specifically, economic growth was equated with improved wellbeing. Another value type used in this reasoning was the achievement type, particularly the larger achievement potential was the reason for the programme's extension. |
| The FiT was still financially inaccessible | Finance cost usually depends on the security of projects. Increasing contract term of FiT | This reasoning was based on values of economic rationality and local benevolence and inclusiveness. |

| Fact | Interpretation | Values |
| --- | --- | --- |
| to poorer residents and businesses. | projects to 20-25 years to allow project developers to negotiate better finance terms, thus making the overall cost bearable [LABC-4, CLEANLAS-7]. | |
| The LADWP's dependence on coal was undesirable. | The FiT would ensure energy diversification [CLEANLAS-7, CLEANLAS-11]. | This reasoning was underpinned by the values of independence from self-direction value type. The state had to import coal for its coal-powered plants, thus depending on other states. The value of security manifested in the goal of "clean" (Schwartz, 1992, p. 6) energy and air. And it was associated with conformity because the limits of coal import were enforced by the regulation. |

## 5.10 Contributions of the Framing Analysis

Framing analysis was selected as an appropriate methodology to reach the goals of this research. This section highlights the knowledge obtained as a result of framing analysis and the significance of the framing findings.

### 5.10.1 Frame element of actors' roles

A frame element consisting of *victims*, *villains*, and *heroes* was added in this framing analysis based on qualitative coding. This element was labelled actors' roles. The frame element of actors' roles allowed classification of important knowledge about organisational actors. This element also contributed to the understanding of value-framing divergence or convergence based on whose interests were in focus, who was responsible, and whose actions were expected.

There was a general agreement in the frames of the FiT that the LADWP was the main responsible entity, in other words, the *hero* who was supposed to make things happen. Sometimes the LADWP was also viewed as a culpable party, in other words, the *villain*: It was most evident in the frames of the LADWP's ineffectiveness and in the feedback from residents and businesses.

The *victims* could be viewed both as the beneficiaries of the development and the ones who suffered from it. The frames from the LABC and the FiT programme's media promoted the view of the FiT as an instrument for the improvement of lives of the lower-income communities, especially those in East LA. The *victims* also included the "women, minority and military veteran-owned firms" [LADWP-19]. These communities were expected to benefit by obtaining jobs and business opportunities. The media, however, was not unanimous in defining indigenous communities as *victims* or beneficiaries. The story in the LADWP Newsroom portrayed indigenous tribes as beneficiaries of the solar development [LADWP-14]. The *Los Angeles Times* provided a different opinion. The indigenous tribes could lose their livelihood derived from the value of nature and that was highlighted in the *Los Angeles Times* [LAT-10]. A more inclusive definition of the

*victims* was also possible as both humans and animals were considered threatened by climate change and, thus, could benefit from the reduction in greenhouse emissions.

The role of values in the frame element of actors' roles was to define the position of an actor within the sustainability discourse, specifically, values often clarified who benefited from sustainability initiatives. The same value type applied to frame promoters or the audience resulted in different meanings that were derived and different actions that were promoted. For example, compliance with the solar regulations meant a problem for the LADWP. The utility had to address the compliance requirement even if it was not in the utility's business interest. For the LABC, compliance meant a mechanism of forcing LADWP's action and transformation of the electricity industry. Such transformation was portrayed as a common benefit [LABC-5]. In another example, economic values were discussed by the general public both as a financial concern about the cost of the programme and as one of the reasons to participate in it [LAT-2, LAT-11, LAT-12]. At the same time, the LABC discussed economic values as a tool to shape the programme's scope and outreach, and as an instrument of empowerment for the lower-income communities [LABC-1].

### 5.10.2 Quotation analysis

Quotations were analysed as one of the framing devices (Table 11). Quotations were used extensively in the analysed sources. The LABC's fourth report was based on the feedback from the FiT applicants [LABC-4]. The LABC mostly quoted representatives of businesses who were interviewed to retrieve their opinions about the FiT. These quotations served as another confirmation of the business orientation of the LABC. In contrast, the FiT programme's media and the *Los Angeles Times* provided a diversity of quotation sources covering both positive and negative feedback. The LADWP Newsroom relied mostly on the quotations from the government and the LABC, the CLEAN LA Solar news used extensive quoting of the LABC and business representatives, and the *Los Angeles Times* paid more attention to the community feedback. This selection of sources

highlighted the focus of the LADWP's communication on compliance, the focus of the LABC and the CLEAN LA Solar on business, and the focus of the *Los Angeles Times* on the community.

### 5.10.3 Emotional analysis

Emotional analysis was a part of the methodological extension to the framing analysis and was applied on across-framing thematic level because emotional messages were tied to themes or author identities rather than particular frames as defined in this research. This extension was informed by the previous research (Cornelissen et al., 2014; Huy, Corley, & Kraatz, 2014; Jin, 2010; Wan, 2008) and driven by the data. More specifically, emotionally-loaded messages in the news contributed to sensegiving and the LABC explicitly encouraged such strategic application in the programme's news. The emotional content of communication also revealed information about the identity and values of the communicating actor. The LABC as a representative of science and rationality presented their reports devoid of any emotional context. The meanings and even opinions were presented as objective and impersonal. The FiT programme's sources concentrated on the positive emotions accompanying the successes of the FiT. This focus was based on the recommendations from the LABC and was expected to encourage participation. The *Los Angeles Times* relied on a wider range of emotions from the happiness of the solar successes to the disappointments accompanying unexpected changes and frustration at the regulatory deficiencies. In particular, negative emotions were evoked in the discussion of the destruction of the value of Manzanar historical site and in a response to the LADWP's inefficiencies. Emotions as indicators of attitude are discussed further in 6.4.1 Attitude to change.

### 5.10.4 Limitations of the frames

The media sources in this analysis articulated problems, interpretations, and treatment options. However, these sources generally failed to provide a forum for discussion. Overall, almost no discussion concerned the questions of what was the right thing to do. The audience was informed about the frames developed by the

LABC and used by the LADWP in a sensegiving process. However, the feedback from the audience was scarcely discussed. A few reader comments published in the *Los Angeles Times* showed that the sustainability programme objectives were, in some instances, in contradiction with the idea of sustainability of the community members:

> *"We believe in economic development - but this is not the kind we want," Jane McDonald, who helps run a farmers market, said at the DWP's first public presentation of the project during an Inyo County Board of Supervisors hearing. "Protection of our livelihoods depends on protection of this landscape."* [LAT-10]

This contradiction signified the need for sensemaking and development of shared meanings. The portrayal of solar successes and higher-level arguments about the solar development was not sufficient in the public's view. The community voiced additional questions as part of the need for understanding: "What's the (environmental) good, bad and evil of those [solar] systems?" [LAT-3].

Despite the need to enhance the understanding, the audience supported the idea of solar: "[T]hey [solar panels installed on her rooftop] gave her [a homeowner] a sense of pride…in helping the state reach its energy targets" [LAT-4]. But this support was not unconditional: "I am all for implementing solar and wind power if it's done responsibly and the total amortized cost for an integrated system is transparent" [LAT-3].

The transparency of reporting was also insufficient. For example, in the issue of jobs, job creation was extensively discussed as an advantage of the FiT programme. However, the stability of such jobs was not discussed. Only one article mentioned that very few solar jobs were permanent [LAT-10]. Besides, the *Los Angeles Times* reported complaints that community livelihoods would diminish due to the solar development in the area [LAT-10]. These complaints referred to a community of rangers who were reliant on the natural environment. Solar job development was not necessarily a solution to them as their skills and preferences were different.

The readers showed their expertise and highlighted novel meanings in a critique of the media coverage: “The national media have turned a blind eye to the ecological atrocities and corporate favoritism constituting our nation's move toward renewable energy in the southwestern deserts” [LAT-3]. A sense of an emerging new identity of the consumer was also evident: “We deserve better than business as usual” [LAT-3].

### 5.10.5 Contradictions and reframing

Description of contradictions is one of the quality criteria of framing analysis (see 3.7.5 Framing quality). Reframing is used as a strategic tool by frame creators and promoters to engage different audiences. Both contradictions and reframing indicate meaning construction.

The contradictions in interpretations of frames are discussed within the descriptions of the frames in sections 5.3-5.8. The list below summarises these contradictions:

- The distribution of power between the LADWP, the city council, and the residents became a contested issue slowing down the FiT implementation (see 5.5.2 Regulating the decision-making power).

- The transparency of the LADWP’s processes was disputed (see 5.3.2 Transparency as a requirement for social participation).

- Beyond the agreement on emission reduction goals, the environmental protection remained disputed (see 5.8 Frame: Environment and Location).

- Despite the stated intentions of the FiT to uplift the disadvantaged communities, the LADWP was blamed for corporate favouritism. This blame was never acknowledged or openly disputed in the FiT programme’s media (see 5.3.1 Local benevolence in the social participation frame).

- The FiT was designed based on rational market assumptions, however,

cases of unfair competition showed the deficiency of these assumptions. This discrepancy demonstrated the inherent contradiction between the rational market assumptions and the complexity of human behaviour in sustainability initiatives (see 5.6.2 Fairness and transparency of the Feed-in Tariff).

- The designers of the programme equated economic development with the increased well-being of communities. The implementation of the programme demonstrated that well-being is more complex than that and includes appreciation of nature, historical and cultural values, and other elements of lifestyle (see 5.5.3 Local benevolence and self-direction and 5.8.1 Neighbourhood solidarity).

Reframing was used to bring more salient values into focus. For example, reduced emissions were discussed as an issue of health, health being a more relatable value than emissions. Electricity generation was communicated as the act of powering homes. These word choices brought the issues closer to the daily concerns of the residents.

Another way of reframing was changing the scope of the frame (Kaplan, 2008). This strategy was used to legitimise solar development. For example, in the case where solar plants threatened the aesthetics of neighbourhoods, reframing the issue as a state-wide concern was used to deny the decisive voice in the matter to the local municipality.

### 5.10.6 Patterns of silencing sensemaking

Van Gorp (2010) defined a core function of framing as the classification of issues as problematic and non-problematic. Thus, comparing different sources with regard to what was problematic and what was not, was a part of this framing analysis. In the analysed data, four patterns of silencing sensemaking were present: (a) reversal of problems and solutions, (b) passive acceptance of ready meanings, (c) denial of problems, and (d) omission of information.

Reversal of problems and solutions referred to viewing an issue as a problem by

one party and as a solution by another. An example in this empirical study was the pricing of the FiT. In the *Los Angeles Times*, pricing of the FiT was discussed as a problem that was difficult to solve to everybody's satisfaction given the variety of interests, values, and organisation levels involved [LAT-2]. On the other hand, the LABC approached pricing from the perspective of economic rationality and viewed it as an instrument ensuring participation outcomes [LABC-1].

Ready meanings as devices for silencing sensemaking were evident in compliance reasoning. Compliance with regulations was viewed as an economic instrument in the LABC's communication. In the FiT programme's media, ready meanings developed by the LABC were accepted unchallenged. The LADWP was expected to be motivated by compliance; this expectation was apparent in the LABC's media and the FiT programme's communications. Compliance reasoning indicated that sensemaking was constrained by the established institutions (Weick et al., 2005). The LABC's reports demonstrated detailed meaning construction in proposing new regulations and explaining the reasoning that went into the design of these regulations. Neither CLEAN LA Solar nor LADWP's news discussed the regulations. Rather, the regulations were accepted as ready meanings. Avoiding such discussion could be seen as a missed opportunity to engage with the stakeholders in the evaluation of the regulations and co-construction of sustainability meaning.

In another strategic application, value-frames provided associations with stable cognitive frames or accepted social norms, thus providing readily acceptable meaning and removing the need for further meaning construction. For example, clean jobs, clean economy, and clean power are associated with the value of cleanness. Cleanness is part of the security value type (Schwartz, 1992, p. 6). Using the "clean" adjective reduced the need for reasoning about the safety of solar technology for the installers, building dwellers, animals and its long-term production safety. The bigger picture of how the idea of clean economy fitted into the overarching goals of sustainable development, such as equality, was often disregarded because clean economy was automatically associated with something that was safe and ethical to pursue. The goals of sustainability programmes were

rarely compared to the overarching meaning of sustainability. Once programme goals were defined, they were not questioned and mostly implementation problems were discussed in the media.

Denial of problems was another pattern of silenced sensemaking. For example, the residents complained about the lack of transparency in sustainability programmes' reporting but the LADWP reported high levels of transparency achieved. Transparency is associated with meaning construction. When a situation is not transparent, learning is impossible (Tversky & Kahneman, 1986). Insufficient transparency prevents the emergence of new meanings. Though transparency is not a stand-alone value in Schwartz's (1992) value model, it is, however, associated with self-direction as freedom of informed choice. It is also associated with rationality, as the ability to make an informed choice (see 4.3.5 Value-mapping). However, there is also controversy about the value of transparency in the literature. Technological solutions reviewed by McGrail et al. (2015) were focused on monitoring for transparency. This monitoring was interpreted in two distinct ways. The positive view focused on the mutual responsibility of citizens that could be enabled through transparency. The negative view was called "dictatorship of carbon" (McGrail et al., 2015, p. 28) because it had the potential to restrict human freedom under conditions of constant monitoring.

Another way of silencing sensemaking is the intentional or unintentional omission of important information. For example, the *Los Angeles Times* provided many triggers of sensemaking by pointing to contradictions and competing interpretations. The deficiency of the framing in the *Los Angeles Times* was in the lack of interpretation and discussion. In the case of the LADWP's ineffectiveness, the *Los Angeles Times* reviewed the encounters of different people who were disappointed in the LADWP's service. However, these same people continued to pursue solar development despite the lack of support from the LADWP. Such framing left unanswered the questions of the citizens' motivation - whether it was based on their responsibility as global citizens, or love of nature, or financial viability of the FiT. In another example, despite the technological problems of

high penetration of renewable power being highlighted in the literature (e.g., Budischak et al., 2013; Klein et al., 2010), they were barely mentioned in the LABC report [LABC-1] and reported as a customer concern in the *Los Angeles Times* [LAT-3]. No treatment options were discussed. Without such discussions, the extent of the issue remained unclear.

In another example, the CLEAN LA Solar news provided details of the benefits of the FiT, listing the number of jobs created, predicted investment amounts, an estimate of the houses powered, and so on [CLEANLAS-7]. However, the same article left the environmental component largely unqualified and referred to it as "the clear environmental advantages" [CLEANLAS-7]. In reality, the environmental impacts of the FiT were not necessarily only advantageous, some of the projects within the programme were discussed for their negative impacts on the animal habitat. This article was compared with the other discussions of the FiT and the LABC's report that was discussed in the article. This comparison revealed that "clear environmental advantages" referred merely to the reduction in GHG emissions from solar electricity as compared to the same amount of electricity produced from coal. The phrase "clear environmental advantages" appeared vague and misleading as less knowledgeable readers could imagine more advantages than were possible in reality.

### 5.10.7 New meanings that emerged from framing

New meanings were a result of the meaning construction that happened through the programme interactions. This meaning construction was recorded in the media. Initially, new meanings were proposed by the LABC. The LABC defined the contextual meaning for a feed-in tariff programme design, highlighted the problems, and recommended treatment. Further meanings were developed in the process of the FiT implementation based and reflected in the communication of the organisational actors.

The LABC based their reasoning on the assumption of economic development as an integral requirement of sustainability. The LABC saw the goals of the development as job creation and a more inclusive economic environment. The FiT

programme's media added the notion of power independence:

> *Together the City of Los Angeles and the LABC have made great strides towards our efforts to reduce the City's dependency on coal, moving away from centralized generation toward a more distributed model while creating thousands of local jobs in the process.* [CLEANLAS-12]

Distributed generation was related to self-direction values based on the independence that it gives the generators. It was also seen as a security measure.

The meaning of "green" has undergone some transformation as a result of the framing discourse. Initially, "green" was associated with solar power as green energy but a new meaning has emerged as the green environment, which is pleasant to live in and friendly to the animals.

New frames emerged to correct the reified perceptions. However, the practical effects of the new understanding were not immediate. In the example of ground-mounted solar, new legislation was necessary, but the delay in creating such legislation caused a delay in the programme (Summer 2014 till spring 2015 according to the August 2016 dashboard (LADWP, n.d.-b)). This delay also became a confirmation of the LADWP's inefficiency.

Another example of meaning construction was job creation as part of the local development frame. Job creation as a goal was underpinned by the values of universalism or local benevolence as job creation targeted the local communities. Existing cultural meanings dictated the positive notion of job availability. In the context of the FiT, this existing meaning was preventing sensemaking of sustainability of the new jobs. The existing meaning was also insufficient in the FiT context because the majority of the new jobs were not meant to be permanent. Another job-associated meaning emerged from the imminent destruction of the indigenous livelihoods and, thus, the need for more jobs and economic opportunities to restore these livelihoods. The meaning of job creation was also analysed as a reframing of short-term financial gains. Many jobs in the solar

industry were short-term construction jobs. They provided short-term benefits, especially to businesses, but while the businesses could continue to benefit from the incentives and their profits from solar sales, the unskilled construction workers would have no long-term benefits. Thus, such job creation was not sustainable for unskilled and construction workers. This was not discussed in the programme's media and the LABC reports. Only a partial discussion of this problem could be seen in the LABC's recommendation to provide incentives for the businesses to create career-ladder jobs. However, no analysis was provided regarding what kind of jobs these could be and how the employment opportunities could be made available.

### 5.10.8 The meanings of "sustainability" and "sustainable"

The addition of "sustainable" as an adjective intends to classify things and events and link them to commonly accepted meanings. However, the meaning of sustainability is highly contextual and signifies different things to different people.

To understand what was encompassed by "sustainability" and "sustainable" in the media sources, a search for "sustain*" (sustainability, sustainable) was performed. The fragments of text, in which the terms were used, were analysed for the presence of other codes.

In the given context, sustainability was mostly associated with the sources of energy:

- "The era of coal is over" [LADWP-8].
- "Sustainable renewable energy sources" [LADWP-12]
- "Sustainability goals" [CLEANLAS-12].

Sustainability was also used as a link to overarching social goals and achievement values: "Los Angeles is a global sustainability leader because of its commitment to clean renewable-energy" [CLEANLAS-3].

## 5.11 First-Order Findings' Summary

The intention of this chapter was to review the value-based framing in the context of the FiT programme in Los Angeles and present it as an unfolding story of meaning construction. In qualitative research, the depth of understanding is the basis for extraction of the underlying conceptual structure and theory development. This depth of understanding was achieved through assembling descriptions and finding similarities, contradictions, omissions, and sequences of reasoning. The diversity of the framing participants and the arguments that they targeted demonstrated the practical difficulty of addressing the issues of sustainability in a multi-stakeholder dialogue and the theoretical problem of analysing this process through framing. This was presented in this chapter. The next chapter reveals the relation of the findings to the previous theories and explains them based on the theoretical, contextual knowledge, and common sense.

# CHAPTER 6 - SECOND-ORDER FINDINGS. THE UNDERLYING CONCEPTUAL STRUCTURE

Second-order findings reveal the underlying theoretical structure of the data (Gioia & Chittipeddi, 1991). In this research, the goal of the empirical case was to validate and refine the conceptual model (Figure 10). The study started with the proposition that values play an important role in the understanding of sustainability and particularly of its contextual definitions. Meaning construction happens through framing that is recorded in the written communication of media, governments, and science.

The social constructivism perspective is based on the assumption that the social reality is constructed through the interactions in the field (Ackermann, 2001). There is a distinction between social constructivism and constructionism. Social constructionism is based on the assumption that meanings reside in texts; constructivism clarifies that these meanings cannot be independent of the reader and interpreter (Pan & Kosicki, 1993; Van Gorp, 2007). Multiple similarities between the two paradigms allow the borrowing of insights from both perspectives and integrating individual learning (Ackermann, 2001) with the wider social implications (Riegler, 2012). In the case of an organisational field, interactions happen among organisational actors. When a strategic change, such as the change towards a more sustainable living, is pertinent, the following processes should be observable:

- Behavioural change, organising, and meaning construction contribute to the institutional change; a lack of institutional change restricts meaning construction (e.g., DiMaggio & Powell, 1983; Fligstein, 2001; Lakoff, 2010; Myers et al., 2013).

- Framing interactions contribute to organising (e.g., Kaplan, 2008).

- Meaning construction causes a behavioural change (e.g., Weick et al., 2005).

- Sensegiving and sensemaking are mutually dependent and are sub-processes of meaning construction (Gioia & Chittipeddi, 1991); sensegiving is a part of strategic framing (Fiss & Zajac, 2006; Gioia & Chittipeddi, 1991).

- Strategic framing is a part of organising and institutional change (e.g., Hoffman & Ventresca, 1999; Scheufele, 1999; Snow et al., 1986).

The observation of the above processes validated the model developed conceptually (see Figure 10 and Table 5). This chapter proceeds as follows. Firstly, the suitability of the methodology adopted in this research is discussed. Then, the processes observed in the empirical study are presented as generalised constructs and a part of the conceptual model of change in an organisational field. Throughout, new insights that emerged in this study are highlighted.

## 6.1 Methodological Contribution

The methodological development in this research was based on the review of the previously used methods of text analysis with the focus on eliciting values, frames, and emerging meanings. This methodological approach was developed as an alternative to ethnography. Compared to ethnography, this new methodology is more suitable for historical analysis of social phenomena on the intersection of organisations and society because it does not depend on the researcher's participation in the related events.

From the philosophical point of view, the researcher adopted an interpretive approach and the position of social constructivism. In this approach, framing analysis consists of identification and interpretation of the units of meaning that exist across texts and contexts and are activated in the mind of the reader (Pan & Kosicki, 1993). According to Ryan and Bernard (2000, p. 769), "[t]exts [a]re [u]s"; that is, texts are a reflection of the society that produces them. Meanings emerge in social interactions and are recorded in language (Gadamer, 1989), providing outsiders, specifically researchers, with an accurate, albeit intricately biased view of situations in which they did not participate. These meanings can be

elicited from texts based on the ability of the text to influence readers; it is this ability that is being interpreted and used for the analysis.

The methodology developed in this research continues the methodological quest of defining, conceptualising, and understanding sustainability through the lens of values. Janoušková and Hák (2013) discussed the values in the definition of sustainability. They based their research on the text of the United Nations' Millennium Declaration (United Nations General Assembly, 2000). They elicited the following values from the text: freedom, equality, solidarity, tolerance, respect for nature, and shared responsibility. Further, Janoušková and Hák (2013) looked at the definitions assigned to these values. Thus their approach was focused on definitions. Their approach was extended in this research through framing analysis that included not only the definitions of values but also problems, treatment options, causal attributions, actors' roles, and emotional and quotation analysis. The analysis of frame structure allowed better assessment of the role of values in the understanding of sustainability. In particular, the treatment element indicated the practical interpretation of sustainability in a particular context.

The methodology developed in this research extended approaches to framing analysis that construe frame as a package of elements (Matthes & Kohring, 2008; Pan & Kosicki, 1993; Scheufele & Tewksbury, 2007; Van Gorp, 2007). The originality of the present methodology is in the procedure for development of frame elements based on the previous literature and qualitative coding of the texts. In this research, this procedure resulted in the following frame elements: problem definition, causal interpretation, treatment, and actors' roles. Each frame was also analysed for the role of values in it. On the cross-frame level, quotation analysis and emotional analysis were added. The interpretive approach allowed the treatment of frame elements as elements of meaning. These elements were analysed in their relation to the meaning of sustainability and the transformation required as part of sustainable development. The role of values was interpreted as a mediating factor in sustainability meaning construction.

The variety of epistemological positions and differences in data and research intentions explains the lack of a universal set of quality measures for qualitative

research. For example, Patton (2005) encouraged subjectivity as a measure of quality. However, subjectivity does not guarantee reproducible results. Morrow (2005) recommended grouping the criteria into the adequacy of data and interpretation. Patton (2005) also encouraged following a protocol or a well-defined research strategy as a quality assurance. In this framing analysis, the last two suggestions were combined.

The adequacy of data was ensured by selecting sources with a comparable coverage and availability to the general public. The other considerations included the contribution to the coverage of the phenomenon and the manifestation of the different value systems. The LABC reports provided the design, laid out the foundations for the FiT, offered evaluations, and highlighted the issues. The LABC's reasoning was underpinned by the values of economic rationality. The FiT programme's media coverage provided a valuable insight from the utility's and the CLEAN LA Solar coalition's points of view. This communication was interlaced with the values of local benevolence, compliance and security. The LADWP and the CLEAN LA Solar websites added data that was used for triangulation and verification of the factual information that was reported. The *Los Angeles Times* provided the critique and covered public opinion. The approach to data selection in this methodology provided the benefit of using readily available data, the benefit of historical lens on frame emergence and development, and the benefit of cross-source comparison. The testing of this methodology showed that it is a suitable way of interpretation of the role of values in the framing of sustainability.

The adequacy of interpretation was ensured by using systematic procedures to identify the elements of texts that could interact with the audience in meaning construction. A well-defined research protocol, which clarified the process of frame elicitation and classification, was developed. The methodology provided an extension and a unique perspective that no other single methodology could offer at the time of this research.

This methodology could be seen as an extension of the methodology developed by Matthes and Kohring (2008). The advantage of their methodology is in a well-

developed research protocol. A well-developed research protocol remained the cornerstone of the methodology in this research. The disadvantage of their methodology is the predefined list of frame elements. This disadvantage is two-fold. Firstly, the elements may never occur. Matthes and Kohring (2008) reported such case in their application. Secondly, other valid elements may be omitted. This disadvantage effectively means de-contextualisation of the research methodology. This issue was addressed in the current research by allowing the list of elements to emerge based on the previous literature, research questions, and specifics of the context.

An important element discovered in this way was the classification of frame actors based on their roles. Though Matthes and Kohring (2008) discussed actors in other frame elements, they did not classify them explicitly. In this methodology, the classification of *victims*, *villains*, and *heroes* was adopted from the approach to framing analysis developed by Lakoff (2006). This classification allowed an additional angle to the value analysis: values of frame creators defined attributions of blame and responsibility and became discernible through the frame element of actors' roles.

An additional level of analysis developed in this methodology was concerned with the emotional loading of framing messages. Emotions work together with values and communication in meaning construction (Cornelissen et al., 2014). The cross-frame emotional analysis allowed a better understanding of values and interpretation of their contribution to the meaning of sustainability. The quotation analysis was added to the analysis across frames within a source. It allowed the assessment of the antecedents of the frame emergence and transference between sources.

This methodology offers a novel contribution to framing analysis because it enables comparative analysis of framing in diverse communication styles that are used by organisational actors. In this research, organisational actors included the public media, the programme administrators, and the science. Their communication styles varied both in the script and the syntactic structure. However, the use of frame elements allowed the elicitation of meaningful and

comparable frames from these sources. The further methodological development would benefit from adding the style of social media to framing analysis.

This methodology was superior to surveys and ethnography in the context of this research. Surveys are often used for value elicitation. However, value priorities of the research participants change in response to priming (Corner et al., 2014). Surveys are inevitably a source of such priming. This is also true for any other intrusive method of value research. Surveys are also disconnected from the context. Values reported in a survey have only some relevance to the actual action propensity in a particular context (Bardi & Schwartz, 2003). Ethnography has the benefits of contextual research, but its disadvantage is the researcher's involvement with the context and the influence of the researcher on the context. The values and frames observed by the researcher would not necessarily be the same as they would be in the absence of the researcher. Framing analysis of the written communication is unobtrusive and allows the analysis of the natural communication of the actors in the research context. This analysis is suitable for revealing values and their role in framing and meaning construction.

To summarise, this research's methodology extended the previous methodologies of framing analysis (Matthes & Kohring, 2008; Pan & Kosicki, 1993) with the inclusion of the frame element of actors' roles (*victims*, *villains*, and *heroes*) and the incorporation of emotions, quotations, and values. The qualitative way of the development of frame elements added the advantage of matching the method to the context. This methodology is suitable for cross-source analysis and comparison of diverse styles of communication.

## 6.2 The Evolution of the Research Questions

The initial research questions were defined as:

1. What frames do institutional actors use to communicate the requirements of sustainability within a sustainability programme?

2. What values do they use to legitimise these frames?

3. Through what mechanisms can these values in frames contribute to the meaning of sustainability?

In the process of data collection and analysis, further questions emerged. These new questions clarified the initial questions. These questions were marked as Analysis Questions (AQ). They are presented below:

AQ1. What frames do public news media introduce and how are these related to their context? How are they different? What is the role of values in this difference? This question appeared because a distinct difference was notable in the framing focus in the *Los Angeles Times* compared to the framing focus in the LABC's reports and the FiT programme's media.

AQ2. What are the moderating, mediating, and impeding factors in meaning construction?

AQ3. What conflicts/contradictions/inconsistencies may or may not exist in the existing frames (within a source and across sources)? Do values provide some explanatory power for these conflicts/contradictions/inconsistencies?

AQ4. Are the concepts of value-frames or value-framing helpful? If yes, then in what way and in what situations?

Questions AQ1-AQ3 allowed a deeper insight into the processes of meaning construction. Questions AQ2-AQ4 focused on disentangling the contributions of values.

A summary of the answers to the research questions is presented in Table 16.

*Table 16*

*Summary of the Research Questions and Answers*

| Question | Answer |
|---|---|
| 1. What frames do institutional actors use to communicate the requirements of sustainability within a sustainability programme? | The following frames were identified and named after the problems: social participation, local development, regulations, LADWP's ineffectiveness, costing of the FiT, and environment and location. These frames were described in Chapter 5 - First-Order Findings. Cross-source Framing Summary and Comparison. |
| 2. What values do they use to legitimise these frames and frame elements? | The values in reasoning were summarised in Table 15. The most frequently used values were the values of local benevolence, self-direction, and achievement. The LABC relied on the values of economic rationality, and the LADWP relied on the values of conformance. Some values were used with a negative connotation: power, greed, ineffectiveness. |
| 3. Through what mechanisms can these values in frames contribute to the meaning of sustainability? | This is discussed in detail in 7.5 The Role of Values in the Framing of Sustainability and is summarised in Table 18 and in Figure 12. |

| Question | Answer |
|---|---|
| AQ1. What frames do public news media introduce and how are these related to their context? How are they different? What is the role of values in this difference? | In this empirical study, public news media was represented by the *Los Angeles Times*. The newspaper offered a diverse discussion of different problems, especially from the public point of view. The FiT programme's news covered the successes of the programme with little attention to problems. It also concentrated on reports of the work in progress. The LABC as a scientific institution provided the initial frames from a detached and rational point of view. The differences in coverage confirmed the findings of the previous research, particularly that the framing discussion is shaped by the dominant values of the relevant institutions (Williams, 1979). |
| AQ2. What moderating, mediating, and impeding effects were observed in meaning construction? | Impeding effects are the processes and factors that halt sensemaking, such as the presentation of problems as obvious or denial of problems. Established institutional and organisational norms and values impeded sensemaking by providing ready meanings and structures. For example, the "green" and "clean" labels united all solar projects under the theme of environmental benefits, which included emission and pollution reduction. The questions of the damage to the natural environment and animal habitat were left largely unaddressed. |

| Question | Answer |
| --- | --- |
| | Emotions have a moderating effect because they reinforce the meanings in communication (Cornelissen et al., 2014). The intended amplifying effect of emotions was found in the framing that emphasised the successes of the FiT programme. The intention to engage positive emotions to encourage participation was stated explicitly in the fourth LABC report [LABC-4].<br><br>Values were found to facilitate convergence or divergence of frames. Thus, the role of values in frame divergence and convergence was mediating. These effects are discussed in 7.5.2 Value-framing construct: Divergence and convergence. |
| AQ3. What conflicts/contradictions/inconsistencies may or may not exist in the existing frames (within a source and across sources)? | The limitations and contradictions were identified in the issues of job creation, the costing of the programme, and the scope of local development. The detailed analysis was presented in 5.10.4 Limitations of the frames and in 5.10.5 Contradictions and reframing. Value analysis allowed better understanding of the sources of conflict. Values have the potential of strategic use for finding a compromise. |

| Question | Answer |
| --- | --- |
| AQ4. Are the concepts of value-frames and value-framing helpful? If yes, then in what way and in what situations? | A clarification of terms is necessary. Value-frames are static forms in a text. They are the traces of value-framing process that are found in the written media. Thus, value-frames are helpful in framing analysis. Value-framing analysis is useful in convoluted situations where multiple alternatives exist and the choices are non-transparent. In such situations, the same calls for action may represent different values. This process has been labelled value-framing convergence. Without analysing value-frames, value-framing convergence may be mistaken for a unanimous agreement. Value-framing also allows understanding of how institutional actors get assigned the roles of *villains*, *victims*, and *heroes*. More details are provided in 7.5.2 Value-framing construct: Divergence and convergence. |

## 6.3 Structural Arrangement of Problems in Frames

The last stage of framing analysis (see 4.3.6. Framing analysis) allowed the identification of the problem structure through comparing the frames and codes. Such comparison resulted in a hierarchy with the FiT implementation as the central topic or master frame. This is shown in Figure 11.

The logical condensation of problems into a master-frame was a result of the analysis done by the LABC. The LABC grouped problems that the FiT should solve. The FiT, thus, was both the master-solution and the master-problem. As the master-solution, the FiT provided answers to solving existing social problems in Los Angeles. These are sub-topics to the left in Figure 11. Further, this master-frame became a constellation of other problems. These problems became apparent during the implementation stage. They are presented as sub-topics to the right in Figure 11.

The condensing and then scattering pattern of the FiT frames is indicative of field structuration, that is, the emergence of widely accepted cultural patterns. The problems were mostly discussed at the beginning of the FiT programme. At the end, they were taken for granted, in other words, the problems became commonly accepted. These commonly accepted meanings confirmed the processes predicted theoretically (see Figure 10 and Table 5). The reification of meanings in institutional practices also resulted in silencing sensemaking. This silencing was discussed in 5.10.6 Patterns of silencing sensemaking. This process was also predicted in the conceptual model.

From this contextual pattern, a more general pattern also emerged: Frames either conglomerate into one master frame or scatter into many. The conglomeration corresponds to the creation of common cultural patterns and accepted meanings; this is the process that leads to the emergence of new institutional forms. Scattering is the opposite; it is a result of unfinished sensemaking and un-converged meanings. Scattering happened due to the problems that could not be resolved by the existing institutions and organisations.

The problems could also be arranged into thematic clusters (see Figure 11). Four clusters were identified. The first cluster was named the compliance cluster and was related to the compliance requirements. The LABC identified the initial problems with the existing regulations. The federal regulations for the renewable energy (i.e. Senate Bills, Renewable Portfolio Standard, and regulations restricting emissions and coal usage) set solar goals, which the LADWP was unlikely to achieve based on the existing local programmes and regulations. Thus, the compliance problem for the LADWP was the increase of solar power generation. A part of the treatment and also a sub-problem was the installation of solar in more diverse geographic zones. The geographic diversification was required both due to the limited space available for solar panels within the city and the economic opportunities of such diversification. Though the compliance cluster defined the initial problems in this particular context, the federal compliance requirements preceded the whole range of frames discussed here.

The business cluster followed the compliance cluster. This cluster united problems that businesses, including the utility business, tackled as part of the FiT. This cluster was also united by the need to compete. This need could be seen both from the practical point of view as the need to survive in the marketplace and as a value-based need for achievement and leadership in the competition. The LADWP was accused of lagging behind other utilities in terms of solar development. It became its business objective to remedy the situation. The negativity surrounding this lag showed the desire for competitive advantage as a characteristic value of the residents of Los Angeles in general. The residents and out-of-state businesses also showed their willingness to succeed both as businesses and as participants in the competition for the leadership in solar development.

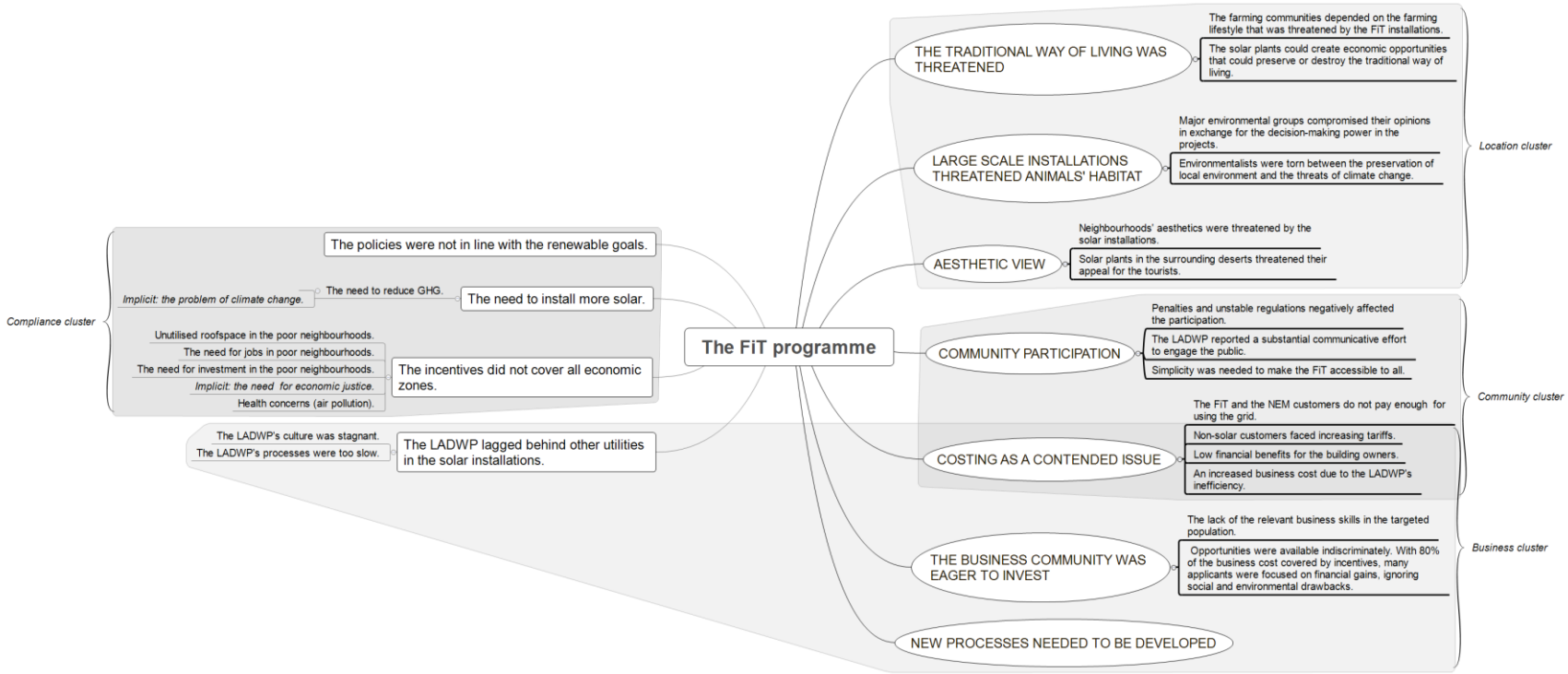



*Figure 11. The structural arrangement of problems in the frames*

The business cluster was closely related to the community cluster. The unifying feature was the values of leadership and achievement, which drove some of the social participation. The other frames in this sector were centred around the community needs and resources. The link between the community and the business cluster was bidirectional: The community participation allowed the growth of solar businesses and the businesses had to provide jobs and electricity to the community.

The last sector that was identified was the location sector. It was linked to the compliance sector as the regulations defined that solar power had to be developed in the geographically limited area. Thus, the main problem of the location cluster was the usage of the available space to satisfy the needs of all constituents, including the community, businesses, regulators, and the natural environment.

## 6.4 The Utility and City Transformation

Sustainability requirements are a trigger for transformation in organisations and society. The case in this empirical study was an example of such transformation. The main focus of the transformation was the electricity system. The transformation required the transition from fossil fuels to renewable sources of energy. This requirement directly affected the LADWP as the owner of several coal plants and a gas plant. In addition to the diversification by energy source, geographic diversification of electricity generation was required as well. The LADWP was expected to become independent of the coal supply from the other states as part of its regulatory obligations. The utility also had to renounce its monopoly as the seller of electricity and become an intermediary between solar producers and consumers. The property owners had to adopt a new identity of power plant owners or lessors. Previously unemployed and disadvantaged residents were expected to become active players in the new solar market. Eventually, the whole city was to be transformed from its current underdeveloped state into a sustainable and liveable habitat.

In this empirical study, the media sources contributed to the transformation

discourse. The process of strategic sensemaking and sensegiving through framing took a course similar to the one previously found in organisations (Gioia & Chittipeddi, 1991). The LADWP was the central organisation undergoing the transformation. It is important to note that the meaning construction processes discussed here refer to the meaning construction of the organisational field in the media. This is not the same as the meaning construction of the LADWP because the utility's internal meaning construction happened through its internal communication processes. The reflection of this internal meaning construction contributed to the meaning construction of the organisational field through the discourse in the media.

### 6.4.1 Attitude to change

Attitude to change was demonstrated in the framing mostly through the emotional feedback. In general, the necessity of change was culturally accepted as sustainable development had become an accepted norm. However, the differences in attitudes defined whether the change was accepted with enthusiasm or as an inevitable fact. This is summarised in Table 17. Attitude to change is an expression of the value of stimulation. Stimulation values refer to the values of change and variety in life (Schwartz, 1992). A positive connotation of stimulation corresponds to the excitement in the face of change, while negative is expressed as resistance to change. Attitudes contribute to behaviours and actions that define how the change develops.

Bell and Morse (2013) argued that for sustainability action, people have to care about what is sustainable, there should be emotional involvement. In the previous experiments, people who responded to pro-environmental motivation felt better about themselves than those who responded to pro-financial motivation (Bolderdijk et al., 2013). This emotional reinforcement resulted in behavioural spill-over (Evans et al., 2013), that is, a sustained environmentally-friendly behaviour. Such behaviour, sustained over time, has the potential for enacting social change.

*Table 17*

*Attitude to Change in the FiT Framing*

| Change is exciting | Mixed attitude | Change is necessary |
|---|---|---|
| - The change was envisioned to result in job creation.<br>- The change opened new business opportunities.<br>- LA was envisioned as a "global sustainability leader" [CLEANLAS-3]. | - The FiT was supposed to reduce the reliance on the utility. This may be positive to some of the residents but may also be a threat to the utility and its employees.<br>- The changes to the physical environment were viewed as a sign of development or as a sign of the aesthetic degradation. | - The realities of climate change required a transformation.<br>- New compliance requirements meant inevitable changes. |

Emotional amplification was also used as a communication strategy (Gray et al., 2015). For example, in their research on the issue of CSR at Nike, Waller and Conaway (2011) showed how the emphasis on the same category of values, particularly social values, allowed Nike to successfully counter-frame the media complaint about children's exploitation in developing countries. The media and Nike used the emotional appeal of frames to argue for their respective positions. Thus, values alone are insufficient to explain framing outcomes. Values should be examined together with the emotional amplification strategies to seek understanding of strategic change outcomes (cf. Cornelissen et al., 2014).

### 6.4.2 Strategic change phasing

The media coverage of communication within the organisational field allowed an insight into the unfolding of the FiT story over the years starting from the first LABC's report in 2010, the first pilot implementation in 2012, and the rollout until November 2016. Appendix A and Table 14 show how the discussion started,

unfolded, and where it had arrived by November 2016. This time interval allowed tracking of the implementation and its accompanying process of meaning construction. Following the definitions developed by Gioia and Chittipeddi (1991), the meaning construction stages were classified into three stages labelled envisioning, signalling, and re-visioning. These are discussed below in comparison with the sensemaking stages discussed by Gioia and Chittipeddi (1991) in a strategic change implementation project at a public university.

The process described by Gioia and Chittipeddi (1991) was similar to the case of the FiT but it was also different. Gioia and Chittipeddi (1991) observed a strategic change in an organisational field of the public university. That change was described as the change that involves "an attempt to change current modes of cognition and action…" (Gioia & Chittipeddi, 1991, p. 443). Such change in cognition and action was expected as a result of the FiT programme too. Gioia and Chittipeddi (1991) started their observation before the change was made public. They observed it for a prolonged period of time (around a year). The difference in the FiT programme's research was that the information was collected through the framing recorded in the public media whereas in the case of the public university, the information was observed and collected from conversations. The differences in approaches resulted from the differences in scope. The FiT programme engaged a greater variety of participants and was publicly followed in the media; it has transcended the scope of one organisation and happened in the organisational field, which transcended organisations and society; the FiT also happened over several years. In such a situation, comparing the scopes of the findings in the FiT research and the ethnographic study (Gioia & Chittipeddi, 1991) allowed conclusions about the soundness of the framing approach in the larger scope of an organisational field.

The first phase that Gioia and Chittipeddi (1991) described was an envisioning phase. In the case of the FiT programme, a similar phase was present and, similarly, it started before the initiation of the programme with the report from the LABC in 2010. This phase, in both cases, included strategic planning, which was done outside the organisation. In the FiT programme case, the report was prepared

by an external scientific research organisation and was based on the experiences of other feed-in tariff programmes worldwide.

The second phase was a signalling phase (Gioia & Chittipeddi, 1991). This phase was quite different from the one described by Gioia and Chittipeddi (1991). Gioia and Chittipeddi (1991) reported that, in their study, the CEO had created an atmosphere of ambiguity that signalled the change and prepared the organisational actors. The LADWP decided to take the opposite approach. Instead of creating ambiguity, the utility strived to achieve the maximum certainty. Just as Gioia and Chittipeddi (1991) reported that ambiguity had created an unexpected positivity, the attempt to remain certain and the caution exercised by the LADWP had created an atmosphere of negativity:

> *DWP is contracting for only 10 megawatts of solar power to start, the equivalent of about 30 to 50 medium-to-large projects. But DeShazo said Sacramento's utility started its feed-in-tariff with 100 megawatts and sold out in one day.* [LAT-11]

The author of this article also discussed "delays and frustration" and critiqued "the culture at the DWP" [LAT-11].

Gioia and Chittipeddi (1991) described the decisive leadership of the CEO whereas the LADWP's leadership was irresolute. The discussion in the media revolved around leadership under the slogan of Los Angeles being the leader of the nation in solar development. But the LADWP was accused of a lack of leadership. The *Los Angeles Times* quoted a businessman who was convinced that within the LADWP, "there [was] no will to make this happen" [LAT-11]; the LADWP's processes were criticised as slow and inefficient. For example, based on the August 2016 Dashboard from the LADWP website (LADWP, n.d.-b), there was a delay from Summer 2014 till Spring 2015 in contract execution because of the pending Conditional Use Approval from the City of Los Angeles.

The LABC and the Clean LA Solar popularised the motto of leading the nation. The value of leadership seemed to resonate well with the audience as it was

validated by the expressions of pride and the wish to provide a good example [LADWP-14, LADWP-21]. However, the conflict of the expectation and the observation resulted in the creation of the frame of the LADWP's ineffectiveness. Here, another accent was on the emotional loading of the value of leadership; the disappointments of not meeting the expectations resulted in expressions of anger, hopelessness ("thanks but no thanks" [LAT-11]), and mistrust: "The conversation is one thing, the reality is another" [LAT-11]. This perception of the LADWP and the frame of the LADWP's ineffectiveness were created by the community of businesses and LADWP's customers. Through interviews, the frame was given back to the LABC as the main strategic "thinker" of the programme who popularised the frame of LADWP's ineffectiveness and linked it to the community participation frame. Multiple delays in the implementation were recorded and the LABC recommended a treatment of the LADWP's ineffectiveness problem based on the use of web technologies to streamline the LADWP's processes.

The third phase discussed by Gioia and Chittipeddi (1991) was called re-visioning. Typically, during this phase, many adjustments happen based on the feedback from the support and the opposition. In the case of LADWP, the adjustments included bringing new problems into focus (see Figure 11). The new problems meant the evolution of frames that manifested in communication and, consequently, in action. The LADWP hired more employees, implemented online tools, and published project-relevant information on their website to increase trust.

The fourth phase was called energising (Gioia & Chittipeddi, 1991). The energising phase typically includes inputs from the opposition though it is characterised by the established support, fine-tuning of the processes, and the re-establishment of the changes. The opposition may stay reified, as was shown by Kaplan (2008). The energising phase was not clearly visible in the FiT programme. Instead, there was a sense of the lack of progress. This lack was observable in the disappointment expressed in the media frames. The LABC expressed the need for an expansion. The envisioned 150MW were not implemented by August 2016 (the date of the latest dashboard available in

November 2016), despite the statement from the LABC that "the FiT is on track to meeting its considerable economic and sustainability goals by 2015" [LABC-4]. The geographic coverage objectives were also not achieved fully.

The LABC in its 2014 report *FiT 100 in Los Angeles: An evaluation of early progress* did not mention the goal of solar installation in MW explicitly. But the news of the Clean LA Solar did mention it explicitly:

> *Based on the successful rollout, the UCLA's team concluded that the "FiT 100" is right on target to deliver 100 MW of carbon-free energy by 2015.* [CLEANLAS-7]

The achievement of this goal was not confirmed in the FiT dashboard, dated August 3, 2016 (LADWP, n.d.-b). The dashboard showed: 29 projects in-service totalling 14.9 MWs, 33 projects under contract not yet in-service totalling 9.1 MWs (LADWP, n.d.-b). This information showed that the 100 MW envisioned for 2015 had not yet been implemented in 2016.

It seemed that the LADWP was still in the re-visioning phase by November 2016 despite the envisioned completion of the project by the beginning of the year and the vision of the national leadership. Such delays confirmed one stakeholder's opinion that the LADWP's work was more words than action [LAT-11].

### 6.4.3 Factors of success and failure

Gioia and Chittipeddi (1991) found that "ambiguity-by-design" (p. 445) was a fruitful strategy to implement a strategic change in a large organisation. This argument is similar to Kaplan's (2008) suggestion that managers are likely to promote framing contests to aid with the implementation of a strategic change. Both ambiguity-by-design and framing contests create an atmosphere of uncertainty of the existing situation. In this empirical study, the approach to change was rather different. The LABC advised creating the maximum certainty to ensure a successful transformation. Following this advice, the utility started with a pilot project and continued with small FiT project allocations of 20 MW [LADWP-7], which were criticised both for their size in MW [LAT-11] and the

duration of their contracts [LABC-4]. This recommendation was also controversial because the LADWP was in a process of change and, therefore, could not guarantee certainty.

The situation of uncertainty allows new actors to come into power (Kaplan, 2008). In the case of the FiT, this happened when new solar firms became actively involved. To some degree, this was the desired situation as highlighted by the LABC, but it also intensified the feeling of uncertainty in the established actors. For example, the residents protested when newcomer firms threatened open spaces in their neighbourhood [LAT-7]. At the same time, the new actors used contradictions to gain power. The new solar firms appealed to the court with the claim of the unlawfulness of the actions of the city council and the city council retaliated by suggesting new regulations [LAT-6, LAT-7]. However, the new firms also gained their supporters such as the LABC [LAT-6]. This situation remained solidified as a contested frame (Gray et al., 2015) and resulted in significant delays in the overall programme implementation. These delays were also caused by an attempt to provide maximum certainty to the programme stakeholders. The high focus on security resulted in less than expected outcomes, far from reaching the goals of the national leadership.

A “captivating vision” (Gioia & Chittipeddi, 1991, p. 446) is instrumental in achieving the goals of a strategic change initiation. Such captivating vision is supported both by the commonality in values (Gioia & Chittipeddi, 1991) and guided by emotions (Huy et al., 2014). Some value-emotional messages used by the media proved to be successful in the FiT communication. This is discussed in 7.3 Combined Effects of Values and Emotions in Framing. However, the design of the programme was largely influenced by economic reasoning and it attracted an audience interested in predictable economic gains. This undermined the resilience of the programme: Once the incentives were obtained, the motivation for change disappeared. Such outcome was predicted in the previous research that analysed self-enhancement motivators of environmental behaviour (Brulle, 2010; Plec & Pettenger, 2012).

It was expected, based on the previous analysis, that utilities resist change (e.g.,

Costello & Hemphill, 2014; Tayal, 2016), whereas science and technology support it (e.g., Felder & Athawale, 2014). This was validated in this empirical study. The motivation of the LADWP was portrayed as a response to compliance requirements. However, in some instances, the utility media expressed motivation for the change, such as in the case of increasing power reliance:

> *Along with helping spur the clean energy economy in Los Angeles and meeting renewable energy goals, the expansion of local solar builds more resiliency and reliability into the power grid. Small solar systems are like "mini power plants" that generate power right where it is being used, saving on transmission costs and taking advantage of the city's abundant sunshine to help meet electrical demand.* [LADWP-15]

The internal organisational motivation for change may be a better driver for sustainability transformation as compared to external forces. Such comparison of the effectiveness of internal motivation versus external forces may be used as a basis for future research designs.

Values may aid the transformation process, but they may also result in stumbling blocks. For example, the LABC's promotion of the rationality of its approach contributed to the silencing sensemaking in the other actors who perceived the LABC's frames as the objective truth. This was evident in the FiT's communication that closely repeated the frames and reasoning provided by the LABC. Instead of sensemaking, the utility communication engaged in sensegiving of the ready meanings. Sensegiving without sensemaking feedback signified the lack of engagement with the stakeholders. This lack hindered change because "[s]trategic change is a negotiation process" (Gioia & Chittipeddi, 1991, p. 446), thus it requires the stakeholders to be engaged in negotiation.

## 6.5 Meaning Construction in an Organisational Field

The organisational field discussed here is in many ways similar to the field of climate policy discussed by Schussler et al. (2014). The field of climate policy mobilises governments, research institutions, non-governmental organisations, the private sector, and international organisations; it requires that "millions of organizations and individuals change their production and consumption patterns" (Schussler et al., 2014, p. 142). In the example of the FiT programme, governments, research institutions, and non-governmental organisations were involved in discussions that were reflected in the media. The sustainability action field can also be characterised as a strategic action field (Fligstein & McAdam, 2011). The strategic action field consists of organisations and institutions that are interested in a "collective strategic action" (Fligstein & McAdam, 2011, p. 4). In the FiT case, the LABC, the LADWP, and the local government were interested in the collective implementation of the FiT together with the businesses. The sensemaking within the strategic action field leads to a socio-economic change (Cornelissen & Werner, 2014). Such change was considered fundamental in the transformation towards sustainability (World Commission on Environment and Development, 1987) and was part of the vision of "a new Los Angeles" [LABC-5].

In the context of the social movement theory, framing is a dynamic process of meaning construction and a central dynamic of understanding of social movements (Benford & Snow, 2000). Social movement actors actively engage in meaning construction through framing; this process happens with the active participation of media, government, and other social institutional actors. It involves challenging of the existing frames and creating new ones in a perpetual and iterative process. This meaning construction also involves sensemaking and sensegiving as sub-processes from the actors' point of view. Solidifying such frames in broad cultural norms leads to the reestablishment or transformation of institutions (Benford & Snow, 2000).

The frames provided by the LABC could be viewed as collective action frames in the definition used by Benford and Snow (2000) because they provided an interpretation of reality and called for action. Providing interpretations is also sensegiving. The LABC provided interpretations of the future market development, local economic development and, to a certain degree, transformation of the power grid. The LADWP expanded these interpretations with the expert opinions of its engineers, particularly focusing on the grid transformation. The action call involved both the utility, the city administration, and the public.

Sensemaking and sensegiving link together strategic and interactional theories of framing. This empirical study explored framing as it occurs across levels. At the initial phase, sensemaking was started by the LABC. In the LABC's research report, the authors evaluated multiple feed-in programmes. A strategic intention was formulated as the intention to provide design principles for the new FiT programme. This intention further materialised in a strategic sensegiving report with recommendations for the LADWP and the programme administrators. This was the beginning of interactional framing. The interactional perspective on framing was proposed by Gray et al. (2015) and the strategic framing perspective was developed by Kaplan (2008). This research used insights from both of these perspectives.

The interactionist approach maintains that meaning is continuously negotiated and built through everyday interactions (Gray et al., 2015). These interactions confirm or challenge existing frames (Gray et al., 2015). The theory of interactionist framing also works within the social constructionism theory of institutions (Gray et al., 2015). Framing explains how existing frames become solidified in institutions, how they are challenged, and how new ones appear (Benford & Snow, 2000; Gray et al., 2015; Maitlis & Christianson, 2014; Ocasio, Loewenstein, & Nigam, 2015). It also shows how these processes occur within an organisational field. The organisational field in this empirical study included the transforming organisation (the LADWP), stakeholder groups (the city residents and businesses), the government and the media, the science representative (the

LABC), and the CLEAN LA Solar as an intermediary. In this empirical study, the existing frames were reinforced and negotiated in the communication representing different businesses and stakeholder groups. In the framing analysis, the relevant values of these groups became apparent. The LADWP's communication and the communication from the LABC also reflected the values of these organisations. This is discussed in 6.6 Roles of Framing Participants.

## 6.6 Roles of Framing Participants

As representatives of different public institutions, frame creators took different roles in framing. Their framing behaviour was also underpinned by different values. This finding is consistent with the previous theories, suggesting that different institutions are characterised by different predominant values (Rokeach, 1979a). The LABC did not discuss frames without treatment recommendations. The LADWP acted as the implementer of the frames. The frames discussed in the LADWP Newsroom were concerned with the organisational processes and compliance with the regulations. The CLEAN LA Solar news focused on a selection of programme's successes. The *Los Angeles Times* highlighted known problems and brought into attention new problems that were omitted in the other sources and had no commonly accepted treatment.

Analysing the sources separately offered an insight into the association between organisations and their strategies of framing and value-framing. The *Los Angeles Times* performed the role of a critic, presenting opinions that were not commonly accepted but had the potential of a powerful influence. This was in line with the observation of de Vries and Petersen (2009) that the news media usually focuses on conflicts. Thus, conflicts were sought by the *Los Angeles Times* and affected the material used by the *Los Angeles Times*, in other words, the newspaper's framing of the programme. The news media of the FiT programme, on the other hand, was charged with the portrayal of the programme's successes. The LABC's framing was affected by the values of business and economic rationality. These values resulted in the framing of the FiT as a market instrument.

Combining the analyses of sources provided an insight into the overarching frames and the transference of frames from one source to another. In the common organisational field, all framing actors worked together. Gray et al. (2015) argued that both powerful interactants and lower level participants can introduce frames and amplify them. In this empirical study, the LABC was playing the role of a powerful interactant backed up by their research experience and the mandate from the LADWP. However, the public media emerged as another important frame creator. The role of the public media in frame amplification was to draw attention to conflicts and extant values. The FiT media sources together with the *Los Angeles Times* performed the roles of frame amplifiers by repeating the LABC's statements, thus reifying them in the minds of readers.

In summary, the findings of this empirical study confirmed that the framing content and strategy are underpinned by the organisation's values. The framing interactions reflected the power gradient in the organisational field. These interactions were to some degree mediated and moderated by values. Overall, contradictions in framing highlighted the need for multi-pronged approaches that include differing opinions of stakeholders. The issues of reframing could also be interpreted as warning signs cautioning against decision-making based on a limited scope or a narrow point of view.

## 6.7 Second-Order Findings' Summary

This chapter highlighted data patterns that validated the previous theorising. It also pointed to several new insights such as factors of success and failure in an organisational field transformation and the importance of ambiguity in fuelling the change process. The next chapter discusses how these findings refine the value-based model of sustainability framing suggested as the result of the conceptual review (see Figure 10).

# CHAPTER 7 - VALUE MODEL

The second-order findings indicated that the sustainability transformation was tracked in the media coverage and the processes underlying such transformation for society were similar to those for a large organisation (Gioia & Chittipeddi, 1991). Comparison with previous research allowed the identification of factors contributing to successes and failures of the transformation.

The focus on values enabled the interpretation the role of values in the organisational field transformation. At the beginning of the strategic initiative, values served as a guide to the discussion. During the programme implementation, they directed sensemaking and sensegiving. At the outcome, they explained agreement or conflict and the effects of the transformation. In this chapter, the second-order findings are overlaid with the initial conceptual model (Figure 10) to propose a value-based model of sustainability framing in a strategically transforming organisational field.

## 7.1 The Contributions of Values

In their research, Ball-Rokeach et al. (1990) proposed an explanation of the change of value-frames in the media. They discussed how ecological, environmental, and belief-system changes affected the associated value-frames in the media. In this research, the approach was reversed; specifically, value-frames in the media were used to seek an interpretation of the changes in the society. This approach is in line with the constructivist paradigm, specifically, it is based on the assumptions that "the experienced reality – is actively constructed … and that the observer plays a major role in any theory" (Riegler, 2012, p. 237) and "knowledge is experience that is acquired through interaction" (Ackermann, 2001, p. 3). In Table 18, the roles that values played in the frames of the FiT discourse are summarised. Table 18 is based on Table 15, which particularises the role of values in reasoning. However, values within a frame are used not only in the reasoning but also in the other frame elements. The usage of values across different frame

elements is demonstrated in Table 18.

*Table 18*

*The Role of Values in the Frames of the FiT*

| Frame | The manifestation of values in sensegiving messages | The role of values |
|---|---|---|
| Regulations | The values of fairness and rationality were manifested in the support of market competition: The LADWP's monopoly was seen as preventing such competition [The LABC].<br><br>The values of compliance were manifested in the assessment of the state of the solar development and in the recommendation of the new regulations [The LABC].<br><br>The value of power was manifested in the conflict over the decision-making power in the FiT and in the reasoning for the deadline enforcement in the FiT projects. The opponents draw on values to justify their behaviour [The *Los Angeles Times*].<br><br>The values of universalism, local benevolence, and self-direction were manifested in the motivation for legislative restrictions on the ground-mounted solar [The LABC, The *Los Angeles Times*]. The values of universalism, local benevolence, equality, and inclusiveness manifested in | Support reasoning.<br><br>Evaluate and critique existing situation.<br><br>Motivate (the redistribution of power).<br><br>Discern and highlight tensions or conflicts.<br><br>Justify behaviour.<br><br>Motivate for change. |

| Frame | The manifestation of values in sensegiving messages | The role of values |
|---|---|---|
| | the reasoning, supporting regulations for the transition to green economy [All sources]. | |
| LADWP's ineffectiveness | The values of transparency, effectiveness, predictability, and simplicity were praised. The opposite of these values was used to criticise LADWP's processes and culture [The LABC, the *Los Angeles Times*]. | Praise and condemn.<br>Discern and highlight contradictions. |
| | The value of responsibility was used to praise the LADWP's supportive stance towards the community [The LABC]. The simultaneous praise and condemnation of the LADWP services by the LABC and the *Los Angeles Times* highlighted the contradiction that could be attributed to the difference in the customers. | Values were used to support the reasoning of long-term harm caused by the ineffectiveness of the LADWP. |
| | Self-direction, benevolence, and trustworthiness values used to describe the expectations of the LADWP's service [The *Los Angeles Times*]. | Explain expectations. |
| Local development | Economic values were manifested in reasoning for long-term financial security and risk minimisation [All sources]. | Encourage long-term thinking.<br>Define priorities. |
| | Economic reasoning prevailed over the social and environmental reasoning | Motivate development. |

| Frame | The manifestation of values in sensegiving messages | The role of values |
|---|---|---|
| | [The LABC].<br><br>Values motivated continued development: The diversification of energy sources and the expansion of the FiT. Values were used as a bridge between the economic development and wellbeing: The culture of the local tribes was suggested to benefit from the solar development; values of universalism, local benevolence, and achievement underpinned the reasoning for the development in the economically disadvantaged areas with high solar potential [All sources]. | Gain support.<br><br>Bridge between goals and create common frames. |
| Social participation | Values engaged the emotional context by highlighting leadership and achievement, this was done to create leadership identity and modify behaviour. Simplicity and transparency were expected to encourage continued participation and gain more support [All sources].<br><br>Local benevolence values were manifested in financial incentives; the incentives targeted a particular behaviour. The value of security manifested in the reasoning to reduce financial risk for business application. The values of economic rationality manifested in the reasoning that financial gains determine participation. The values of inclusiveness underpinned the | Modify behaviour.<br><br>Encourage.<br><br>Gain support.<br><br>Elicit a particular behaviour (modify behaviour).<br><br>Support reasoning. |

| Frame | The manifestation of values in sensegiving messages | The role of values |
|---|---|---|
| | reasoning for the FiT installations in lower-income areas [The LABC]. | Support action (the FiT installations). |
| Costing of the FiT | Economic rationality and local benevolence were used in reasoning for determining the FiT cost. These values were in conflict in this context because higher incentives meant higher affordability but also a higher cost for the taxpayers. This cost was also distributed disproportionately to the potential benefits of different groups of the population. The *Los Angeles Times* discussed both sides of the conflict while the LABC and the FiT media focused only on the economic benefits of the programme. | Support reasoning.<br>Discern and highlight contradictions. |
| Environment and location | This frame was characterised by conflicting values of the local environment (aesthetics and nature) versus the global environment (universalism). Values increased the salience of the alternative frame of the local environmental values. This conflict was highlighted by the *Los Angeles Times*<br>The economic rationality values were used in reasoning for restrictions of ground-mounted solar [The LABC and the FiT media]. | Highlight conflicts.<br>Increase salience.<br>Condemn. |

| Frame | The manifestation of values in sensegiving messages | The role of values |
| --- | --- | --- |
| | Values were used to condemn short-term financial gains [The *Los Angeles Times*]. | |

## 7.2 Value Conflicts and Contradictions in Framing

Highlighting contradictions in reasoning is based on analytical thinking that elicits and compares values involved in a particular frame. One example of value contradictions within a frame was the case of an argument over the decision-making power between the LADWP and the city council. Initially, the final decision about FiT projects' approval was the right and the responsibility of the city council. Council member Fuentes proposed removing this constraint on the LADWP's decision freedom. The proposal was the response to the motivation from the LABC and the public to increase the efficiency of the utility and the reasoning that the LADWP cannot be held responsible for the decisions it cannot make. This reasoning was based on the value of empowerment and the underlying belief that actors are motivated by the values of self-direction; thus, independent decision-making was deemed beneficial. However, almost immediately the city council withdrew its proposal when the LADWP needed to extend the deadlines for the FiT participants facing unforeseen delays. The LADWP's officials were quoted in the *Los Angeles Times* arguing that such delays were often out of the businesses' control. The newspaper also interpreted council member's veto as the desire to retain power. Fuentes, on the other hand, promoted it as a matter of responsibility: "'I would not be doing my job if I allowed a flawed agreement to move forward,' Fuentes said" [LAT-8]. However, there was a contradiction in the council member's words that also suggested the desire to retain control: "'If DWP were to allow these companies to miss deadlines without penalty, it would set a costly precedent,' signalling that its contracts 'have no teeth,' Fuentes said" [LAT-8].

Further debate over the issue continued over the problem of control versus freedom to make own decisions:

> *The council should give up that power "if you really want to make the board and department much freer of interference by elected officials," UC San Diego professor of political science Steve Erie*

*said. "But the City Council is loath to do that."* [LAT-8]

Thus the values of responsibility, power, and self-direction framed this conflict and resulted in a significant delay of the programme overall. The conflict was portrayed in the *Los Angeles Times*.

## 7.3 Combined Effects of Values and Emotions in Framing

Frames scale up through amplification and conflicts (Gray et al., 2015). Frame amplification is based on scope, repetition, and emotional intensification (Gray et al., 2015). All of these mechanisms were evident in the media analysed.

The process of scope amplification refers to broadening the audience of the frame. This was done through publication of reports, press releases, and various workshops with the stakeholders. Frame intensification through repetition happens through multiple repetitions of the same interpretation until it becomes accepted as truth. This was demonstrated by the depiction of the FiT suggested by the LABC (see 5.2 The FiT as a Part of Sustainable Development). Another example was the depiction of the FiT as the national leadership. These framing structures were repeated multiple times through the media sources. They were also intensified by quoting powerful individuals such as the mayor, the LABC's president, and the General Manager of the LADWP.

The values of leadership and achievement were emotionally intensified through celebrations and invoking the feelings of pride in the celebratory messages. The LABC specifically drew attention to the importance of this strategy by recommending the project success to be celebrated and publicised: "Create promotional events to act as incentive for property owners/ - 'Switch-flipping' events/ - Press releases" [LABC-4]. This strategy was the ritualisation of celebrations. Ritualisation is a way of legitimising frames. In this case, the frames that needed legitimation were those that referred to the FiT as the treatment of the many social and environmental problems. These problems coerced the businesses,

the governments, and the residents into identity change. Rituals instil a feeling of identity (Gray et al., 2015). The new rituals of the FiT celebrations were creating a new sense of belonging, thus facilitating the transformation of the identities.

In their research on meaning construction, Cornelissen et al. (2014) discussed the combined effect of communication and emotions on meaning construction. A frame that instils positive emotions causes the participants to replicate the frame with more frequency, thus the frame participants become frame promoters. Cornelissen et al. (2014) defined emotional contagion in the negative context as "…the continuous reinforcement and spreading of negative emotions through communication and social interaction that overrules reflective thought" (p. 711). In this research, a similar process was used in the value-based messaging. The usage of the emotional contagion was based on the positive feedback, in other words, positive emotions were purposefully reinforced and spread in connection with the achievements of the FiT. These achievements were linked in communication to the values of leadership. The emotions were amplified by statements like "leading the nation" [LADWP-20], "a model for the nation" [LABC-4], "drawing strong interest" [LABC-4], and "ambitious goals" [CLEANLAS-9]. These statements were used to strengthen the leadership identity. The leadership identity was already associated with the people of Los Angeles in the media. This emotional amplification strategy was in agreement with the previous findings that frame amplification builds on the accepted ideologies (Benford & Snow, 2000).

Additional mechanisms of frame amplification are related to values. For example, economic values helped frames to transcend through the sources and to be adopted by the variety of organisational actors. Values were used to highlight the conflicts and increase salience. The previously reviewed processes of emotional intensification were built on the values of achievement, which appeared to be relevant in the context of Los Angeles.

Values were also used to pinpoint conflicts in the frames proposed by the LABC. For example, the global environmental protection goal clashed with the value of the local natural environment. As pointed out by Gray et al. (2015), frame

contestation may stay and get solidified in its conflicted state without approaching an agreement. This happened with the environmental sustainability goals; this duality was confirmed by environmental organisations who had to choose between GHG reductions and the preservation of the desert life.

## 7.4 The Significance of Value Classifications

The previous research attempted to associate specific values with sustainable living. Self-transcendence values were associated with pro-environmental and pro-social behaviour (e.g., Bolderdijk et al., 2013; Steg et al., 2014), which corresponds to two out of three dimensions of sustainability. Schwartz and Bilsky (1987) also proposed that societies universally prioritise values that guarantee survival and prosperity. In this research, no particular value was found to be directly associated with sustainability; instead, sustainability framing included diverse sets of values and actions associated with them. This is discussed in the following subsections.

### 7.4.1 Self-transcendence

In the analysed texts, the values of social benevolence were often involved. Other frequently involved values were universalism, conformity, security, the values of economic rationality, achievement, and self-direction. It was not the goal of this empirical study to count the actual occurrences of value-involvement because such counting does not necessarily equate with importance. Instead, indicators of importance were found in texts. For example, the LABC based most of its reasoning on the assumption that financial benefits were the main condition for the FiT uptake. Anger and disappointment of the residents in relation to obstacles in leadership goals, pointed to the importance of leadership values. Power conflicts between the LADWP and the City Council emphasised the value of power.

Universalism values as the goals of benefitting the global society and preserving nature were rarely mentioned explicitly. Only one article discussed the welfare of

animals. The benefit for the global society was also mentioned only once: “We can do something good for the world, good for the economy, and good for our business” [CLEANLAS-1].

Thus, the values used in motivating and validating the FiT programme were not aligned with self-transcendence. A significant emphasis existed on self-enhancement values, such as values of achievement and leadership. It could be interpreted as the frame creators, consciously or unconsciously, framed their messages in line with the dominant values of the audience. This is in line with previous research (Benford & Snow, 2000; Bolderdijk et al., 2013; Steg et al., 2014). Thus, new frames are based on the old value systems.

As was mentioned, this study started with the proposition that values play an important role in the understanding of sustainability and, particularly, of its contextual definitions. The proposition was confirmed in this empirical study. Framing participants developed sustainability meaning based on their value system. The fact that these values were not part of the self-transcendence group indicated that the meaning of sustainability is moderated by the value system of the contextual actors; this meaning is not universally associated with a particular value system. This has an important implication for sustainability communication. Communicating a particular prioritised value set does not, on its own, define the meaning of sustainability. Only values combined with action proposals define sustainability meaning sufficiently. Such communicative definition of sustainability as actions combined with values was labelled value-framing of sustainability. The value-framing of sustainability can be convergent and divergent. When action calls converge despite different values emphasised by different actors, this process was labelled value-framing convergence. Value-framing divergence is the opposite process that happens when the values of framing participants converge but their actions diverge. This is discussed in more detail in 7.5.2 Value-framing construct: Divergence and convergence.

### 7.4.2 Social, environmental, and economic value lenses

Economic, environmental, and social objectives of sustainable development, also

known as pillars, are expressions of values (Kates et al., 2005). These pillars, however, do not cover all the values that underpin sustainable development (Kates et al., 2005). Rather, the pillars provide value categories that people can fill with meaning. Different social groups define social, economic, and environmental sustainability requirements based on their value systems. These value systems prescribe the balance of the needs, wants, and responsibilities. Even within the boundaries defined by the pillars, the interpretations depend on a value perspective. For example, society can be valued as an achievement of human civilisation, but also as a means to maintain a healthy and safe life, or a strategy for group survival. These interpretations are based on different dominant values. Within the environmental pillar, nature can be evaluated as something of intrinsic value or transformative value for human experiences or as a utility for human beings (e.g., Afeissa, 2008; Norton & Toman, 1997). At the same time, economic value can also be classified as value of work, value of exchange, value of use, intrinsic value, and so on (e.g., Harrison & Wicks, 2012). Depending on the priority of economic, environmental, and social values, interpretations of problems and solutions are different.

Social, environmental, and economic pillars of sustainability were analysed in this empirical study as social, economic, and environmental value lenses. It was confirmed that social, economic, environmental value lenses need to be decomposed to allow understanding and construction of meaning. The goals of environmental protection represented a collision of two different value-frames. The one promoted emission reduction as the way to protect the environment for future generations, although such emission reduction may come at a price for particular groups or species. The other view concentrated on the irreplaceable value of a particular species and extended the importance of this species to a larger issue of the balance, environmental beauty, and ecological safety. Despite both value-frames concentrated on the value of the environment, the distinction between them was in more granular values. In another example, in the frame of environment and location, one of the motivations was preserving the aesthetic value of the neighbourhoods. Another motivation was preservation of the cultural and historical heritage. It was possible to classify such values as “social”,

however, such classification appeared vague and reductionist because these values were different from the objective social values that focus on the availability of employment and the right to vote.

## 7.5 The Role of Values in the Framing of Sustainability

The meta-theorising part of this research elicited the following aspects of value influence (see Table 5):

- Framing is affected by the values of frame creators and the audience.
- Values are reified in the institutions.

Values as a tool in strategic framing are used to:

- gain support,
- modify behaviour,
- create common frames (Table 5).

Values in framing as the result of a transformation (Table 5):

- The priority of values is modified.
- Sensegiving emphasises new value priorities.
- Social value systems are transformed.
- New behaviours and cultural and institutional practices affect the values of individuals.

Values as inputs to framing provide a lens through which framing participants see the world. This lens situated cognitive frames of sustainability in a particular value-system. In this empirical study, the framing participants represented different institutions. For example, the LADWP's media had an emphasis on the

value of compliance. The expectation of compliance from the LADWP was also perpetuated by the other actors, such as other news media. For example, the LADWP was usually discussed in terms of what it should do and how it should comply with the regulations and requirements. This was discussed in more detail in 6.6 Roles of Framing Participants.

All predicted roles of values in strategic change framing were confirmed and clarified (see Table 18). A better classification of the value roles as a strategic tool has also emerged:

- Values are used to reason, such as to evaluate, critique, justify, praise, condemn, support an action, explain, prioritise.
- Values are used to influence, such as, to modify behaviour, engage, motivate, encourage, gain support, and increase salience.
- Values are used to merge frames.
- Values are used to discern and highlight conflicts.

The role of values in reasoning was elaborated in Table 15. This research found additional roles of values in framing. Values engage emotional content, this is discussed in 7.3 Combined Effects of Values and Emotions in Framing. Values allow discerning and highlighting contradictions (see 7.2 Value Conflicts and Contradictions in Framing). Goffman (1974) defined the role of framing as finding similarities in the strips of reality. Values in framing are one of the mechanisms through which such similarity can be identified. Finding such similarities and also dissimilarities is part of meaning construction. Values provide linkages and transitions between frames and sources. These linkages allow the dialogue to proceed in a peaceful manner. Values in meaning construction act as a frame-binder and a trigger for new frame emergence. For example, frames of the LADWP's ineffectiveness and the social participation frame were bound by the values of transparency and inclusiveness. An increase in transparency and inclusiveness was thought to be a prerequisite for an increase in social participation. The frame of social participation emerged as the actualisation of the

value of local benevolence in the local development frame.

Values defined which organisational actors were viewed as *victims*, *heroes*, or *villains* (as discussed in 5.10.1 Frame element of actors' roles). For example, frame-promoters talked about empowering disadvantaged communities. Such empowerment could be interpreted as self-direction that was wished for others. The value of self-direction was applied to self by businesses who needed contracts.

Values in framing as the result of a transformation could not be analysed in this empirical study as the transformation was incomplete. This is explained in 6.4.2 Strategic change phasing. However, it was defined that the framing itself could have three outcomes: change, conflict, or resistance to change. Such outcomes are the result of the attitude to change (see 6.4.1 Attitude to change), strategies utilised (see 6.4.3 Factors of success and failure), and conflicts experienced (see 7.2 Value Conflicts and Contradictions in Framing).

The role of values in framing processes of sustainability sensemaking was interpreted as the result of the review of the previous research (see Table 5). The goal of the empirical part of the research was to establish the validity of the proposed role of values in the frame and to explore the deviations. The role of values in the inputs of strategic framing was entrenched in the existing cultural and institutional systems. The role of values in strategic framing was confirmed and enriched. The role of values in framing as a result of the strategic transformation remained outside the scope of this study, thus confirming that value change is a slow process. In the intermediate transformation stage reached in this study, the values contributed to the results of change, conflict, or resistance to change in the identified frames.

### 7.5.1 The empirically derived value-based model of sustainability framing

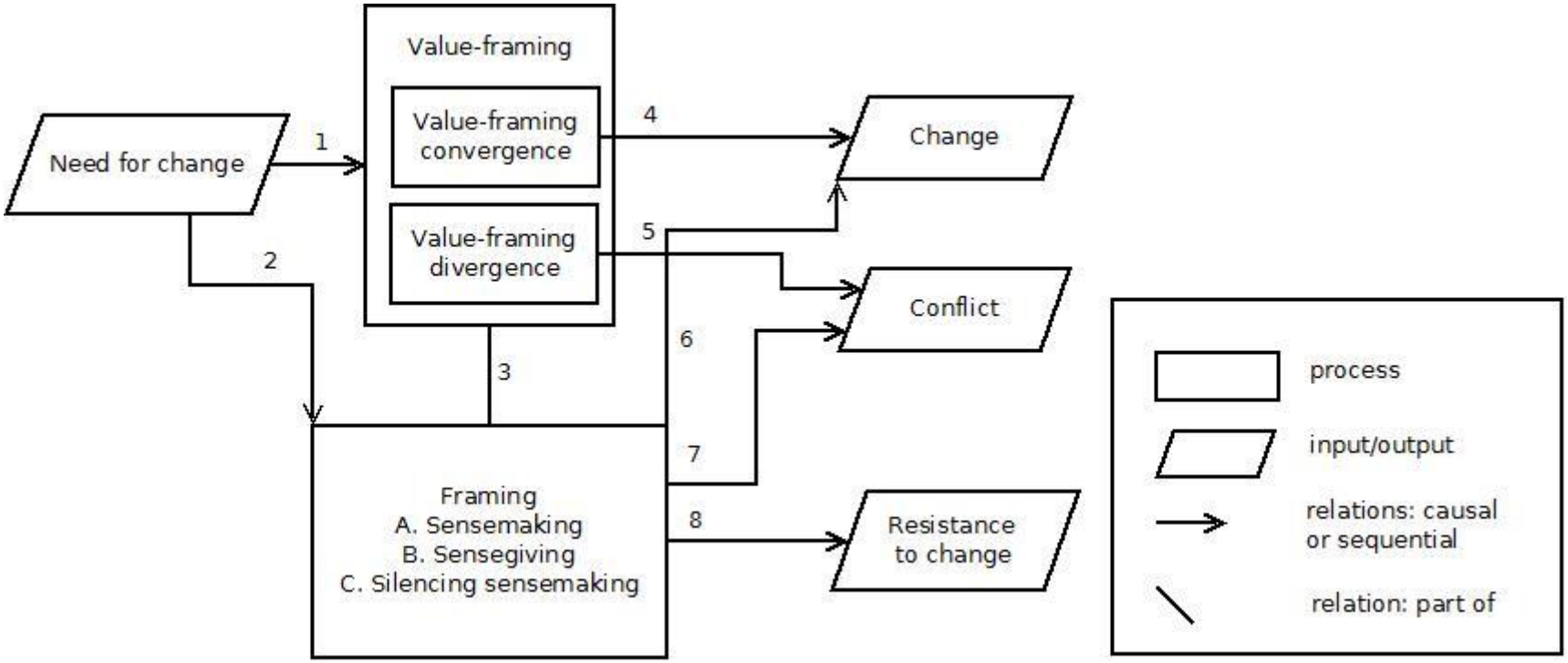



*Figure 12. Value-based model of sustainability framing*

The updated model of the value-based framing of sustainability (Figure 12) builds on the model from the conceptual review (Figure 10) but includes only the constructs confirmed in the empirical study. The new model is described below with the relations numbering reflected in square brackets. On the input side, the need for change remained as in the previous model. In this empirical study, this need for change was based on the sustainability requirements, new regulations, and identity transformation. This is detailed in the first paragraph of 6.4. The Utility and City Transformation. The outputs in the empirical study signified an intermediate stage of the sustainability transformation. At this stage, it was not clear to what degree the programme affected the existing value systems and institutions. It was obvious, though, that it started the meaning construction, enacted some changes, and resulted in some conflicts and resistance to change. It should be clarified that separation of sensemaking and sensegiving in meaning construction is analytical rather than empirical and is used for consistency of terms. The separation of terms is offered to clarify the meaning of silencing sensemaking. According to the mechanisms identified in 5.10.6 Patterns of silencing sensemaking, silencing sensemaking does not mean silencing of sensegiving, that is, the term silencing meaning construction would be inappropriate. The mechanisms leading from the inputs to the outputs were framing [2, 6, 7, 8] and value-framing [1, 4, 5]. Practically, these mechanisms were not separate from each other [3]. The differentiation is only useful as an analytical model, which draws attention to different aspects of framing.

In the previous literature, the iterative nature of framing as meaning construction was noted (e.g., Gray et al., 2015). This iterative nature was not apparent in the study and thus it was not included in the model in Figure 12. This does not mean that meaning construction was not iterative in the minds of individuals involved in the processes or in the collective mindset of the residents of Los Angeles. On the contrary, the previous discussion of the antecedents of the FiT in 4.1.1 The Feed-in Tariff programme in Los Angeles confirms that the FiT was not the first attempt at a solar programme in Los Angeles, nor the first regulatory intervention targeting the higher penetration of renewable energy. These previous actions could

be seen as the previous iterations of the targeted meaning construction on the level of a society. The extension of this study in time and across several LADWP's programmes would have allowed that to be captured. It is reasonable to theorise that similar meaning construction iterations happened on the level of individuals and groups, however, the design of this study did not allow the capture of these more granular interactions. This remains one of the limitations of the current study and can be extended in the future with ethnographic or netnographic approaches.

In the model in Figure 12, the transformation from the inputs to the outputs signified an intermediate stage of the sustainability transformation. The need for change, as a sustainability requirement, was acknowledged by some members of society. Some of these members adopted the role of frame creators, others remained the audience. Framing processes happened as a bidirectional exchange between the frame creators and the audience. Both frame creators and the audience engaged in sensemaking and sensegiving at different stages of the strategic transformation. Sensemaking and sensegiving were discussed in 6.5 Meaning Construction in an Organisational Field. In addition to sensemaking and sensegiving, framing also included silencing sensemaking (see 5.10.6 Patterns of silencing sensemaking). In some cases, this silencing stalled the transformation, for example, when the lack of transparency was denied by the LADWP. In other cases, silencing resulted in the acceptance of the transformation actions without further meaning construction. Such silencing was apparent in the acceptance of the FiT design by the LADWP despite the concerns of the residents. Overall, the framing led to change [6], conflict [7], and resistance to change [8].

The conflicts resulted from differences in values attributed to proposed change. For example, people who wanted to contribute to solar development found out that their contribution benefited trade groups. The expectations of the contribution to the community were not fulfilled, and the people felt disappointed and were discouraged from continuing to change their behaviour. The conflicts also resulted from the different interpretations of the values of the natural environment, the tensions between local and global objectives, and the different interpretations of the rights and responsibilities in decision-making.

The change happened when value expectations were fulfilled. For example, business investments resulted in secure returns accompanied by positive press coverage. In this case, the businesses expected economic value benefits and they received them. Therefore, the businesses were content to continue their participation in the programme. The change persisted.

The resistance to change happened when existing values and beliefs were too strong to respond to the necessity of change. The resistance to change was apparent in the lack of transformation at the LADWP, particularly in the complaints about its level of service. It was also apparent in the delays of the programme implementation and in the prioritisation of the short-term financial gains.

The positive change results and the conflicts could be practically explained by the sub-processes of value-framing: value-framing divergence [2] and value-framing convergence [3]. Value-framing convergence was defined as the framing process that results in common action, that is, a change [5] despite the difference of the values of the framing participants. Value-framing divergence was defined as the framing process that results in a conflict [4] despite the similarity of the values of the framing participants. These constructs are discussed in the next section (7.5.2 Value-framing construct: Divergence and convergence).

### 7.5.2 Value-framing construct: Divergence and convergence

Value-framing is an analytical mechanism that can be useful in studying sustainability transformation. This mechanism is presented in Figure 13. In a logical flow, common values in the framing result in the common action [1], and different values result in different actions [2]. Two other sub-processes were observed in this study: convergence and divergence of value-framing. Convergence of value-framing occurs when parties supporting different values arrive at the same treatment options [3]; these treatments are further promoted through value-framing.

In the researched case, the LABC argued for putting solar panels on the roofs

within Los Angeles using values of economic efficiency. The residents of the city arrived at the same treatment option, however, their main motivation was based on the aesthetic value of open space. Divergence of value-framing occurs when seemingly the same value priorities justify conflicting actions [4]. In the researched case, environmental values were used to promote support for all solar installations. However, the same environmental values were used to condemn solar installations on the ground where such installations were threatening the natural habitat. The important implication of the convergence and divergence of value-framing is in the role of sensemaking of the framing actors in understanding the proposed actions and the transformation. The methodology applied in this empirical study also indicated that analysing frames using the frame element of actors' roles was useful in understanding the underlying convergence and divergence of value-framing. The attribution of the roles of *victims*, *villains*, and *heroes* appeared to be the factor that affected the priority of divergence and convergence over the logical flow [5, 6]. Another methodological implication is that in the case of frame divergence, implying values from actions is unreliable. This is also in line with the previous research. For example, Hoffman (2011) observed that despite the similarity of values in frames of expert opinions, such opinions are likely to be rejected if the values of the experts are rejected. Thus, using value-framing as one construct is more beneficial for explaining actions and behaviour.

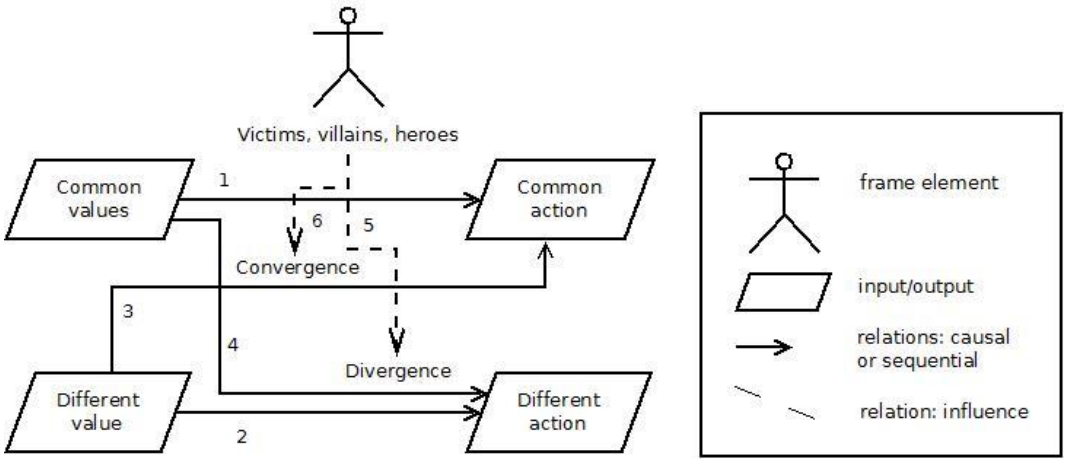



*Figure 13. Value-framing convergence and divergence*

Value-framing affects outputs by mediating conflict, change, or resistance to change. Kaplan (2008) reasoned that diverging or contested frames delay decisions. In this empirical study, this reasoning was confirmed. Delays affected project implementation due to the conflict between the city council and solar installers. The LABC tried to speed up the process through active sensegiving but this was not always successful as powerful actors like the city council resisted change and strove to retain control.

### 7.5.3 Summary of theoretical contribution

Finally, it is important to explain how the model presented here is the basis for a value-based theory of sustainability framing. A theory is characterised by its range and the hierarchical structure of generalisation (Weick, 1989). The contribution of this research towards the development of a value-based theory of sustainability framing is characterised by:

1. Range. The range covered by this theory is a strategic change of an organisational field initiated by requirements of sustainable living.

2. Generalisations structure. This structure is presented in Figure 12. The structure includes mechanisms of framing and value-framing. The hierarchical structure accounts for framing processes and the role of values within them.

Additional contributions towards a value-based theory of sustainability framing include:

- The clarification of the value-framing construct.

- The definition of value-framing divergence and convergence processes.

- The identification and description of sensemaking silencing.

- The clarification of the roles of framing participants as well as the role of values in defining their roles.

Ritzer (2001) argued that a theory should make sense and be useful in understanding, explaining, and making predictions. The value-based theory of sustainability framing developed here makes sense as it focuses on a problematic contemporary phenomenon. The applicability and usefulness of the proposed model, mechanisms, processes, and descriptions are discussed in the next section (see 8.3 Implications for the Public).

## 7.6 Value-Model Chapter Summary

This chapter refined the value-based model of sustainability framing based on the outcomes of the empirical study. This model accounts for a sustainability transformation of an organisational field up to an intermediate stage when some changes are reified but some conflicts and resistance to change become apparent. The model proposes two mechanisms of sustainability transformation: framing and value-framing.

Framing happens through interactive and bidirectional processes of sensemaking, sensegiving, and silencing sensemaking. These processes are based on values and utilise values to reason, influence others, discern conflicts, and merge frames.

Value-framing is a particular lens on framing. The findings of the empirical study suggested that neither framing analysis nor value analysis alone can provide a sufficient explanation of the course of change because of value-framing convergence and divergence. Value-framing is not just as a rhetoric device but is also a technique for disentangling the communicative value-laden interactions with the goal of understanding how these interactions lead to action and construct the social reality.

# CHAPTER 8 - CONCLUSIONS

This thesis addressed the questions of the framing of sustainability and the role of values in such framing. The main purpose of this thesis was to contribute towards the development of the value-based theory of sustainability framing. This theory is an interpretive and descriptive theory underpinned by the social constructivism paradigm, which is based on the assumption that social reality is co-constructed by social actors and their knowledge is generated in their interactions (Ackermann, 2001; Riegler, 2012). In this thesis, the other assumption is that these interactions can be historically tracked in written communication using framing analysis. Framing allows the simplification of complex problems, such as sustainability. Through this simplification, framing makes contextual meanings of sustainability accessible to various institutional actors. Framing as sensegiving creates these accessible frames in communication. Framing as sensemaking contributes towards the creation of cognitive frames of sustainability. Both processes contribute towards frame diffusion and reification within an institutional field. Frames become cultural norms that are solidified in the new or existing institutions. At the same time, the existing institutions restrict the creation of new frames and delay the change required for sustainability.

Values contribute to framing across processes and levels. In framing processes, values contribute towards inputs, sensemaking/sensegiving or silencing sensemaking, and outputs. In sensemaking and sensegiving, values assist with reasoning, highlighting conflict, influencing others, and creating common frames. Silencing sensemaking can be attributed to a variety of values in frame motivations. It can also be attributed to conformance as the willingness to accept ready meanings. Values affect inputs to the framing processes by defining what is acceptable and what can be supported. Values affect the outputs of framing by evaluating the proposed actions and assisting with choices. Across levels, values provide a common ground for framing and meaning construction engaging media, business, science, professionals, and the public.

The first version of the value-based model of sustainability framing was developed based on the review of previous research. A part of this model concerned with framing was confirmed and improved based on an empirical case study forming the second version of the model. Both versions validated the importance of the contextual grounding in analysing the framing of sustainability. In particular, the findings of the empirical study demonstrated the importance of the structured approach to framing analysis in understanding the issues discussed. The findings also clarified why neither framing analysis nor value analysis in isolation is sufficient to explain topic emergence and development in a text and their links to actions. Together, the framing and value analyses highlighted agreements and contradictions, pinpointed their sources and possible solutions, and explained changes and conflicts in the society and also the lack of actual transformation. The cross-framing analysis allowed factors of influence in meaning construction to be discerned.

This chapter proceeds with a discussion of the implications of this study for academic scholarship, governance, and the general public. Further, the limitations of this research are reviewed. The chapter concludes with the recommendations for future research.

## 8.1 Implications for Academic Scholarship

This research addresses the lack of a comprehensive theoretical perspective on the role of values in the interactive framing processes of sustainability meaning construction as part of sustainable development. This is done by creating a value-based model for analysis of sustainability framing processes in a transforming organisational field. The novelty of this model is in extending the framing theory by analysing the role of values in frame creation and negotiation, and in framing outcomes. This value lens on framing allows an analysis of reasoning, influence on other actors, conflicts, and the emergence of common frames. It is useful for cross-level framing research and tracing the transference of frames across sources. This new model enables researchers of sustainability transformation to find continuity and integrate their findings with the research across different

theoretical perspectives on an organisational field.

### 8.1.1 The addressed knowledge gaps

Additionally, this study addressed the following gaps in knowledge:

1. The concept of value-frames and value-framing was inconsistently defined in the literature and its usefulness was questioned. In this research, the usefulness of the value-framing construct in analysing sustainability transformation was confirmed. Additionally, value-framing divergence and convergence processes were distinguished. Value-framing convergence occurs when different values result in support of the same action. Value-framing divergence occurs when the same values result in support of conflicting actions. The frame element of actors' roles was found useful to discern these two processes.

2. Multiple studies assessed framing in political communication. However, in an analysis of a transformation in an organisational field, the framing construct was seldom used. This novel range of application provided valuable insights into the role of framing, in particular, sensemaking and sensegiving in a strategic change within the context of an organisational field.

3. Most of the previous framing research analysed one type of media source (i.e. only newspapers, only websites, only blogs, or only comments). However, meaning construction happens across many sources. This research integrated framing analysis across various reports, newspaper articles, and online news. This integration offered a more inclusive and representative view on meaning construction through framing.

4. The lack of framing research across micro-, meso-, and macro-framing levels was highlighted in the literature (Cornelissen & Werner, 2014). As a documented evidence of meaning construction, frames in the different media sources collect the evidence of framing across these levels. The results of this research indicated that the role of values transcended

individual frames and frame sources. Values acted as the binding medium among different media sources. A lack of a particular value focus in one frame served as an opportunity for the creation of new frames. Different interpretations of values by different frame promoters provided triggers for sensemaking.

5. A suitable methodology for value and framing analysis across different media sources was not available at the time of this research. Such methodology was developed with the goal of meaningful comparison of frames across sources. The frame element of actors' roles was added to the frame analysis structure; this element proved its usefulness in discerning value-framing convergence and divergence. The cross-frame analysis was added to interpret the overall effect of the repetitive framing devices on the meaning construction of sustainability. This analysis included emotional analysis and quotation analysis. This methodological approach can be used in the future interpretive studies of text.

The recommendations for future research are discussed in 8.5 Recommendations for Future Research.

### 8.1.2 Applicability of this research

The transferability of the findings of this research is dependent on the context, in which the intention is to apply such findings (Noble & Smith, 2015). For example, one of the findings in this research was that economic rationality dominated framing reasoning in scientific reports. This result is contingent on the focus of the research institution providing the analysis. In this research, the focus of the LABC was on business and policy matters. For comparison, the perspective and the dominant reasoning is likely to be different for a research entity with a technical focus. However, the insights that are transferable, in this case, are that the dominant values of an institution define frames that it creates.

This study was contained within one geographical location; thus, it could be considered an isolated case. However, this case signifies and represents a

phenomenon that is increasingly more common in the contemporary world. The recent increase in the cases of organisational field transformation towards sustainability is largely due to the development of the Internet and the ability to bring science or, more likely, its interpretation in the public media to the growing population of Internet users. Two examples of the potential application of the value-based sustainability framing model are presented next.

Sustainability often manifests itself as both a threat and an opportunity to modern organisations. In the previous research literature, an example of Nikebiz.com was used to analyse its strategic framing as a response to the accusation in socially unsustainable practices (Waller & Conaway, 2011). In Nike's case, strategic framing and sensegiving were a part of the response strategy; sensemaking was the sub-process of the organisational transformation. The organisational transformation was required to satisfy the demands of corporate sustainability imposed by the society. The value-based framing of the company's communication relied on universalism values to redeem the trust of its customers. The value-based model developed in this research could be applied to analyse the value-framing in the case of Nikebiz.com. In particular, the processes of value-framing divergence and convergence and the roles of *victims*, *villains*, and *heroes* could provide valuable insights into the outcomes and the success of Nike's communication strategy in transforming the organisational field.

Another example of global sustainability concern is genetically modified (GM) crops and foods. The GM food caused concerns about testing and regulations and a fear of the spread of the modified genes into nature. One of the most publicised cases was the case of Monsanto, a company that held several patents on the GM crops. The company's website portrayed the organisation as an environmentally and socially conscious entity: "We are proud to be a sustainable agriculture company" (Monsanto, n.d.-c). The company used socially responsible values in framing its goals to provide educational programmes and funding, advance human rights protection, and help developing countries. In the case of Monsanto, the list of actors in the organisational field involved governments, science, media, and the general public. This list is comparable to the one used in this study. Monsanto's

case, however, was more global and more difficult to isolate for a research study. The model developed in this research could be applied to the case of Monsanto. Monsanto's case was an example of value-framing divergence: The antagonists emphasised the same social and environmental values in their framing. The stages of change could be also identified based on the framing in media sources, including the "Company History" page on Monsanto's website (Monsanto, n.d.-b). Monsanto was also an example of the reified contest frames, that is, the frames supporting and opposing the GM agriculture.

To summarise, the model developed in this research can be applicable in public-orientated sustainability discourses covered in the media. The criteria for the applicability include:

- an organisation whose existence is threatened by climate change and sustainability transformation requirements;
- strategic plans of transformational development within the organisation to address these threats; and
- the involvement of the public and other organisational actors in the organisational transformation.

## 8.2 Implications for Governance

A contextual understanding of sustainability is required for a successful implementation of sustainability programmes and the development of underlying organisational structures and institutional arrangements. This contextual understanding develops with the participation of multiple institutional actors, including science, media, business, and governance. Values are important in all phases on the strategic change implementation. They emphasise the influence of facts, beliefs, and actors; they underpin reasoning giving the basis for critique and (mis)trust; they accelerate and decelerate change through highlighting conflicts and building bridges in understanding. A better understanding of the pathways of value effects in sustainability framing allows the creation of better communication

strategies, a better formulation of policies, and better support of the needs of communities. Administrators of sustainability programmes should utilize the existing public media sources to encourage public participation not only in the programmes but also in the meaning construction in these programmes.

To solve the problems of existing sustainability indicators and assist policymakers, Janoušková and Hák (2013) proposed the development of value-based indicators of sustainable development. Such indicators, they argued, could be particularly important to politicians who require better indicators of wellbeing in sustainability policies (Janoušková & Hák, 2013). The findings of this research indicate that values on their own are not sufficient to define the sustainability of an action or behaviour. Thus, the framework developed in this research is crucial for the development of such indicators to ensure that the indicators are linked to the context and not to abstract values.

The important implication of this research is in revealing the potential of value-framing convergence and divergence for bridging different frames and resolving conflicts. This research demonstrated that an agreement on values offers no guarantee for a successful joint action. However, disagreement on values does not prevent a successful joint action. Value-framing, as a communicative practice, can be used to develop an understanding and reach mutual agreements.

## 8.3 Implications for the Public

This research is an example of an analysis that can be used to critique existing frames of sustainability. Such exposure is important as part of sustainability transformation, which requires that "existing institutions are exposed and restructured to support a new set of beliefs and actions" (Hoffman & Ventresca, 1999, p. 1374). Such analysis can be performed in other contexts by the media or members of the public. It can be used to evaluate framing as sensegiving from government and scientific institutions. This research demonstrated that social, economic, and environmental value lenses on sustainability initiatives do not necessarily provide an accurate picture of the values and motivations of the

proposed actions, and several value-based interpretations are possible within these commonly used value lenses. Value-based framing analysis can be used to distinguish these interpretations, reveal the motivations, and thus diagnose problems of sustainability initiatives.

The findings that can be abstracted from the context can be applied to other sustainability initiatives. As this research did not concentrate on a particular set of values but rather on their role, it is likely that the research is culture-agnostic. This research found that different actors use value-laden rhetoric to encourage participation and support; this finding is applicable to other programmes in different cultural settings. This research demonstrated that power gradients can be traced in media. This finding can be applicable in other public programmes or projects where media discussion is available. This research demonstrated the usefulness of the value-framing analysis for understanding of sustainability and, particularly, the unexpected results of sustainability initiatives. Value-framing analysis helps to explain how unexpected alliances are formed. Thus, value-framing can be applied to other programmes.

This research was based on a case of a feed-in tariff programme. Accordingly, the descriptive findings of this research have specific implications for feed-in tariff programmes. However, it is important that feed-in tariff programmes are considerably different in scope, technology, targeted audience, participants, and geographical location. They do not necessarily contribute to the utility death spiral and do not necessarily require transformation. Many feed-in tariff programs are implemented on a national basis as opposed to the city scope in this empirical study. Some programmes are implemented through rigid regulatory requirements, others impose significant limitations for eligible participants, thus reducing the dialogue in the media. The differences in context should be considered when the descriptive findings of this research are applied to other feed-in tariff programmes. Examples of such applications follow.

In the short-lived Renewable Energy Feed-in Tariff (REFIT) programme in South Africa (International Energy Agency, 2013), the frame of the utility's ineffectiveness could be applied. The administrative load of application

processing and the inability of the government utility to handle the applications efficiently was one of the reasons the programme was stopped in 2011 and replaced with a competitive bidding for bigger projects. Quoting a World Bank sponsored report: “Unclear … was Eskom’s [the public utility in South Africa] intention to fully support the REFIT program by allowing timely finalization of power purchase agreements and interconnection agreements”(Eberhard, Kolker, & Leigland, 2014, p. 7). Thus, the context may be very different in different countries but the nature of conflict frames between the utilities and the public may fit into similar descriptions.

Similarly, the issue of space use (the environment and location frame) was observed in Thailand. The introduction of a feed-in tariff there resulted in attracting big competitors with little effect on utilising the rooftop space (Tongsopit, 2015).

## 8.4 Limitations of this Research

This research is concerned with the development of a conceptual model of the value-based framing of sustainability. The initial model was developed based on the previous research literature. The empirical study validated and clarified a part of this model. Thus, one of the limitations of the empirical study was the limited scope of sustainability transformation that it was able to address. In particular, the value system transformation suggested by the previous authors (e.g., Gifford & Comeau, 2011; Spence et al., 2014) was beyond the scope of the empirical study. The tracking of value system transformation remains an opportunity for a longitudinal study of an organisational field. As a single case study, this research imposed certain contextual limitations on the applicability of the findings of this research. This was discussed in detail in 8.1.2 Applicability of this research.

Several limitations pertain to the selection of sources. One such limitation was the grounding of the analysis in written communication. Though such communication is reflective of framing, it does not capture the intricacies of framing and sensemaking of sustainability that happens in the daily interactions of individuals.

This is another opportunity for a micro-level research of sustainability framing. On the macro-level, sustainability framing within a society is affected by multiple sustainability initiatives. Such influence is an opportunity for research across sustainability initiatives. However, it is important that the main contribution of this research was integration across levels of framing, thus the details of each level remained less explored.

Another source-related limitation was the selection of texts. In this study, influence was chosen over the completeness of coverage. The chosen sources were high-impact, responsible for the coverage of the programme either by the nature of their business (the *Los Angeles Times* and the LADWP) or contractually (the LABC). These sources were unlikely to be missed by any resident who had any interest in the programme. However, these sources were not the platform for topical discussions where the meaning construction was actually happening. Examples of such platforms could be engineering forums, solar associations' discussion boards, the media of political parties and community associations, and less organised discussions on the social media, personal exchanges, feedback from the international stakeholders, and so on. A significant medium for meaning construction is social media. While the review of the related discussion in the social media constituted a significant part of this, it was not included in the analysis due to the methodological inconsistency as was reviewed in 4.2 Selection of Sources. As one of the implications of this research is the potential for automation of the framing analysis using computational linguistics, this automation will open the possibility for combining the analysis of the social media with the analysis of the news and reports in the future research. The choice of sources in this study allowed the capture of only the high-level, most visible results of meaning construction. While sufficient for an exploratory study, this choice is very limited for explanation of all inputs and outputs into the meaning construction of each particular conflict encountered in this study or solutions that were proposed or accepted.

Another related limitation was the participation: Meaning is socially constructed but the ability and willingness of different stakeholders to participate varied

substantially. It could be argued that the design and implementation of the FiT, despite its intention of wide social participation, was a product of the LABC. The ability of the lower-income communities or indigenous tribes to participate in the debate about the options of the programme was limited due to the technical, social, and economic complexities of the programme and the time required to study these complexities as well as the limited influence that these groups of the population could exhibit. Overall, the power and knowledge gradient was left outside the scope of this study as well as the other previously discussed factors of meaning construction, such as religious affiliations, age, education level, and others.

Another limitation was the point of view of the researcher. In studies concerned with cultural values, the point of view of the researcher provides both advantages and disadvantages. The advantage is in the natural distance from the culture under research and the ability to see its striking characteristics from the position of an outsider (Van Gorp, 2010). However, this distance also means a limitation in involvement with the events. The work with historical texts significantly reduced the ability to perceive the immediacy of people's response and understand their emotions. In future research, working with the natives could provide another valuable perspective in understanding the context. To develop a complete view of the phenomenon, this research could be replicated by a local researcher and the results compared.

Another limitation of this research is in the possible deceptions that words involve. Ihlen (2015), for example, argued that the way corporations frame their results in achieving sustainability may be misleading. In some cases, these representations of sustainability do not include ecological sustainability. In others, they misrepresent the facts. The purposeful deception is hard to distinguish from the unintentional lack of understanding. In this research, the possibility of purposeful deception was not analysed. However, as this research was focused on understanding, its findings can be useful for identifying the deception by using the framing elements and analysing their consistency.

## 8.5 Recommendations for Future Research

This research developed the initial value-based model of sustainability framing based on the review and synthesis of previous research (see Figure 10). A part of this model was confirmed with the empirical case study. The remaining part, specifically the processes following the strategic transformation initiative, remained outside of the temporal scope of the study. Thus, an opportunity remains for future designs of longitudinal studies to validate and describe the role of values in framing during and after a strategic sustainability transformation. Several opportunities for the future research exist in amending the scope of this study by focusing on the communication of a distinct social group, such as LADWP's employees, solar engineers, indigenous tribes, or others. Such focus would depend on the particular research question asked. Another scope amendment could be sought in changing the selection of the media used for the analysis. And the combination of these two approaches, previously used in marketing studies (Brodie et al., 2013), could be analysis of online communities using a netnographic approach. In the LADWP's case this approach could be applied to the organisation of people for protecting desert communities.

The value-based model confirmed in the empirical study (see Figure 12) provides opportunities for future research based on it. This future research can focus on quantification of the mechanisms proposed in this model. The following research questions can be raised:

1. How can value contributions in the mechanism of value-framing and processes of sensemaking, sensegiving, and silencing sensemaking be quantified? This question can be answered in an experimental setting by priming the participants on different values and, further, giving them tasks involving the relevant mechanisms and processes.

2. To what degree are the frames repeated between different sources and to what degree are they modified? What is the role of values in defining whether the frame will be adopted as it is or modified? These questions can be answered with a multiple case study design using the methodology

developed in this research and comparing the findings across cases.

3. What are the relations between the values in society and the values in the media, government communication, and science? This research question can be answered with a case study design in a contained social setting where value priorities have been measured at the outset of the study.

4. Are the roles of values in framing different in individualist and collectivist cultures? Tengblad and Ohlsson (2010) described the difference in the enforcement of the decision outcomes in collectivist and individualist organisations. The present study was situated in the context of an individualist culture. In individualist cultures sustainability decisions are well-documented and action guidelines are provided (Tengblad & Ohlsson, 2010). A comparative study in the context of a collectivist culture would allow the investigation of the differences and define the applicability of the proposed model in collectivist cultures.

5. What are the factors determining frame domination? Kaplan (2008) concentrated on the domination of certain frames as a result of managerial cognition. In this empirical study, frame domination was based on the authority of science and the value of rationality. This authority received insignificant contestation. Future research can be designed to explore the relative contribution of social authority versus rationality in explaining frame domination. Such research would require contextual grounding in the prevalent values in the society.

The value-based model of sustainability framing also opened opportunities for future methodological development. The methodological review in this thesis indicated that the recent development of computer-aided linguistic methods allowed an increasing degree of context capture using these methods. Building upon the methodology proposed in this research and the contextual descriptions of framing elements, a range of computer-based linguistic methods may be developed applying frame-element analysis to a large sample of media and social media communication in a comparable context. In the future, the combination of

computer-aided techniques with the advances of machine-learning is expected to make possible the inclusion of a contextual understanding.

## 8.6 Summary of Conclusions

This research addressed the lack of a comprehensive theoretical perspective on the role of values in the framing of sustainability in the context of a transforming organisational field. Such perspective is beneficial for future research on values, framing, and meaning construction of sustainability. The proposed model integrates framing across levels and interprets the role of values on each level and across them. The findings of this research are beneficial for the public and policymakers because they allow a better understanding of sustainability communication and enable a better design of future policies and communication strategies.

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# APPENDIX A. TIMELINE OF EVENTS IN THE FIT PROGRAMME

*Table B. 1*

*Timeline of Events in the FiT Programme*

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 31 December 2016 | Projected end of the Solar Incentive Program. | (LADWP, n.d.-d) | The FiT was viewed as a counterpart to the SIP. The SIP provided incentives for smaller than 30 kW installations not covered by the FiT. With the end of these incentives, the FiT may need to be expanded for smaller installations, alternatively another programme should be designed providing compatible with the FiT incentives (Garcetti & Edwards, 2014) |
| 02 May 2016 | A solar rally at the California Public Utilities Commission (CPUC). | (CPUC, n.d.) | Hundreds of solar workers participated in the rally to protect solar jobs in California. This event demonstrated involvement of the general public in the solar power debate. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 21 October 2015 | A rally in downtown LA. | (Jackson, 2015) | More than a 1000 Californians participated in this event against the utilities' proposal to increase the cost of solar for the residents. |
| 9 November 2015 | Suspension of the "No-incentive" interconnections. | (LADWP, n.d.-e) | The "No-Incentive" solar interconnection programme signified the ineffectiveness of the LADWP. Incentive approvals were so slow that it was more worthwhile for new solar owners to forego the incentive to speed up the interconnection process. With this new development, the LADWP implemented a new streamlined solar meter installation and interconnection process. Though this new process was relevant to SIP installations only, it demonstrated the ability of the LADWP to use web-technology to improve effectiveness. |
| 4 December 2015 | Streamlined SIP enablement. | (LADWP, n.d.-e) | This was one of the steps taken by the LADWP to improve its processes and alleviate the perception of an ineffective public utility. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 17 February 2015 | The fifth allocation of the FiT. | (LADWP, n.d.-b) | The Board of Water and Power Commissioners approved the launch of the fifth and the final allocation of the FiT Programme. |
| February 2014 | *FiT 100 in Los Angeles: An Evaluation of Early Progress* study was published by the LABC. | (DeShazo & Turek, 2014) | The study concluded that the FiT is on-track to deliver its projected goals by 2015. It has also identified areas of improvement. |
| 08 July 2013 | The second allocation of the FiT was opened. | (LADWP Newsroom, 2013) | The LADWP began accepting applications for the second 20 MW FiT allocation. 20 MW allocations were planned every six months at a gradually reducing price. |
| 27 June 2013 | Oxnard Plaza Apartments FiT installation was connected to the grid. | (LADWP Newsroom, 2013) | Oxnard Plaza was part of the first wave of installations, that is, the demonstration 20 MW project, before the official launch of 100 MW programme. Oxnard Plaza was expected to produce 142 000 kWh of electricity annually. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 1 February – 28 June 2013 | Time interval allocated for the first 20 MW tranche of the FiT applications. | ("New solar feed-in-tariff program to open for applications on February 1," 2013) | The LADWP started to accept applications on the 1st of February 2013. The applications were accepted for projects from 30 kW to 3 MW. The applications were prioritised on the FiT Reservation List by lottery and also by the time of application. |
| April 2013 | The remaining 50 MW of the 150 MW FiT programme were approved. | ("Largest-in-the-nation feed-in tariff solar program kicks off. First solar installation to interconnect with city power grid completed on North Hollywood apartment complex," 2013) | The remaining 50 MW were requested as small projects within LADWP service area. These projects were offered for proposals bundled with large utility-scale solar development in Mojave Desert. Thu, though Mojave Desert development was not included in the FiT allocation, it was, however bundled with the program and to some degree caused by it. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 01 February 2013 | FiT applications for the first 20 MW were opened. | ("New solar feed-in-tariff program to open for applications on February 1," 2013) | The LADWP opened the programme to receive first tranche of applications. |
| 11 January 2013 | The 100 MW FiT programme approved. | (LADWP, n.d.-b) | The Board of Water and Power Commissioners approved the 100 MW FiT component of the 150 MW FiT Programme. |
| 27 September 2012 | SB 1332. | (McLeod, 2012) | SB 1332 obliged publicly owned utilities to adopt and implement a standard feed-in tariff by July 1, 2013. |
| 9 January 2012 | The FiT demonstration programme. | (Peterson, 2012) | The new proposal was put forward in expectation for it to contribute to the goals of 33% of power in California coming from renewable sources by 2020 (CPUC, n.d.). The FiT has started with 10 MW demonstration programme. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 30 April 2012 | The 150 MW FiT was approved by the City Council, the city mayor, and the LADWP | (Leslie, 2012) | The City Council unanimously approved the FiT proposal. Mayor Villaraigosa has signed the prospective programme into law; The LADWP adopted the resolution to proceed with the programme. |
| 2010 | *Designing an Effective Feed-In Tariff for Greater Los Angeles* was published. | (DeShazo & Matulka, 2010) | This report presented the analysis done by the LABC defining the requirements for a feed-in tariff programme in Los Angeles, its opportunities, and challenges. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 2007 | The SIP program start. | (LADWP, n.d.-d) | The SIP set the stage for the FiT program. The SIP covered mostly residential installations using net metering as the payback for the energy produced. The SIP was criticised for favouring more affluent residents who could afford to pay for the installation; it was criticised for not being counted towards the state clean energy targets, and it was also criticised for an indiscriminate payback tariff, which could potentially make electricity more expensive for poorer consumers. |
| 2006 | SB 1368 | (SB 1368 Perata. Electricity: Emissions of greenhouse gases, 2006, p. 1) | SB 1368 established a limit on coal import in the state. |

| Date | Event | Source | Implication for the FiT |
|---|---|---|---|
| 2002, 2006, 2011 | The establishment of the Renewable Portfolio Standard (RPS). | (CPUC, n.d.) | The Renewable Portfolio Standard was established under Senate Bill 1078 in 2002, accelerated under Senate Bill 107 in 2006, and expanded under Senate Bill 2 in 2011. The RPS requires 33% of total electricity procurement to come from renewable sources by 2020. |

# APPENDIX B. RESEARCHER'S RELATION TO THE CASE

In qualitative research, researcher's bias is unavoidable. In order to decrease the impacts of such bias and to let the readers form their own opinions, the researcher's relation to the empirical case is described here. The researcher received technical and economic knowledge of feed-in tariff programmes through work experience. In 2014, the researcher participated in the economic impact analysis study for a proposed net metering policy implementation in Namibia. Part of this study was a review of existing policies including net metering and feed-in tariff policies in California. In particular, the researcher's assignment included economic impacts, community and business acceptance, tariff structure, utility revenue losses due to infrastructure upgrades and loss of business. The discussions and workshops with the representatives of government and business in Namibia exposed the diversity of views on sustainability and the needs of sustainable development.

# APPENDIX C. LIST OF SOURCES

*Table D. 1*

*List of Sources in the Framing Analysis*

| Reference | Type | Code |
|---|---|---|
| **LABC** | | |
| DeShazo, J. R., & Matulka, R. (2010). *Designing an effective feed-in tariff for greater Los Angeles*. Los Angeles, CA: UCLA. | Report | LABC-1 |
| DeShazo, J. R., Pastor, M., Auer, M., Carter, V., & Vartanian, N. (2011). *Making a market: Multifamily rooftop solar and social equity in Los Angeles*. Los Angeles, CA: LABC Institute. Retrieved from http://apen4ej.org/wp-content/uploads/2012/09/LABC-Solar-Workforce-Study-2011-.pdf | Report. Executive summary | LABC-2 |
| LABC Institute. (2011). *Empowering LA's solar workforce: New policies that deliver investments and jobs*. Los Angeles, CA. Retrieved from http://apen4ej.org/wp-content/uploads/2012/09/LABC-Solar-Workforce-Study-2011-.pdf | Report | LABC-3 |

| Reference | Type | Code |
|---|---|---|
| DeShazo, J. R., & Turek, A. (2014). *FiT 100 in Los Angeles: An evaluation of early progress*. Los Angeles, CA: LABC. | Report | LABC-4 |
| Pastor, M., Auer, M., Horsford, C., DeShazo, J. R., & Turek, A. (2014). *Sharing solar's promise: Harnessing LA's FIT to create jobs and build social equity*. Los Angeles, CA: LABC. Retrieved from http://labcinstitute.org/files/LABCI_Workforce_Report_Press_Release_4_23_14.pdf | Report | LABC-5 |
| LABC Institute. (2016). *FiT pays. Rooftop solar program delivers dividends for business owners*. Los Angeles, CA. Retrieved from http://www.labusinesscouncil.org/files/FiT_Pays.pdf | Report | LABC-6 |
| **CLEAN LA Solar** | | |
| Borland, K. M. (2013, December 23). Clean LA Solar program grows. *GlobeSt.com*. Retrieved from http://cleanlasolar.com/files/Globe_St_Article_12.23.13.pdf | News article | CLEANLAS-1 |
| Clarke, C. (2013, June 26). North Hollywood apartment building the first in L.A.'s solar program. *KCET*. Retrieved from https://www.kcet.org/redefine/north-hollywood-apartment-building-the-first-in-las-solar-program | News article | CLEANLAS-2 |

| Reference | Type | Code |
|---|---|---|
| Crafted at the port of Los Angeles. (2016, February 23). Retrieved from http://cleanlasolar.com/solar-installations | Information | CLEANLAS-3 |
| Gallegos, B. (2012, April 25). Oped: L.A. shows that solar power isn't just for the wealthy. *The Los Angeles Daily News*. Retrieved from http://www.dailynews.com/opinion/20120425/oped-la-shows-that-solar-power-isnt-just-for-the-wealthy | News article | CLEANLAS-4 |
| Hales, R. L. (2013, July 30). Commercial scale solar has come to LA's Eastside. *The ECOReport*. Retrieved from http://theecoreport.com/commercial-scale-solar-has-come-to-las-eastside/ | News article | CLEANLAS-5 |
| Kapadia, R. (2014, February 6). Press release: TRK Development becomes latest to join CLEAN LA solar program. *CLEAN LA Solar*. Retrieved from http://cleanlasolar.com/files/TRKDT_Press_Release_20614.pdf | Press release | CLEANLAS-6 |
| LA's groundbreaking FiT program shines with energy into the next phase. (2014, February 19). | News | CLEANLAS- |

| Reference | Type | Code |
|---|---|---|
| *Examiner.com*. Retrieved from http://www.examiner.com/article/la-s-groundbreaking-fit-program-shines-with-energy-into-the-next-phase?cid=rss | article | 7 |
| Leslie, M. (2012, April 30). Sky's the limit for rooftop solar power. *The Los Angeles Business Journal*. Retrieved from http://cleanlasolar.com/files/LABJ-op-ed.pdf | News article | CLEANLAS-8 |
| Peterson, M. (2012, January 9). New proposal seeks to encourage solar panels on LA rooftops, parking lots. *KPCC*. Retrieved from http://www.scpr.org/news/2012/01/09/30710/new-proposal-seeks-encourage-solar-farms-la-roofto/ | News article | CLEANLAS-9 |
| Peterson, M. (2013, June 24). Los Angeles' large-scale solar rooftop project begins Wednesday. *KPCC*. Retrieved from http://www.scpr.org/blogs/environment/2013/06/24/14075/los-angeles-large-scale-solar-rooftop-project-begi/ | News article | CLEANLAS-10 |
| Saillant, C. (2013a, January 11). Los Angeles DWP unveils solar power buyback program. *The Los Angeles Times Blogs*. Retrieved from http://latimesblogs.latimes.com/lanow/2013/01/los-angeles-dwp- | Blog article | CLEANLAS-11 |

| Reference | Type | Code |
|---|---|---|
| unveils-solar-power-buyback-program.html | | |
| UCLA. (2014, February 18). Press release: UCLA: LA's ambitious rooftop solar program delivering promised results; Expansion can reap economic and environmental benefits in all parts of the city. *CLEAN LA Solar*. Retrieved from http://cleanlasolar.com/files/FIT_100_Press_Release_-_FINAL.pdf | Press release | CLEANLAS-12 |
| Wilcox, G. J. (2013, June 26). L.A.'s new solar program gets a jolt. *The Los Angeles Daily News*. Retrieved from http://www.dailynews.com/general-news/20130626/las-new-solar-program-gets-a-jolt | News article | CLEANLAS-13 |
| **LADWP** | | |
| Board of Water and Power Commissioners approve LADWP Solar Feed-in-Tariff demonstration program. New program expands ability to tap into city's abundant sunshine. (2012, April 17). *LADWP Newsroom*. | News article | LADWP-1 |

| Reference | Type | Code |
|---|---|---|
| LADWP pilot Feed-in Tariff solar program garners strong response in first request for proposals. (2012, July 17). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/go/doc/1475/1497575/LADWP-Pilot-Feed-In-Tariff-Solar-Program-Garners-Strong-Response-in-1st-Request-for-Proposals-copy- | News article | LADWP-2 |
| Board of Water and Power Commissioners approves 2-year electric rate increase. Legal mandates and aging infrastructure drive need for rate increase. (2012, September 12). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/go/doc/1475/1542123/Board-of-Water-and-Power-Commissioners-Approves-2-Year-Electric-Rate-Increase | News article | LADWP-3 |
| LADWP holds Feed-in Tariff (FiT) program workshops October 17-18 in downtown Los Angeles and San Fernando valley. (2012, October 16). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-4 |
| L.A. takes major step towards clean energy future as city council gives green light to large solar projects | News | LADWP-5 |

| Reference | Type | Code |
|---|---|---|
| creating hundreds of jobs and providing enough clean, renewable energy to power 331,000 homes per year, solar arrays move L.A. forward to meet renewable energy goals. (2012, November 21). LADWP Newsroom. Retrieved from http://www.ladwpnews.com/ | article | |
| LADWP lights up new solar program for L.A. Board of Water & Power Commissioners approves 100 MW Solar Feed-in Tariff (FiT) program to buy sun power from private parties at set pricing. (2013, January 11). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-6 |
| New solar feed-in-tariff program to open for applications on February 1. (2013, January 23). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-7 |
| LADWP takes historic action toward clean energy future for Los Angeles. (2013, March 19). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-8 |
| LADWP takes another big step to create L.A.'s clean energy future. Finalizes 150 MW local solar program plus 200 MW utility scale solar. (2013, May 21). LADWP Newsroom. Retrieved from | News article | LADWP-9 |

| Reference | Type | Code |
|---|---|---|
| http://www.ladwpnews.com/ | | |
| Largest-in-the-nation feed-in tariff solar program kicks off. First solar installation to interconnect with city power grid completed on North Hollywood apartment complex. (2013, June 27). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-10 |
| Local solar gets another boost as LADWP re-opens feed-in tariff program for applications July 8. (2013, July 3). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-11 |
| LADWP Newsroom (2013, December). Southern Owens Valley Solar Ranch project. *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/external/content/document/1475/2065926/1/SOVSR%20fact%20sheet-layout-2.pdf | Fact sheet | LADWP-12 |
| LADWP announces improvements to customer experience of Solar Incentive Program. Mayor's Solar Dashboard to increase transparency, keep customers informed of progress. (2014, March 19). | News article | LADWP-13 |

| Reference | Type | Code |
|---|---|---|
| *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | | |
| Moapa Paiute tribe, LADWP and First Solar break ground on 250 MW solar project. U.S. sen. Harry Reid joins in ceremony kicking off landmark power plant on tribal land. (2014, May 21). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-14 |
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| LADWP approves agreements for 250 MW of large solar in Kern County plus 50 MW of local solar to boost L.A. economy. New solar projects light the way to 25% renewables by 2016; 33% by 2020. (2014, July 3). *LADWP Newsroom*. Retrieved from http://www.ladwpnews.com/ | News article | LADWP-16 |
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# APPENDIX D. FRAMING IN THE LABC'S MEDIA

In this appendix, the results of framing analysis in the sources collected from the LABC are described. These sources included the reports developed in cooperation with UCLA and other academic and research institutions. Firstly, the representation of the FiT in the LABC's sources is summarised. Then, the details of the frames and the results of the meta-framing analysis are presented. The appendix concludes with a summary of the implications for the social transformation.

## D.1. LABC's Portrayal of the FiT

The LABC was the initial promoter of the FiT programme. Such involvement was interpreted as a possible explanation for the sympathetic portrayal of the FiT. In comparison, evaluations of the previous feed-in tariff programmes implemented by other utilities attracted more critique and focused on their problems.

The LABC presented the FiT programme as an overall beneficial initiative. Typically, the highlighted benefits included job creation, economic growth, local social development, emission reduction, meeting growing electricity demand, fostering private investments, and increasing competitiveness in the electricity market.

The portrayal of the FiT was closely repeated in the FiT programme's media as it is shown in Appendix E. Framing in the FiT Programme's Media. This portrayal focused on the combined benefits as the main depiction of the programme.

## D.2. LABC's Frames: Regulations

The regulations frame was concerned with the FiT fitting into the existing regulatory framework and development plans:

> *There is a disconnection between Los Angeles' aggressive solar goals and its policies. Although the region maintains some of North America's most ambitious renewable energy and economic development goals, the current solar policy framework does not facilitate any significant in-basin solar contribution to these goals.* [LABC-1]

Renewable Portfolio Standard (CPUC, n.d.) required that California generates 33% of its electricity from renewable energy by 2020. A significant part of that renewable energy was expected to be solar. The previous mayor of Los Angeles, Antonio Villaraigosa, responded to these requirements by setting a goal of 150 MW of local solar power. The FiT programme was a direct response to this requirement. The Los Angeles pLAn (City of Los Angeles, 2015) reinforced these requirements with the plan to grow local solar generation to 900-1500MW by 2025. The FiT goal of 150MW by 2016 would have contributed 10-17 % towards this plan.

### D.2.1. LABC's definition of the regulations problem

The LABC's reports put a significant focus on discussion of policy issues. Framing problems in terms of policies relied on the assumption that regulations were the right vehicle of change towards sustainability. The LABC identifies the following issues with the existing regulations:

- The disconnect between the renewable goals in Los Angeles and the existing policies;
- the monopoly of the LADWP.

The first issue took a priority on the LABC's list: "California's existing and proposed FiT programs are not effective for inducing extensive in-basin solar for Los Angeles. These programs lack a cost-based tariff structure that facilitates participation from non-professional solar owners and owners of small projects." [LABC-1].

The aggressive solar goals were emphasised five years later in pLAn that envisioned Los Angeles as "an increasing national and global leader [in solar power] moving forward" (City of Los Angeles, 2015, p. 22). The LABC concluded their analysis with the opinion that new policies were required for a transition to clean energy. Existing incentives and programmes were deemed to be insufficient to incentivise the growth of the clean energy sector. This conclusion was based on economic modelling underpinned by rational market assumptions, which prevailed in the LABC's reasoning.

The second issue was concerned with the monopoly of the LADWP. The reasoning extended the first issue. The LADWP's monopoly was found to impede the development of the solar market by restricting participation from professional solar developers:

> *The most significant regulatory barrier to solar adoption in Los Angeles is the protection of LADWP's legal monopoly status by the City's Charter. This regulatory barrier prevents professional solar developers from owning systems and selling solar energy to those entities that cannot otherwise bear the business risk associated with solar.* [LABC-1]

The LABC presented the LADWP's monopoly as a barrier to clean energy growth because of the lack of market competition. This reasoning was underpinned by the belief in the rational market where competition establishes lower prices and higher production levels. The stress on the unbearable business risk emphasised the importance of values of security and uncertainty avoidance.

### D.2.2. LABC's causal interpretation in the regulations frame

The LABC has performed an analysis of successes and failures of previous feed-in tariff projects and a contextual analysis of feed-in tariff perspectives in Los Angeles. These analyses became the basis for the LABC's reasoning. Table E.1 below presents causes and effects that the LABC identified to support its claims for the proposed FiT design.

*Table E. 1*

*Causal Interpretation of the Regulations Frame in the LABC's Media*

| Statement | Reasoning |
|---|---|
| The existing policies were not sufficient to reach Los Angeles' and LADWP's renewable energy goals. | The LABC performed an economic modelling to prove that new policies were required to reach the goals. |
| The existing policies did not provide a profitable way for homeowners to sell excess energy. | The existing policies caused homeowners to undersize their installations so that the amount of solar produced was less or equal to the consumption. This was not efficient because installing a bigger system could allow saving on the labour and maintenance cost and the excess electricity was required elsewhere. A cost differentiated feed-in design was associated with home-sized installations, thus, permitting better utilisation of space. |
| The LADWP's monopoly prevented solar development. | The LADWP's monopoly status as the electricity distributor prevented professional solar developers from owning solar systems and selling energy to those entities that could not bear the business risk associated with solar. |
| The ratepayer expense of the FiT had to be alleviated to support the economy. | The policymakers were advised to provide incentives for creating high-wage jobs. |

| Statement | Reasoning |
|---|---|
| The potential of larger projects within the LA basin was spatially limited. | The solar development in the LA basin was important because of the lower infrastructure costs and a reduced need for local system upgrades. The LABC promoted the use of the rooftops for the solar installations. |
| The Los Angeles' conditions are different from other jurisdictions. | The policies should be adjusted to the local context. |

### D.2.3. LABC's proposal of treatment for regulations frame

The LABC envisioned the FiT as a major part of their treatment of the problem of the regulations. The reports expressed a great level of confidence in the effectiveness of this treatment: "FiT policies can be designed to achieve nearly any solar goal" [LABC-1]. However, the LABC also cautioned that only if certain conditions were met the treatment would be effective as a contributor towards "some of North America's most ambitious renewable energy and economic development goals" [LABC-1].

The LABC insisted that the FiT design should be based on the local conditions. This solution became the starting point of the frame of local development. The LABC predicted that the costing of the programme would become a trigger for a debate, such debate being a part of the meaning construction. In the pre-emption of such debate, the LABC offered a sensegiving message: "Debating tariff levels based on other jurisdictions' tariffs is not productive" [LABC-1], encouraging the use of the meanings proposed in the report. To support their argument, the LABC reviewed several existing feed-in tariff programmes and concluded that the opportunity for Los Angeles is different.

In the LABC's analysis, the opportunity for a feed-in tariff in Los Angeles was

identified in using rooftops in-basin. The argument was based on the lack of opportunities for a low-cost solar development out of the LA basin.

The in-basin rooftop solution was expected to work through attracting participants who would contribute to MW solar goals. The participation was estimated to be sufficient to meet the programme goals, moreover, caution had to be exercised against over-stimulating the market:

> *When the tariff is attractive, many owners will apply for participation, so the total program cap is the most fundamental market control design element available to administrators. Simplicity of participation is essential. Most people who own favorable solar sites are not energy professionals. Extensive participation procedures will limit participation. These drivers of FiT policy results must be carefully managed.* [LABC-1].

The social participation, thus, became a continuation of the problem of the regulations. The growth of the local solar market growth was envisioned as a positive outcome: "An effective FiT policy could help expand the Los Angeles solar market and also contribute to the regional goals" [LABC-1]. Thus, the frame of the regulations was closely linked to the frame of the local development, too.

### D.2.4. The role of values in the LABC's regulations frame

Economic reasoning and evaluations took the priority in this frame: "a well-designed feed-in tariff policy can be a powerful tool for economic development that also yields a co-benefit of renewable power" [LABC-1]. In this wording, the sustainability goal of the FiT, that is, the renewable energy development was presented as a co-benefit becoming a secondary goal to the economic development. The economic reasoning was also the basis for meeting the compliance requirements. The LABC argued that the new programme had to be financially sound and provide incentives for the further economic development, such as jobs.

The propositions of the local economic development were associated with the

values of local benevolence. Another focus was on values of self-direction. These values manifested in the reasoning to increase efficiency in the utilisation of space for the solar panels. Another example of self-direction reasoning was in holding the residents responsible for their choices: “Angelenos clearly accept lofty renewable energy goals but their willingness to pay for an in-basin solar contribution has not been debated in a transparent manner.” [LABC-1].

### D.2.5. Actors’ roles in the LABC’s regulations frame

In this frame, the *villain* was faceless: the problem originated from the adopted regulations and thus was de-personified. The *victim* was the LADWP, as its daily functioning, and even its identity as a monopoly in the electricity sales was challenged by the regulations. Another threat could be noted in the potential stress for the local economy: “the solar power that [the FiT] produces is an expensive type of renewable energy to generate” [LABC-1]. Thus, the whole community could become the *victim*, having to sacrifice some of the tax money to cover the increased cost of electricity.

Another way to view the LADWP and the community as the *heroes*. “A serious commitment by administrators [of the LADWP was] required” [LABC-1] to implement the programme. But the success of the programme was also dependent on the participation of the community.

## D.3. LABC’s Frames: LADWP’s Ineffectiveness

The LABC focused significant attention on the evaluation of the LADWP both as the monopoly restricting solar development and as the organisation charged with the implementation of the FiT. The LABC started its first reports pointing to the deficiencies of the LADWP. Further, the tone changed to more positive evaluation and feedback.

### D.3.1. LABC's definition of the LADWP's ineffectiveness problem

The LABC recognised problems with the utility already before the beginning of the FiT: "The Los Angeles Department of Water and Power (LA DWP) has failed to take advantage of the tremendous environmental and economic potential that solar power offers our region." [LABC-3]. In the process of the implementation, the LABC has conducted interviews with business participants and reported that many applicants noticed a slowdown in the application process after the completion of the site visit and before the execution of the contract (i.e. SOPPA) and Interconnection Agreement. This slowdown was attributed to a combination of overly complex contracts, contract inexperience on the part of the applicants and the shortage of the technical staff at the LADWP. However, the inexperience of the owners was predictable:

> *For other types of properties, site owners will not have experience in setting a rooftop lease price and will often times become discouraged when learning of the proposed lease revenue. This may result in non-participation or a significant delay in negotiation. Many site owners will view the prospect of locking down their rooftops to a 20-year contract (the standard SOPPA contract length) without any termination agreement as a high risk proposition that simply is not justified by the lease revenue. The most common concern site owners have is the possibility of restricting the future development of their property.* [LABC-4]

A few other problems were mentioned. The applicants condemned the LADWP's documentation delivery methods as a "very old school" [LABC-4] in the time of the electronic communication. They complained about the delays in permitting from the Department of Building and Safety.

LABC's sensemaking was evident in the updated meaning of requirement of the LADWP's effectiveness. Further sensemaking was triggered. Applicants had to make sense of the contracts and their new identity as solar producers. The LADWP had to make sense of its new identity as the organiser of the programme.

The firms needed more clarity in the documentation:

> *As for specific issues within the document, a second small firm mentioned having difficulties obtaining the proper insurance requirements. This applicant felt these terms could be spelled out more clearly. LADWP did provide applicants with examples of what type of insurance is required, but when the applicant sent this to insurance brokers, they would come back with something not even close to what LADWP wanted. The applicant did admit much of this had to do with insurance providers who were just not familiar with the world of solar, but still felt LADWP could help streamline the process of matching applicant with insurance provider.* [LABC-4]

These complaints indicated unfairness in the application process. The smaller firms could not afford to deal with the complexity of the application procedure. They also reported the majority of the problems. On the contrary, positive comments were received from "a large firm" [LABC-4]. These comments claimed an "exemplary LADWP staff effort" [LABC-4].

### D.3.2. LABC's causal interpretation in the frame of LADWP's ineffectiveness

Despite the many applications, "the majority of these projects dropped out after the interconnection study phase, which … [was] often attributed to the cost of interconnection and LADWP's delay in executing the SOPPA and interconnection agreement" [LABC-5]. Thus, the ineffectiveness and the cost were threatening the success of the programme by reducing the participation.

### D.3.3. LABC's proposal of treatment of the LADWP's ineffectiveness

The LABC recommended streamlining the permitting processes and adopting "online solar permit processing" [LABC-5]. Additional steps to improve the effectiveness of the LADWP process included: application rollover, standardising of the forms and timing of rejection/acceptance results, standardising interconnection studies, and providing an FAQ. Building and safety compliance processes required to be standardised as well (the responsibility of the Department of Building and Safety).

### D.3.4. Actors' roles in the LABC's frame of the LADWP's ineffectiveness

The LADWP was viewed as both the *villain* and the *hero*. The homeowners were also blamed for their unwillingness to resubmit the applications and to participate in the next rounds for a reduced price. But this unwillingness was also attributed to the existing processes at the LADWP.

Before the FiT start, the LABC concluded that "the LA DWP has focused its attention on plans for large-scale solar installations" [LABC-3]. Despite the focus on the FiT on inclusion, the LADWP seemed to still prefer larger projects by providing better services to larger clients: "A large firm described the conversations over interconnection costs to be 'very productive'" [LABC-4]. Further comments from the large firm were also mostly positive: "A large firm specifically praised the utility for being "good at returning phone calls and answering questions" [LABC-4]. This same firm noticed "when things needed to be escalated to [the higher level], they were" [LABC-4]. The better support of the larger projects and clients made the smaller businesses and underprivileged communities the *victim.*

### D.3.5. The role of values in the LABC's frame of the LADWP's ineffectiveness

Ineffectiveness is the opposite of effectiveness. The value of effectiveness is

associated with achievement by praising success and capability. In this case, the ineffectiveness was also linked to increased cost and loss of business. Thus, it was associated with economic values. The local benevolence values were not in focus, however, the negative influence on the community could be traced in the communication.

## D.4. LABC's Frames: Local Development

LABC's work in preparing the design of the FiT was driven by Mayor Villaraigosa's challenge to create a market-driven sustainability programme. The LABC interpreted the need for local development as the development of the solar market, uplifting economically disadvantaged areas, and providing jobs. This problem was linked to the frame of social participation.

### D.4.1. LABC's definition of the problem of local development

The root cause of the problem was portrayed as a combination of the regulatory obligations and the need to improve the socio-economic state of the city. The regulations obliged LA to add a significant amount of solar power by 2020. With the NEM already in progress, residential solar had little potential left. Large-scale solar plants were not possible within the LA basin due to the space limitations. Besides, such plants required additional transmission infrastructure, which would be costly, time-consuming to develop, and inefficient. From the socio-economic point of view, Los Angeles had "a trained workforce ready for jobs in solar installation, design, sales" [LABC-3]. However, the lack of job opportunities for the workforce threatened to draw this workforce to other states. Additionally, the LABC mentioned the need to "stabilize distressed neighbourhoods" [LABC-2], support low-income residents, and provide training and jobs to unskilled workers.

### D.4.2. LABC's causal interpretation in the local development frame

In the given context, the LABC's interpretation of the local development was based on the solar economic development. Access to the grid was considered an enabling factor as the technology for an efficient distribution of energy. Without

the grid access, a reduced participation was expected because it made solar systems less economically viable. Grid access in remote areas, that is, non-local solar development, had the disadvantages of transmission losses and the lack of transmission lines. The lack of open space in the city was used to reason for the installation of the solar panels of the existing rooftops, thus, providing higher efficiency in utilising the existing infrastructure.

The LABC also viewed the participants and investors as rational market actors and reasoned that their decision-making was driven first and foremost by economic benefits. This assumption contributed to the proposed FiT tariff designs. The LABC gave some acknowledgement to the pro-environmental and socially responsible values that may be driving the installation of solar systems, but they are convinced that the economic benefits are the main decision factor: "Although some potential owners are interested in the positive social and environmental benefits of solar energy, the economics of the investment are weighted most heavily in any decision to purchase a system" [LABC-1].

### D.4.3. LABC's proposal of treatment of the local development problem

The LABC proposed the FiT as "an equitable growth policy" [LABC-4] and the main treatment for the problems of local development. Several aspects of the FiT design were particularly pertinent for the local development. Firstly, the FiT needed to be cost-based, in other words, based on "a tariff that covers the producer's costs and provides a reasonable rate of return is essential for inducing widespread solar participation in a FiT" [LABC-1]. Secondly, the FiT had to provide security and long-term predictability: "[O]ur first recommendation is to scale up the FiT program significantly (from its current 100 MW to 600 MW) to add certainty and economic development potential" [LABC-5]. Thirdly, the LABC argued for creating clear incentives for companies for job creation and especially career-ladder jobs for the currently unskilled workforce:

> *The FiT program needs clear goals and incentives for employment, including credits and/or identified benefits for creating career ladder jobs for the unskilled workforce. While getting that first job*

> *is important, firms and workforce developers do recognize that the pathway to the middle class means creating career ladder jobs which allow installers and first-time workers to develop skills which allow them to move up the employment ladder.* [LABC-5]

Combined, these goals were expected to solve significantly increase the generation of solar power while solving the most pertinent social issues and transforming the city.

### D.4.4. Actors' roles in the LABC's frame of local development

The local society was the main *victim* of living in the flawed economic and social environment. The regulations were expected to solve the problem by enabling the potential *heroes*: investors, businesses, and the owners of the rooftops. The *villains* in this situation could not be identified because of too many factors, especially historical factors, contributing to the lack of the development in the city.

### D.4.5. The role of values in the LABC's frame of local development

The LABC called Los Angeles a "home to… an entrepreneurial spirit" [LABC-3]. Entrepreneurship could be associated with many values, however, based on the definition it is associated with making money ("entrepreneur," 2016). Thus, the LABC envisioned Los Angeles populated with economically driven people. This was especially well portrayed in their reasoning that whatever other values may be driving the decisions to participate in the solar programme, eventually the economic aspects would drive the decision. This rationalistic market approach was presented as subservient to society: "An increasing body of research, including from organizations such as the Federal Reserve and the International Monetary Fund, is showing that economic growth strategies that advance social equity can also result in longterm, economic growth" [LABC-4]. For example, it was stressed that community-serving professionals were among the direct beneficiaries of the FiT installations: "Among those who live in multi-family housing are a wide range of workers, including nurses, firefighters, police officers,

landscapers and more." [LABC-2]. These considerations were interpreted as a manifestation of local benevolence. Another aspect of the local benevolence was in planning to benefit from federal incentives and ensure the flow of resources into the region: "[E]ffectively designed policies would enable the region to take advantage of tax benefits and subsidies from state and federal solar programs which would result in a significant flow of financial resources into the region" [LABC-1].

The environmental development was discussed as a choice "to live in a more sustainable manner, with a reduced carbon footprint." [LABC-2]. The role of the local development frame was to discuss how this choice could become available.

## D.5. LABC's Frames: Social Participation

The frame of social participation was closely linked to the LADWP's Ineffectiveness frame and the frame of local development. The LADWP's ineffectiveness alienated many prospective applicants, and the frame of social participation sought to engage the applicants and the rest of the community. The result of the engagement was expected to be local development.

### D.5.1. LABC's definition of the social participation problem

LABC viewed community participation as the way to achieve the programme's goals: "[T]o accomplish LADWP's goals, the program must attract applicants through cost-effective pricing that allows a reasonable rate of return" [LABC-4]. This participation also had to contribute to the equity goals:

> ***Give priority to Solar Equity projects***. *Firms with a well-developed plan for hiring disadvantaged workers, workers residing in high-need ZIP codes, and/or graduates of local training programs could be given priority in the lottery system and "lock in" the highest tariff rate, regardless of the allocation in which they apply [emphasis in the original].* [LABC-5]

Such reasoning was meant to result in the opportunities for disadvantaged and low-income workers. This meaning made the reasoning different from the local development frame in its value emphasis.

### D.5.2. LABC's causal interpretation in the social participation frame

There were also problems of perception that may be stalling the collaboration. Many people still saw LA as a city of "wrenching inequality and environmental distress" [LABC-5].

The LABC built its argument on the unattractiveness of the previous programmes to the lower-income residents. Such unattractiveness meant that a large part of the community was excluded from the incentives offered for the solar development. At the same time, the opportunities for solar developments were abundant in the lower-income communities and such communities needed incentives to improve their socio-economic situation.

However, the initial regulations were found insufficient to ensure participation. In particular, some practices were identified as obstacles to community participation:

> *[A] common trait to FITs and the resulting scattered, "cold calling"-like outreach is the potential for a small handful of firms to race out into the marketplace and try to "lock up" as many site owners as possible. Many times, this is achieved by promising unrealistic lease figures.* [LABC-5]

A problem with the participation was also explained by the insufficient work done by LADWP in educating the community about the programme: "A surveyed property owner affirmed that 'property owners are unaware of the program' and that 'more people should know about this'" [LABC-4].

### D.5.3. LABC's treatment for the problem of social participation

To ensure that the programme is accessible to any business, the LABC promoted simplicity:

> *The simpler, faster, and cheaper it is to participate, the broader the participation is likely to be. Solar technology and energy planning are not familiar topics to most non-professional solar owners. Extensive application procedures will present a barrier to participation for these owners.* [LABC-4]

This had to be done to make contracts accessible to small businesses, start-ups who cannot afford legal costs or high administration costs.

Further, the LABC promoted a balance of "design elements for FiT programs: administration, eligibility, tariff design, market control, and special provisions" [LABC-1]. The special provisions included incentives for the businesses to create career-ladder job, thus, ensuring long-term sustainability of jobs. In addition to the incentives, the LABC proposed and, further, implemented educational programmes for businesses targeting participation from unskilled workers and disadvantaged communities. Another treatment option was to link education to the FiT: "Channeling funding to existing resources – such as the Los Angeles Trade Technical College's Renewable Energy Programs – to further support job placement services could help institutionalize links between training programs and FiT projects." [LABC-5].

The LABC also proposed to include incentives for smaller projects as their start-up costs were higher:

> *[P]rioritize smaller FiT projects and put them first in line with the Plan Check engineer, ahead of other projects. As stated before, a notable number of small projects in and around downtown LA can be attributed to the LADWP carve out, which must continue in order for solar developers to be incentivized to continue working with small property owners.* [LABC-5]

The tariff-design also targeted increased participation: "A tariff that covers the producer's costs and provides a reasonable rate of return is essential for inducing widespread solar participation in a FiT" [LABC-1].

### D.5.4. Actors' roles in the LABC's frame of social participation

The lower-income communities were the *victims*. They needed the FiT intervention to give them opportunities to improve their situation through participation. The LADWP was initially portrayed as the *villain*: "LA DWP is the least efficient utility at generating solar jobs, spending a total of $129,000 per job-year created" [LABC-3]. However, the FiT was expected to correct this situation, though, the cost was not re-evaluated.

### D.5.5. The role of values in the LABC's frame of social participation

The frame of social participation was largely motivated by local benevolence. The value of local benevolence underpinned the reasoning to improve the situation of the disadvantaged and low-income communities, to promote inclusiveness and equality. The belief that an empowered community was at the core of the FiT success relied on the achievement and self-direction values. The empowered community was envisioned through financial independence and an ability to choose own goals based on the information provided. The availability of information also required transparency: "Transparent and predictable queue procedures can increase the certainty associated with the program" [LABC-1].

## D.6. LABC's Frames: Costing of the FiT

The costing of the FiT included issues of tariff design, allocation of incentives, financing, the cost of uncertainty, and unexpected delays. The new issues encountered during the implementation resulted in the new requirements, such as the need for up-staffing at the LADWP, the need for web-application development for the online processing, and the new regulations.

### D.6.1. LABC's definition of the FiT costing problem

The LABC promoted the FiT as "a cost-effective program, as well as huge sums of private investment and thousands of local jobs" [LABC-2]. Thus, the costing of the problem was not highlighted as a problem in the LABC' sources. Instead, the

LABC focused on the practical issues of the best costing options.

However, the LABC acknowledged that the uncertainty was the threat to the programme design:

> *We have market uncertainty and lack of clarity on the program design, especially the fact that the costs of interconnecting to the grid are not always identified or quantified beforehand and that permitting for actual construction and local manufacturing can be difficult and unpredictable.* [LABC-5]

The problem of the high cost of solar and therefore the possible burden on non-solar taxpayers was also acknowledged.

### D.6.2. LABC's causal interpretation in the costing of the FiT frame

The LABC reasoned that the "most significant barriers to solar ownership are economic. Although some potential owners are interested in the positive social and environmental benefits of solar energy, the economics of the investment are weighted most heavily in any decision to purchase a system" [LABC-1].

The LABC further reasoned that despite the initial extra cost, the FiT projects would provide important long-term benefits:

> *Commercial projects are more expensive than utility-grade projects to develop; however, when you take into account the value of local economic development, distributed generation, and avoiding the costs of long-distance transmission – which are estimated at approximately $.03 per kWh – commercial projects are more affordable than meets the eye.* [LABC-5]

However, the LABC also cautioned against over-stimulating the market:

> *If the tariff is too high, owners will be excessively compensated, the market will overreact, and the program can exhaust its resources, creating a policy-driven industry "boom and bust" cycle. If the*

> *program continues for a long-time, the industry will come to rely on subsidized tariffs. Downward pressure on costs will not be passed through the value chain and there could be reduced incentives to be efficient. The tariffs are normally passed directly on to ratepayers.* [LABC-1]

In support of their reasoning, they quote experiences of other FiT problems and critics of these previous experiences. However, despite the reasoning for the market-driven programme, the LABC also supported incentives, especially for small projected because these "projects are more expensive to develop, yet are offered the same price per kWh" [LABC-5].

Another line of reasoning was fuelled by the need for certainty. Certainty is a condition for the more rational behaviour of the market actors (Kahneman & Tversky, 1984). The LABC argued for extending the contracts to 25 years. This extension, they argued, would afford the LADWP secure energy supply at prices that would be cheaper than fossil fuels in the future. At the same time, the extended contract duration would allow solar developers to secure better financing terms and offer more profitable contracts to the site hosts.

### D.6.3. LABC's treatment for the costing problem

The LABC promoted a tariff structure as one of the conditions for a successful FiT implementation. Tariffs needed calculating based on an estimated market response locally: "A tariff in one locality may induce the desired market response, while the same tariff in another locality could over-stimulate the solar market." [LABC-1]. The treatment requirements included:

- Setting up a market relevant costing for the FiT: The price should be cost-based to attract new participants, however, it should not be over-incentivised because this would create problems in the future.

- Incentives should be created for smaller projects, for job creation, and training.

Extend contract duration for 25 years instead of 20 was deemed beneficial to secure solar energy for five more years and make investments in solar safer and cheaper.

### D.6.4. Actors' roles in the LABC's frame of the FiT costing

The LABC presented this frame as a balance between costs and benefits. Such detached view did not distinguish *victims*, *villains*, and *heroes*.

### D.6.5. The role of values in the LABC's frame of the FiT costing

The strong emphasis was on costs and the benefits. Such view was interpreted as the manifestation of economic rationality. The values of security manifested in uncertainty avoidance supported the assumptions of economic rationality because market actors behave more rationally in transparent no-risk situations.

## D.7. LABC's Frames: Environment and Location

The LABC viewed location as one of the factors influencing the FiT design. The environmental component of the FiT was associated with emission reductions and, consequently, cleaner air.

### D.7.1. LABC's definition of the environment and location problem

The LABC argued that large solar potential in the LA basin had to be utilised. Before the FiT, "the Los Angeles Department of Water and Power (LA DWP) has failed to take advantage of the tremendous environmental and economic potential" [LABC-3] of solar rooftops. Besides, even after the beginning of the FiT, "untapped rooftop potential in high-need neighborhoods" [LABC-5] remained an opportunity.

### D.7.2. Causal interpretation of the frame of environment and location in the LABC's reports

The LABC supported in-basin solar development due to its efficiency and the

potential to improve the socioeconomic conditions:

> *Developing a strong in-basin solar market is essential to the City's efforts to increase solar production. Commercial projects are less expensive per kWh than residential projects, and are often located nearby socioeconomically disadvantaged populations that could, with training and attention to networking and placement, access solar employment. [LABC-5]*

The environmental benefits were highlighted as a co-benefit. "Those bearing environmental injustice" [LABC-5] were included in the range of the disadvantaged areas where the FiT was poised to make a difference.

In addition to the almost immediate socio-economic benefits, the FiT was poised to "create greater resiliency in the face of natural disaster" [LABC-6]. Such resiliency was explained by the distributed energy generation and the higher independence from the other states.

### D.7.3. LABC's treatment of the frameof environment and location

The LABC argued that an in-basin FiT would "create job opportunities and stabilize distressed neighborhoods" [LABC-2] while providing opportunities to "live in a more sustainable manner, with a reduced carbon footprint" [LABC-2] and use "a larger pool of clean, renewable energy" [LABC-2].

The FiT was interpreted as an economic solution to deeper social problem: "Promoting clean energy investments and employment opportunities in areas most disproportionally impacted by air pollution has been essential to the LADWP Feed-in Tariff program" [LABC-6].

### D.7.4. The element of actors' roles in the LABC's frame of the environment and location

The frame of environment and location discussed *victims* as the residents in economically and environmentally distressed areas. The *villains* were not

identified. The FiT was expected to provide the platform for the residents to become their own *heroes* and improve their socio-economic and environmental condition.

### D.7.5. LABC's portrayal of the role of values in the frame of the environment and location

This frame was grounded in the values of local benevolence as the FiT targeted an improvement in the socio-economic and environmental condition in Los Angeles.

## D.8. Quotation Analysis of the LABC's Sources

The LABC's reports relied on quotations from the interviews with business owners. The reports cited different firms to show the inconsistencies in LADWP's work. For example, a representative of a large firm "thought our conversations [with the LADWP] were very productive" [LABC-4]. At the same time the experience of a small firm was rather disappointing: "Brought it up at the first site meeting and they said no and that was it. I don't want to sit there and argue with an inspector. In the end, they hold all the cards" [LABC-4]. Other firms also showed disappointment with the service provided by the LADWP:

> *Others expressed disappointment in the lack of any notification from LADWP. A specific firm mentioned how "they were put into the lottery and then there was nothing, which was really disappointing." Multiple firms expressed skepticism in the punctuality of lottery result online updates, instead resorting to calling the utility for more up-to-date results.* [LABC-4].

Some quoted opinions indicated the lack of trust in the LADWP commitment: "LADWP simply 'did not want emergency workers or anyone else worried about electricity coming from two different locations'" [LABC-4]. However, other businesses expressed their appreciation:

> *[L]arge firm applicant commented on how LADWP "set up site visits in a timely manner," while another large firm echoed how the*

> *utility was "very prompt with the site visit." In finding a time that worked for both parties, a third large firm mentioned how "the engineers were flexible" in their scheduling.* [LABC-4]

The LABC did not provide much coverage of non-business LADWP customers. The only exception was one quote from a representative of homeowners.

In the non-customer category, the LABC quoted the mayor of Los Angeles and various research entities, such as the National Renewable Energy Laboratory (NREL) and unnamed academic institutions. The LABC also provided extracts from the LADWP's regulations, which were used to explain the situation and the problems.

## D.9. Emotional Analysis of the LABC's Sources

The LABC provided a detached and unemotional analysis. However, the LABC advised the LADWP to "communicate success" [LABC-5], thus, eliciting a positive emotional response.

## D.10. Summary of Values in the LABC's Sources

The LABC reasoning was underpinned by values of economic rationality. A supportive to the economic rationality value of certainty was the basis for the FiT recommendations: "Successful FiTs are characterized by certainty" [LABC-5].

The values of local benevolence underpinned the positioning of the FiT as a treatment for many social issues in Los Angeles with the particular focus to providing opportunities for the local people. Compliance underpinned the requirements for the regulations.

Overall, values played the role of supporting the arguments that the LABC made.

## D.11. LABC's View of the Utility and City Transformation

The FiT was portrayed as an important component of the sustainability transformation: "A scaled-up FiT could help pave the pathway to a Los Angeles that merges livability[*sic*] and inclusion, clean air and clean technology, and helps to unite diverse communities of Angelenos across the city" [LABC-5].

The main goals of the transformation in the LABC's interpretation were economic: "[A] well-designed feed-in tariff policy can be a powerful tool for economic development that also yields a co-benefit of renewable power" [LABC-1]. The sustainability transformation in included market transformation: "The FiT has the potential to transform Los Angeles' commercial solar market at precisely the moment in the wake of the recession when the City needs sustainable and inclusive economic development" [LABC-5] The environmental improvements were considered a co-benefit and a part of the improvement of the socio-economic situation. Such representation reflected the anthropomorphic position of the LABC.

The LABC provided the most comprehensive prediction of the outcomes of the FiT:

> *The initial two allocations will generate 862 job years, which will be part of 2,155 job years total once the entire FIT 100 program is implemented. These numbers will help bolster one of the U.S.'s fastest growing industries - a solar sector that experienced a 20% growth in 2013 with 24,000 new jobs. When fully implemented, the FIT 100 will generate approximately 130,000 MWh annually, which if used to offset coal, will avoid over 5,383 million pounds of greenhouse gases. This is equivalent to powering 21,600 homes on local renewable energy annually. The FIT 100 program is expected to generate approximately $300 million of direct investment for the City of Los Angeles over the lifetime of the program. With many projects sited in the San Fernando Valley and in South Los Angeles,*

> *the FIT 100 geographically complements the LADWP's existing net metering program which has sited many single-family solar systems in West Los Angeles. Additional benefits may include expanded transmission and distribution capacity, greater generation capacity, avoided grid services, avoided water and non-greenhouse gas emissions and avoided Renewable Performance Standard compliance.* [LABC-1]

This prediction was widely adopted and quoted by other sources including the LADWP media and the *Los Angeles Times*.

The LABC explicitly acknowledged that the FiT was a forum for sensemaking based on "learned adaptation", "an evolution of policy design" [LABC-1]. The range of this sensemaking could be seen as the development of the FiT understanding over time and over sources.

In the LABC's vision, the LADWP played a new role in the transformed society: "[A] utility could become a contractual intermediary between a solar owner and an electricity consumer" [LABC-1]. The LADWP was expected to transform from a utility that "…ha[d] lagged behind other utilities in solar production per person" [LABC-5] into a market leader.

A parallel transition was envisioned for the city from the starting position characterised by lagging "not only in solar MW installed, but also in solar jobs" [LABC-5] to Los Angeles "…leading the state in solar production and jobs" [LABC-5]. The values underpinning such transformation included innovation, inclusion, clean environment, and economic prosperity:

> *An old Los Angeles –notorious for sprawl, inequality and environmental distresses – is slowly becoming a new Los Angeles, a city hoping to be at the cutting edge of innovation and inclusion, clean air and green jobs, livability [sic] and economic vitality.* [LABC-5]

In sum, all these transformations were expected to account for a new economy:

> *[A]n economy in which we grow apart needs to be reworked into an economy where we can grow together. The FiT is one of these bridges to both a new future and new set of conversations about our shared future.* [LABC-5]

However, the signs of the actual social transformation showed that the transformation is in its early stages. The latest LABC's report *FiT Pays. Rooftop Solar Program Delivers Dividends for Business Owners* stated that the investors were "on a path to profitability", but "most of Los Angeles' renewable power [was] generated outside the L.A. Basin and transmitted inefficiently" [LABC-6]. The environmental benefits were also concerned only as the GHG reductions leaving many other environmental issues unaddressed.

# APPENDIX E. FRAMING IN THE FIT PROGRAMME'S MEDIA

The FiT programme's media included in the framing analysis included the LADWP news website and the news section of the CLEAN LA Solar website. The LADWP website provided important secondary information. The LADWP and the CLEAN LA Solar were the organisations responsible for the implementation of the FiT. It is crucial to highlight that the frames used in LADWP communication are reflective of the organisation's communication behaviour (Ball-Rokeach et al., 1990) and not of the organisational values or beliefs, or the values and beliefs of the employees of LADWP.

The programme's media filled the news with reports of success or reports of actions that should lead to this success. The FiT's seldom discussed problems explicitly. The only examples were problems with the duration of interconnection studies and cost of those, backlogs and delays with the processing of applications. Such presentation was sensegiving and aiming at creating an image of a successful customer-orientated programme and organisation.

## E.1. The Portrayal of the FiT in the programme's media

The FiT's media adopted many frames from the LABC, and also preserved a high focus on the economy. In a number of articles, the news repeated the frame of co-benefits estimated by the LABC with almost no modification:

> *The full 100 MW program is expected to create more than 2,000 jobs: 1,370 direct jobs plus 785 more indirectly related to the program, according to the UCLA study. The FiT 100 is also expected to deliver approximately $300 million in direct investment in the City of Los Angeles by solar companies and other businesses involved in the program… Once the full FiT 100 program is in*

> *place, the UCLA research team estimates that as many as 2.7 million tons of greenhouse gases will be displaced from the environment every year.* [CLEANLAS-12]

The FiT was presented in as a source of pride:

> *Feed-in tariff (FiT), also known as CLEAN LA Solar, is a groundbreaking energy program that allows commercial property owners in L.A. to take advantage of underutilized rooftop space by generating energy through solar panels and selling it to the DWP at a competitive fixed rate. The result is zero-carbon, renewable energy that also supports jobs and fuels private investment. The largest program of its kind in the nation.* [CLEANLAS-6]

The notable accent here was on leading the nation with the ground-breaking initiative. This is linked to the values of achievement. Besides, the FiT was deemed to be a source of an unlimited opportunity: "Sky's the limit for rooftop solar power" [CLEANLAS-8]. Building on the "underutilised" space suggested the value of efficiency. Jobs and investment benefits suggested the importance of socio-economic development and its contribution to compliance goals: "A good move to Los Angeles' commitment to 50% renewable energy" [CLEANLAS-3].

The FiT was presented as an "environmentally friendly program, which creates jobs and clean, renewable energy while reducing pollution" [CLEANLAS-5]. Thus, the environmental benefits were pollution and emission reduction, which were portrayed as "the clear environmental advantages" [CLEANLAS-7], thus, needing no further clarification.

The programme was also portrayed as a transformational power: "DWP general manager Ronald O. Nichols added the program is an important step forward in completely transforming the city's power supply" [CLEANLAS-1] and a "contribution to environmental sustainability" [CLEANLAS-6].

## E.2. The LADWP's website

The website (LADWP, n.d.-c) was reviewed as a source of triangulation for the factual information mentioned in the media. The website's home page did not link to the FiT programme directly, however, search within the website allowed finding of the programme information.

The priority list, which was discussed by the LABC as a means of incentivising smaller projects, was last updated November 2, 2015. It contained 63 large projects and 47 small. None of the active projects was in the areas where the income was below 40000$/per annum. The well-publicised low-income area project in Boyle Height [LADWP-20] was not listed among the projects. Boyle Heights median income was 33235 $/annum (The Los Angeles Times, n.d.).

## E.3. The FiT's Frames: Regulations

The regulations frame focused on problems and treatment recommendations to address the existing regulatory requirements. For the LADWP, regulations took a high priority, but in a different way than for the LABC. For the LABC, regulations were viewed as a tool to achieve any goal. For the LADWP, compliance with regulation was the main issue in this frame

### E.3.1. The definition of the regulations problem in the FiT's media

The regulations for the LADWP to comply with came from three main sources:

1. SB1368 imposed an emission cap for import of power by electric utilities (SB 1368 Perata. Electricity: Emissions of greenhouse gases, 2006). The cap was set at the level of an efficient, combined-cycle natural gas power plant. Compliance with this regulation linked to the problem of local development and explained the focus on locally produced power and energy independence.

2. Local city pLAn set the goals of growing solar resources and keeping Los Angeles in its leading position within the nation (City of Los

Angeles, 2015).

3. SB 1332 mandated that pubic-owned utilities, such as the LADWP, should implement feed-in tariffs and contribute proportionally to the statewide mandate of 750 MW of Solar generation capacity under the feed-in tariffs (McLeod, 2012).

### E.3.2. Treatment of the regulations problem in the FiT's media

The FiT was the treatment of the problem of regulatory requirements: "LADWP's goal is to provide 150 megawatts (MW) of energy through its FiT program in compliance with state legislation SB1332" [LADWP-20]. The programme's sources also discussed the workshops conducted to raise the awareness of the FiT and the measures taken to improve the effectiveness of the LADWP's processes.

### E.3.3. The role of values in the regulations frame in the FiT's media

The main focus of the programme's sources in regards to the regulations frame was in highlighting the achievements of the LADWP in the programme implementation and compliance with the regulations. Thus, the main value demonstrated in this frame was compliance. Compliance also signified the lack of sensemaking and the reliance on the solutions and meanings provided by the regulations and the LABC.

## E.4. The FiT's Frames: LADWP's Ineffectiveness

LADWP's ineffectiveness was highlighted in the LABC's sources and the *Los Angeles Times*. The problem was not explicitly discussed in the FiT media. However, the acknowledgement of the problems was evident in the discussion of the steps the LADWP planned or taken to improve the situation.

### E.4.1. The treatment of the LADWP's ineffectiveness as discussed in the FiT's media

Despite not stating the problem with the LADWP's processes, the programme

media reported on the work and plans to address the issues. It also highlighted that the FiT "received a tremendous response from the first 20-MW round" [LADWP-11]. Such response was unexpected and amplified the problem with the processing. The treatment options included:

- doubling the number of staff to process applications;
- publishing progress on the website;
- adding online dashboards to profile the progress;
- clearing backlogs to speed up the application approval;
- anticipating interconnection cost to speed up the applications.

These treatment options were the replication of the recommendations from the LABC.

### E.4.2. The role of values in the LADWP's ineffectiveness frame discussed in the FiT's media

The lack of the discussion in the FiT media was interpreted as the lack of sensemaking. The LADWP adopted the recommendations from the LABC, thus, acting on the values of compliance.

## E.5. The FiT's Frames: Local Development

The issue of local development was raised by the LABC in its preparation of the FiT design report. Here, the discussion of how this frame appeared in the programme's media is presented. As previously, the programme's media did not contribute to the identification of the problem. The problem definition was taken from the LABC report.

### E.5.1. Causal interpretation of the problem of local development in the FiT's media

The reasoning used in the FiT media often took the form of sensegiving. For example, the news promoted that people should have a choice with regards to installing solar or not. However, that choice was often in the hands of businesses who had the ability to benefit from the FiT. The sensegiving of choices and opportunities was challenged when the residents opposed the installation of solar in their neighbourhood. This argument is discussed in the frame of environment and location. Another example of sensegiving was relevant to the solar development on the tribal land of Moapa Paiutes. In this example, the FiT media discussed the economic development opportunities for the local tribe that allowed preservation of their cultural heritage.

An important part of the reasoning was the addition of the technical view on the local development. The potential problems with the electricity grid were highlighted:

> *Reliability's another [concern]. Webster says the utility designed its grid to send power to homes and businesses. It'll take different engineering to deliver electricity in the other direction on transmission lines. "We have to be very, very careful that, especially on a Sunday afternoon, the power surges don't come back through the grid, popping transformers and overloading circuits and taking parts of our city down," Webster says.* [CLEANLAS-9]

Despite such concerns, the LADWP Newsroom argued that "the expansion of local solar builds more resiliency and reliability into the power grid" [LADWP-17]. Thus, in addition to the socio-economic reasoning adopted from the LABC, the FiT media added technical meanings created by the LADWP.

### E.5.2. Treatment of the local development problem in the FiT's media

The initial treatment suggestion for the local development was initiated by mayor Villaraigosa, who challenged the outside groups to create a market-driven sustainability programme. The LABC has taken up the challenge and designed the FiT with the goals of local development in mind. The implementation of the FiT became the task for the LADWP and the CLEAN LA Solar. The programme's media took the role of the reporter of the progress with the focus on the positive results and attitudes "'I am excited to see a local business step up and join the CLEAN LA Solar movement in Boyle Heights,' said L.A. City Council member, José Huizar" [CLEANLAS-5]. Boyle Heights was one of the underprivileged areas, which had little potential to attract investments before the FiT.

The programme media also highlighted the developments in training opportunities for small businesses:

> *"This academy is an effort to demystify the contracting process and provide increased opportunities for small businesses to compete for contracts which have been historically most challenging," said Monica Rodriguez, Vice President, Board of Public Works. "Helping these businesses successfully navigate our process can provide infinite benefits which include boosting our local economy and creating jobs".* [LADWP-18]

Thus, training the businesses was depicted as a part of the FiT solution to the local development. The business training academy needed to ensure that solar businesses are successful. The good match of the academy's work with the FiT was also highlighted:

> *"At any one point a year and a half ago," Leslie said, "we had*

> *1,300 solar installers in training. About half were working, and of that half, many were having to go outside of the county to find work".* [LADWP-8]

Thus, the FiT allowed to contain the trained resources within the city and afforded them an opportunity apply their skills to the local development.

### E.5.3. Actors' roles in the local development problem in the FiT programme's media

The community was depicted as the *victim* in the need for the development. A joint effort the LADWP, CLEAN LA Solar, the training academy were praised for the positive results, thus, jointly fulfilling the role of *heroes*. The *villains* were not identified in this context.

### E.5.4. The role of values in the frame of local development in the FiT programme's media

Most of the time, the reasoning for the local development was underpinned by economic values bundled with other benefits. The values of local benevolence were the basis for containing the development locally, retaining skilled workers, and providing opportunities for the local people. Cultural and traditional values were mentioned in the case of the Moapa Paiute tribe, whose cultural preservation was suggested to benefit from the economic development. The frame of local development also relied on empowerment and self-direction, which resulted in educational programmes and promotion of competitiveness in the developing market.

Security underpinned the reasoning for diversification and stabilisation of the grid. Maintaining a reliable and cost-efficient supply of electricity was one of the objectives of local development.

## E.6. The FiT's Frames: Social Participation

The necessity of social participation was suggested by the LABC. The FiT's

media discussed actions for solving the problems highlighted by the LABC. The FiT media did not derive any new problems.

### E.6.1. Causal interpretation of social participation problem in the FiT programme's media

The FiT media discussed participation as a factor of success of the programme. The inclusiveness of such participation was one of the important goals:

> *"Every community should benefit from this rooftop solar program, and so far it's clear that effective rooftop solar can create opportunities in every part of the city," said Manuel Pastor, Director of USC' s Program for Environmental and Regional Equity. The FiT's early installations show the diversity of opportunity throughout the city.* [CLEANLAS-12]

Thus, the FiT was portrayed as a community empowerment tool. Following the LABC's reasoning, the programme's media argued for the cost basis for participation, specifically, attractive tariffs were deemed to be critical for participation. The programme's media also acknowledged that the simplicity of the application processes was the key for the participation:

> *LABC President Mary Leslie said "the Mayor issued a challenge for public-private solutions to bring clean, solar energy to Los Angeles. The FiT is an elegant solution because it is a simple contract that business understands and it creates new investment and jobs in L.A."* [LADWP-10]

The feedback from the community organisations was also reported with the focus on equality of the opportunity that the FiT provided:

> *Bill Gallegos, CEO of Communities for a Better Environment, said the program is an opportunity for all areas of the city. "There is one thing about the sun - it's very democratic," he said. "We are concerned about the health and economic well-being of our*

*community. What excites us about this program is the new opportunity it brings to address long-standing issues in the communities of L.A. with high economic need. We will see job creation, small and medium-size business development and cleaner air to breathe."* [CLEANLAS-13]

### E.6.2. Treatment of social participation problem in the FiT's media

The programme's media highlighted the work done by the LADWP to promote the programme and encourage participation. The LADWP arranged a series of workshops and reported "a tremendous amount of interest from folks wanting to attend the workshops" [LADWP-1]. However, the content of these workshops was not covered in the news in sufficient detail. The workshops targeted the local population. This focus was in line with the targets of local development but missed the opportunities to engage investments from outside the city.

The FiT media also reported the work on increasing the accessibility of the information:

*"We achieved a level of transparency that is unprecedented, providing more information on what is driving our costs and about the basis for the needed rate increase to the public and to the ratepayer advocate than ever before," said LADWP General Manager Ronald O. Nichols.* [LADWP-3]

The programme's media also reported successes achieved in the goals of equitable participation:

*More than 40% of Clean LA's projects are in solar equity hotspots. In many cases developers hired local workers, or forged partnerships with local training programs.… "I am excited to see a local business step up and join the CLEAN LA Solar movement in Boyle Heights," said L.A. City Council member, José Huizar.* [CLEANLAS-5]

### E.6.3. The element of actors' roles in the social participation frame in the FiT programme's media

The programme's media did not assign the roles of *victims*, *villains*, and *heroes* explicitly. However, in highlighting the actions and successes of the LADWP, the media implicitly portrayed the utility as the *hero* solving the problems.

### E.6.4. The role of values in the social participation frame in the FiT programme's media

The FiT media relied on the economic reasoning adopted from the LABC in their support of financial drivers of participation. The values of local benevolence underpinned the reasoning for inclusiveness of the programme and sharing of the benefits it provided. The empowerment of the community was the manifestation of the values of self-direction. The value of transparency supported the empowerment goals by providing the participants with the information for their decision-making.

## E.7. The FiT's Frames: Costing of the FiT

The programme's media did not discuss the issue of the cost. The FiT was presented as a well-priced and a cost-effective option considering its benefits: "LAs' groundbreaking new rooftop solar energy program is working well on its promise to bring cost-effective, clean power to tens of thousands of LADWP customers" [CLEANLAS-7].

### E.7.1. Causal interpretation of the costing problem in the FiT's media

The FiT's media presented the FiT as a low-cost treatment option: "[T]he cost of power under this LA's FiT program – averaging 15 cents per kilowatt-hour – is lower than any other similar FiT program in North America" [CLEANLAS-7]. This low-cost meant the cost for taxpayers and the utility, for the programme participants it meant lower incomes:

> *The cost of getting the program up and running will raise the*

> *average residential monthly electric bill by about 4 cents, according to a staff report. The DWP will hire an administrator and about 30 other people to operate the program but most of those costs will be reimbursed by program participants, the report said.* [CLEANLAS-11]

Though the cost of power purchase was low, it was estimated as still profitable for the businesses: “Felina will be able to begin selling the generated energy in March 2014, and will pay off the cost of the installation in three years” [CLEANLAS-1].

The programme also targeted reducing costs for the participants by making “the process more user-friendly and cost-efficient in the future" [CLEANLAS-12]. The costs could be further lowered by market mechanisms: “One of the biggest benefits is that competitive bids and greater economies of scale will result in lower costs to customers and minimize rate impacts” [LADWP-9].

Despite the concerns about the cost, the analysts estimated that the general impact on the economy would be cost saving over the long term: “In addition to clean energy, the program will generate significant cost savings that can be passed along to residents and create well-paying jobs - in all of our communities” [CLEANLAS-4].

### E.7.2. Treatment of the costing problem in the FiT’s media

The LADWP increased customer rates as the initial step “these investments are needed to comply with legal mandates” [LADWP-3]. Further, to adjust the cost of the programme to the lowering costs of solar the tariffs were set to “decline according to a tiered price structure that cap[ped] the amount of power that can be reserved at each price” [LADWP-15]. Apart from this initial rate increase, the FiT was presented as a well-priced, efficient, and cost-saving programme, requiring no further cost adjustments.

### E.7.3. Actors’ roles in the costing frame in the FiT’s media

The programme’s media presented the cost of the FiT as the best allocation of

money and, thus, a benefit for all the residents including participants and workers.

### E.7.4. The role of values in the costing frame in the FiT's media

The FiT's media used market rationality to argue for the benefits of the FiT costing. Because the benefits were allocated to all local actors, this reasoning was underpinned by local benevolence.

## E.8. The FiT's Frames: Environment and Location

This frame was the reaction in media to the concerns over the new solar installations and the disruptions they caused in the environment. These concerns showed that sustainable is not necessarily just solar renewable energy.

### E.8.1. Causal interpretation and treatment of the problem of environment and location in the FiT's media

The environmental reasoning was implied in the FiT based on the widely accepted belief that solar is the way to preserve the environment because it produces cleaner electricity generation mechanism avoiding pollution and reducing water consumption. This opinion was largely supported by science, however, some environmental impacts of PV production, installation, and functioning required further research and improvement (Torres-Sibille, Cloquell-Ballester, Cloquell-Ballester, & Artacho Ramírez, 2009; Tsoutsos, Frantzeskaki, & Gekas, 2005; Turney & Fthenakis, 2011).

In this frame, the programme's media acknowledged some potential disruptions: "[T]he construction work will have impacts on air quality, biological, cultural and paleontological resources, all of which will be minimized by the use of best management practices and mitigation measures" [LADWP-12]. Thus, the solution resonated with the approach of economic rationality, which allowed to balance costs of the damage and the benefits of the new plant.

### E.8.2. The role of values in the problem of environment and location in the FiT's media

This frame was discussed from the point of view of economic rationality. In this view, the damage to the intangible and difficult to value biological and cultural resources was redeemed by the economic benefits.

## E.9. Quotation Analysis in the FiT's media

Quotation analysis showed what the sources chose to portray and whom they quoted as references to support particular opinions and views. The programme's media relied extensively on quotations from the LABC. The main value themes supported by quotations were: compliance, inclusiveness, local benevolence.

> *"Each new installation brings us one step closer to meeting Mayor Garcetti's clean energy goals and creating a sustainable, thriving Los Angeles. Our clean energy efforts are turning out to be a critically important economic development tool for Los Angeles, and we're just getting started." said Mary Leslie, President of the Los Angeles Business Council.* [CLEANLAS-5]

Inclusiveness implied both self-direction and local benevolence and was achieved through sharing knowledge as stated by Mary Leslie of the LABC:

> *[W]e think it's critical for the city to build greater awareness so more building owners can evaluate if this solar program is a good FiT. The more they know about it, the faster the program can grow and meet its full potential.* [CLEANLAS-7]

The quotations of LADWP officials were used to explain different aspects of the programme development and implementation. Quotations from the city mayor were used to emphasise the achievement of the FiT and the LADWP:

> *"Today, we took a major step forward in creating a clean energy future for Los Angeles by flipping the switch on the first installation*

> *to be completed through the LADWP Feed-in Tariff Program - the largest offered by any city in the nation," said Mayor Villaraigosa in a press release.* [CLEANSLAS-2]

The mayor's involvement in FiT started when Mayor Villaraigosa set the solar goals for a feed-in tariff programme and continued with the pLAn developed under the administration of Eric Garcetti.

Positive comments from the community organisations were also quoted to praise the programme and its potential. For example:

> *"This is an important step in becoming a leader in Indian Country and will help to create a model for other Tribes to follow," said Aletha Tom, Chairwoman of the Moapa Paiute Tribal Council. "If our small Tribe can accomplish this, then others can also. There are endless opportunities in renewable energy, and Tribes across the nation have the available land on which to build them".* [LADWP-14]

This quotation concentrated on the opportunity of leadership (achievement) and self-direction for a small tribe. In taking up the opportunity, the tribe could become an example for others.

To emphasise the potential of the FiT, the framing devices used by the government officials were quoted: "[the FiT is a] great fit" [CLEANLAS-6], "I am thrilled" [LADWP-21], "I am excited" [CLEANLAS-5], "Angelenos should take pride" [LADWP-5].

## E.10. Emotional Analysis in the FiT's media

The FiT programme's media used many quotes from authorities to emphasise the celebratory nature of FiT achievements. For example, Mary Leslie, the president of the LABC was quoted: "This is a proud moment for Angelenos, and a reflection of the success of the FiT program. We look forward to celebrating many more projects to come" [LADWP-21]. Council member Joe Buscaino, in whose

council district one of the FiT projects was completed, was quoted expressing excitement and pride:

> *I am thrilled that the Port of L.A. is moving another step closer to its commitment to provide 10MW of solar power on port property by 2020.… I am proud that the L.A. Waterfront is playing a significant role in guiding the City forward in its implementation.* [LADWP-21]

Another cause for celebratory portrayal was the leadership of LA as the pioneer in the FiT in the nation:

> *"L.A. is a global sustainability leader because we are committed to developing innovative ways of producing clean, renewable energy," said Mayor Garcetti. 'FiT helps us create solar power locally and gives Angelenos the tools to play an important role in making our City more sustainable and resilient".* [LADWP-21]

Not only the city officials but also the businesses saw the FiT as a way to excel and provide an example:

> *"With programs like the LADWP's feed-in tariff, the solar market in Los Angeles is entering a really exciting time and is set to explode. We are looking to expand our services to solar development, leasing and consulting services as well," said Rishi Kapadia, President of TRK Development. "It's an incredible opportunity to invest in solar projects right now. Los Angeles is an ideal place for solar, and with this groundbreaking program Los Angeles can set the bar globally for what is possible with renewable energy generation".* [CLEANLAS-6]

Leadership and achievements in this quotations were associated with happiness and positive emotions, thus, encouraging repeated behaviour and participation:

> *"We couldn't be happier to be part of this program. I encourage other building owners to review the database and see what kind of*

*rooftop solar potential their buildings may have," said Jacob Levy, whose company Levy Affiliated Holdings owns the 103,000-square foot property.* [CLEANSLAS-5]

Another emotional intensification of action could be seen in the concern for the community wellbeing:

*"We are concerned about the health and economic well-being of our community," [Bill Gallegos, the CEO of Communities for a Better Environment] said. "What excites us about this program is the new opportunity it brings to address long standing issues in the communities of LA with high economic need. We will see job creation, small and medium-sized business development, and cleaner air to breathe."* [CLEANLAS-13]

## E.11. Summary of the Role of Values in the FiT's media

The most frequent value that was stressed in programme's communication was compliance. This role of compliance was both to justify the LADWP's actions and to enforce the actions from the community.

Another important value was local benevolence manifested in community empowerment. Empowerment of communities could also be interpreted as a self-direction value projected on others: Empowerment allowed other people to be more independent, free to make own choices, and able to express creativity in solving their own daily problems. Empowerment was discussed as attainable through education and the increased participation of the local economically disadvantaged population:

*Focusing on women, minority and military veteran-owned businesses, the academy's first session is now under way. Training provides information and insight about bidding and working on construction projects, including design-build and other project*

*delivery methods for LADWP, Public Works and USC.* [LADWP-18]

Empowerment linked economic and social development goals; it also increased self-dependency of the community and businesses.

Another important value was the value of achievement. It was manifested in leadership rhetoric, leadership was important for both Angelenos and surrounding tribes:

> *"This is an important step in becoming a leader in Indian Country and will help to create a model for other Tribes to follow," said Aletha Tom, Chairwoman of the Moapa Paiute Tribal Council. "If our small Tribe can accomplish this, then others can also. There are endless opportunities in renewable energy, and Tribes across the nation have the available land on which to build them".* [LADWP-14]

## E.12. The Utility and City Transformation in the FiT's Media

The FiT programme was presented as a transformative force allowing the change both in the LADWP, the city, and the community. The transformation was required to reduce dependency on coal and centralised power production (the utility monopoly):

> *Together the City of Los Angeles and the LABC have made great strides towards our efforts to reduce the City's dependency on coal, moving away from centralized generation toward a more distributed model while creating thousands of local jobs in the process.* [CLEANLAS-12]

Another transformation of the electricity sector was through reducing dependency on the out-of-state power:

> *Evan Gillespie, campaign representative for the Sierra Club's Beyond Coal Campaign, said the vote [for FiT approval] will allow the DWP to curtail its dependence on out-of-state energy generators.* [CLEANLAS-11]

The social transformation was seen as improvements in terms of inclusion, democracy, and equality: "[The FiT is] an innovative solar-energy program that represents an important step away from fossil-fuel dependence and toward a sustainable power supply that is inclusive, democratic and equitable" [CLEANLAS-4].

And the utility itself was characterised by its undergoing transformation:

> *"LADWP is replacing over 70% of its existing energy supply over the next 15 years," Nichols said. "Local solar not only increases the level of renewable energy we provide to customers but also helps maintain power reliability as we transition away from coal power".* [LADWP-6]

Besides replacement of the energy supply, the transformation also included improvements in cost-effectiveness and efficiency:

> *The transformation of LADWP's historic energy supply is well-underway. "Eliminating coal is one leg of our transformation, but we can't stand on that leg alone - we have to replace that power supply," said Ronald O. Nichols, LADWP General Manager. "That is why for several years now and for several more to come, LADWP has been taking steps to replace coal power with a combination of greatly increased commitment to energy efficiency, expanded renewable energy, and balancing that with a necessary amount of low-carbon natural gas power." All of these elements will come together to ensure a reliable, cost effective power supply transformation.* [LADWP-8]

# APPENDIX F. FRAMING IN THE PUBLIC MEDIA

The role of public media is to inform, to comment, to provide a forum for discussion, to critique government action, and to be a two-way medium for communication between public and government (Stenborg, 2013).

The selected public media source was the *Los Angeles Times* newspaper. The *Los Angeles Times* focused on issues that were omitted by the regulators and the LADWP. Presenting such coverage, the *Los Angeles Times* filled many gaps in the understanding of the programme and allowed meaning construction. The deficiency of the newspaper's coverage was in the lack of causal interpretations and treatment recommendations.

## F.1. The Portrayal of the FiT in the Public Media

The *Los Angeles Times* acknowledged the fact that the FiT was the largest urban programme of its kind. In the descriptions of the FiT, the *Los Angeles Times* often focused on the financial aspects of the programme:

> *Described as the largest urban rooftop solar program of its kind in the nation, the so-called feed-in-tariff program would pay customers 17 cents per kilowatt hour for energy produced on their own equipment.* [LAT-12]

In another example, the potential business income was highlighted:

> *The utility is paying the latest round of Feed-in Tariff applicants 14 or 15 cents per kilowatt hour -- enough to potentially pull in more than $120,000 annually for a two-and-a-half-acre array, according to DWP estimates.* [LAT-7]

The programme was also depicted as a transformation of the utility business:

> *Backers say it will chip away at the utility's dependence on*

*electricity from coal-fired plants and create thousands of local jobs in the developing, but still fragile, solar market.* [LAT-11]

However, the utility itself was portrayed as cautious, maintaining the slow pace of transformation: "The DWP settled on 10 megawatts only so it can work out the kinks, Nichols said. 'We want a really good experience for our customers,' he said. 'That's why we're starting small.'" [LAT-11].

## F.2. The Public Media Frames: Regulations

The *Los Angeles Times*'s frame concerning regulations discussed events that followed the implementation of the FiT. This was different from the regulations frame discussed in the LABC reports because the LABC's frame focused on the regulations required for the FiT implementation.

### F.2.1. The definition of the regulations frame in the *Los Angeles Times*

The main problem that the news discussed in relation to the FiT regulations was the problem of the open land use. An outdated law for solar installations was used for the FiT programme. This law did not make any differentiation between solar installed on vacant land and on rooftops. Written decades ago, the law had a purpose of promoting solar development and protection of "homeowners who put solar cells on their rooftops" [LAT-7]. The situation changed when the FiT regulations came into place allowing solar-owners to profit from their electricity production: "[T]he industry has exceeded the regulations we have in place" [LAT-6].

### F.2.2. Causal interpretation of the frame of regulations in the discussion in the *Los Angeles Times*

The *Los Angeles Times* presented opposing opinions in the problem on the background of the developments in the solar industry: "Solar, once almost universally regarded as a virtuous, if perhaps over-hyped, energy alternative, has now grown big enough to have enemies" [LAT-2]. Among these enemies,

Americans for Prosperity is an advocacy group that targeted to overturn the 20% renewable energy mandate in Kansas to set an example for the other states. The group explained their strategy stating that: “These green energy mandates are bad policy" [LAT-2]. This sweeping statement, however, found some concrete support in the lacking regulations for solar installations.

The communities argued that the low cost of solar and the lack of regulations would result in the decimation of land: “In agricultural-zoned land, you'd lose the whole community character. It wouldn't be ranches and horses and roosters. It would be these electrical panels” [LAT-7]. The supporters of solar, on the contrary, argued that “the commission decision [to deny solar development on the open land] had ‘no rational basis’” [LAT-7] and that the whole matter was of “statewide concern” [LAT-7] and not in the power of the local municipality. Thus, the regulations argument was translated into the issue of who was supposed to make decisions. The argument over the decision-making also involved the LADWP, the city council, and the community. The council’s power over the LADWP was blamed for the lack of responsibility on the LADWP side. It was also proposed to involve the community in the approval decisions. However, the LABC argued that the economic benefits of FiT were significant and the simplicity of application played a large role in its success, thus, involving community decision would needlessly slow down the programme.

### F.2.3. Treatment of the regulations frame in the *Los Angeles Times*

The *Los Angeles Times* discussed several areas of regulation improvement. Firstly, the LADWP should be able to approve the decisions without city council approval. Secondly, better regulations for ground-mounted solar were required. Some proposals involved a community voice in approving decisions, others argued for the continued involvement of the city council. The LADWP proposed to solve the problem economically by setting lower tariffs for the ground-mount solar. New guidelines were also proposed to differentiate whether a project was mainly for own use or for sale. Overall, the debate over the regulations caused a several months’ delay in the programme’s implementation.

### F.2.4. Actors' roles in the regulations frame in the *Los Angeles Times*

The newspaper article did side with any of the opposed sides, instead, the outdated and insufficient regulation were blamed. The new regulations were supposed to enable better conditions for all. Businesses and the residents could be considered the *victims* of the circumstances. However, the perspective on *victims*, *villains*, and *heroes* was value-based. For example, it could be argued that the businesses who proposed the ground-mounted solar were the *victims*. These businesses followed the regulations and obtained all the required approvals, however, their work was stopped because of the complaints from the community. The *villains*, in this case, were the residents. This value-perspective was taken by the LABC and other solar advocates who "praise[d] the program as a way to create jobs and boost renewable energy" [LAT-7]. In such view, jobs were good for the community and the renewable energy was good for the planet. Thus, the residents were opposing not only the businesses but also higher-level objectives of economic development and emission reduction. This argument relied on the values of universalism, particularly the value of natural environment and social development. It also relied on the values of economic rationality. These values manifested in equating the economic development with an increase in well-being.

If the argument were taken from the residents' value perspective, the businesses became *villains* and the residents were the *victims*. In such value perspective, local benevolence values underpinned the care and the responsibility for the immediate surroundings. These values were used in reasoning to give the community a voice in the solar projects' decision-making. Aesthetic values also opposed the values of economic rationality because the well-being was associated with an aesthetically appealing surroundings instead of economic opportunities.

### F.2.5. The role of values in the discussion of the regulations frame in the *Los Angeles Times*

The previous section showed the role of values in attributing the roles of *victims* and *villains*. The values contribution was in the analysis of those whose interests were concerned. The local residents voted for the beauty of their environment

associated with aesthetic values and universalism. The residents also supported what was close to them, thus, the focus was more on local benevolence than universalism. The solar businesses, in this case, were outsiders in the state. As the residents protected their rights over the immediate environment, this argument could be also analysed as a matter of power. Without an understanding of the values behind the actions, the resolution of such conflict could be incomplete.

This frame also demonstrated sensemaking processes that involved businesses, the residents, the utility, the City Council and the LABC: "Planning officials had vetted and approved the proposed solar array, but the residents lodged an appeal against it." [LAT-7]. The lack of agreement in values among the sensemaking participants resulted in a conflict that delayed the programme.

## F.3. The Public Media Frames: LADWP's Ineffectiveness

The problems with the LADWP's processes were highlighted by the LABC prior to the FiT. The news discussed the issue and expanded it. This issue of the LADWP's ineffectiveness was also discussed in the social media. The LADWP's Facebook page allowed users to leave comments and many comments were negative highlighting the issues of billing, disconnection, rudeness, and so on.

### F.3.1. The definition of the LADWP's ineffectiveness problem in the *Los Angeles Times*

The issue of the LADWP's ineffectiveness came into focus due to the requirement of the FiT to capture and keep the interest of its customers. The particular issues interfering with the objectives of the FiT were: slow processes, LADWP's culture of inaction, the complexity of LADWP's billing and contracts.

The role of news was to provide increase the salient of the issues and provide more evidence. In one of the stories, the *Los Angeles Times* profiled an apartment ownership business. The business owners were determined to support solar development. However, they complained that the application took "too long"

[LAT-11]. Despite the apparent setback and disappointment, the business owners decided to build solar in the future units.

In the issue of the LADWP's culture, the news stressed the issue of contradictions within the LADWP, which made the utility "unpredictable" [LAT-11] and not trustworthy:

> *"I like the idea of solar, but unfortunately my experience is that the DWP doesn't support it," said Engel, who has run a small manufacturing firm on Pendleton Street for four decades. "The conversation is one thing, the reality is another."* [LAT-11]

This example highlighted the difference between LADWP's communication and action. This conflict was a trigger for sensemaking. For the applicants, it was important to understand whether there is a potential for them to apply, and for the LADWP, there was a need for change not only of their business model but also the change of their perceived identity.

This complexity of the LADWP's processes resulted in frustration of the customers. In the case highlighted by the news, a solar customer said: "[T]hanks but no thanks to the DWP's long-awaited 'feed-in-tariff' program" [LAT-11] attributing his response to the previous bad experience.

Another aspect of the problem was the denial of some of these issues: "'That's a myth. And it's outdated,' Nichols [the general manager of the LADWP] said at a City Hall news conference that launched the feed-in-tariff program" [LAT-11].

### F.3.2. Causal interpretation of the LADWP's ineffectiveness frame in the *Los Angeles Times*

The *Los Angeles Times* did not provide much discussion about the reasons for the LADWP's ineffectiveness. The only issue discussed was the lack of the LADWP's decisive power in FiT decisions. The reasoning was that the LADWP could not be held responsible because its decisions were subject to approval by the city council. The city council was blamed for clinging to the power; its

representative Fuentes "continued to flex his muscle over the DWP as a council member, even as he advocate[d] to scale back some of those powers" [LAT-8].

### F.3.3. The element of actors' roles in the LADWP's ineffectiveness frame in the Los Angeles Times

The customers of the LADWP were presented as the *victims* of the poor service of the utility. The LADWP was generally portrayed as the *villain*. However, the *Los Angeles Times* highlighted that this was not the only interpretation: "Outside consultants have argued that the DWP is too vulnerable to political interference" [LAT-8]. This influence was discussed as the decision-making power, which the city council maintained over the approval of the FiT projects. Thus, the city council could be viewed as the responsible party, too.

Attempts to change this power distribution were discussed: "Under… [Felipe Fuentes'] proposal, many day-to-day utility decisions would not automatically go to the council, but the council would retain the power to step in and override DWP board decisions." [LAT-8]. However, the discussion highlighted the contradiction in words and actions of the city council: "It's in stark contradiction with what he's trying to do,' said Walker Foley, Southern California organizer with the consumer and environmental advocacy group Food & Water Watch…Fuentes disagreed with the idea that there was any contradiction." [LAT-8].

### F.3.4. The role of values in the LADWP's ineffectiveness frame in the *Los Angeles Times*

The LADWP's slowness was explained by the values of security. LADWP argued that their slow transition was meant to create certainty. However, this argument was contradicted by the experience of the customers who argued that LADWP was unpredictable.

The discussion about the complexity of the LADWP contracts and application processes was based on the values of simplicity and the inclusiveness of the participation that simplicity would allow. Inclusiveness was associated with the

values of local benevolence.

The power balance between LADWP and the city council was another issue where each authority seemed to want to have final power about decisions surrounding the FiT: “Critics say that by blocking the original plan, Fuentes has continued to flex his muscle over the DWP as a council member, even as he advocates to scale back some of those powers” [LAT-8]. The arguments for maintaining such power were portrayed with criticism as the contradictions in the reasoning of the council were pointed out but also concerns “concerns about how Angelenos would hold the utility accountable if council oversight were weakened” [LAT-8] were expressed. This argument demonstrated how the opposing parties used the same value to engage support. The value of empowerment underpinned the argument for both sides albeit creating conflicting motivations for actions. The public, thus, faced seemingly a morally equal choice, with the difference only in the portrayal of candidates for power.

## F.4. The Public Media Frames: Local Development

The *Los Angeles Times* inherited the overall development objectives from the LABC’s vision. These objectives included job creation, local investments, and providing renewable power for the households.

### F.4.1. The definition of the problem of local development in the *Los Angeles Times*

The problem of economic development highlighted in the *Los Angeles Times* was in the contradictions between the vision of the LABC and the expectations from the residents: “We believe in economic development -- but this is not the kind we want” [LAT-10]. The differences are discussed in the other frames of the *Los Angeles Times*; this frame is focused on the root cause of such differences.

### F.4.2. Causal interpretation of the frame of local development in the *Los Angeles Times*

On the high-level, the need for the FiT appeared because the “DWP lag[ged] behind any other major utility in the state in terms of installed solar capacity” [LAT-11]. The FiT was designed to fix this lag and transform the utility. However, such goal was in contradiction with the utility’s business interests. The previous monopoly ensured that the LADWP had no competition and retained control over the electricity matters in its region. The new developments required to seize this control but “utilities don't like competition” [LAT-2]. Such contradiction resulted in the delays with the implementation and reduced participation, thus, plummeting the development. Another cause of the lack of the development was attributed to the behaviour of the participants: “Businesses take the incentives and do not care about failure”. This could be attributed to the contradictions to the predictions based on the rational thinking, the thinking that did not account for greed and dishonesty. Another contradiction was between the predicted economic reasoning of the participants and the reported underlying motivation to participate as a desire to do "to do [a]… part to transition from carbon emission to zero carbon” [LAT-4]. However, despite the differences in the values underlying the motivation, the action coincides with the prediction.

### F.4.3. Treatment recommendation for the problem of local development in the *Los Angeles Times*

The problems of local development discussed by the *Angeles Times* were value-

based and no treatment was recommended. The more practical components of the local development were discussed as part of the other frames in the *Los Angeles Times*.

### F.4.4. The element of actors' roles in the frame of local development in the *Los Angeles Times*

In this frame, the LADWP and some of the businesses were discussed as the *villain*, responsible for the less than expected achievements in the local development. The residents, on the contrary, were portrayed as the *heroes* who were willing to contribute based on the altruistic motivations.

### F.4.5. The role of values in the frame of local development in the *Los Angeles Times*

The *Los Angeles Times* discusses examples of both value-framing convergence and divergence. For example, the LADWP had a high focus on compliance and compliance values were used to design the transformation as a regulatory enforced programme. However, compliance values also meant that the loopholes in the regulations were exploited resulting in unintended outcomes. The example of value-framing convergence was the result of participation. Despite the motivation to participate was promoted as an economic gain, some residents reported that their motivation was to do their part and contribute to environmental protection and the development goals.

## F.5. The Public Media Frames: Social Participation

Social participation was highlighted as a requirement for a successful feed-in tariff programme by the LABC and the programme's media. The *Los Angeles Times* discussed the social participation problems that appeared during the implementation of the FiT.

### F.5.1. The definition of the problem of social participation in the *Los Angeles Times*

The *Los Angeles Times* discussed the following problems impeding social participation in the FiT: the lack of value alignment and transparency, mistrust, and the lack of consultation with the community.

### F.5.2. Causal interpretation of the frame of social participation in the *Los Angeles Times*

The values of economic development pursued by the FiT were contrasted with the different perspective on well-being in Owens Valley: “Ranching is our calling. This valley is our most valuable resource. They want to cover it up with solar panels” [LAT-10]. Thus, the solar development was perceived as a negative impact on the livelihood.

The FiT media highlighted the transparency achieved by the LADWP in reporting the FiT progress. However, the *Los Angeles Times* quoted residents who believed that the information was not disclosed, especially, the information about the “ecological atrocities and corporate favoritism” [LAT-3].

The lack of transparency was combined with the lack of trust. Instead of involving the community, such issues caused withdrawal and coalition against the solar development. For example, the *Los Angeles Times* reports on a community in Owens Valley forming and “alliance of the Owens Valley Committee, Native American tribes, cattlemen, conservation groups, the National Park Service and members of local nonprofits” [LAT-10]. Not only the coalition emerged but also boasted a high-level of organisation and participation:

> *“The sophistication and organizational skills of the opposition are unprecedented,” Inyo County Supervisor Jeff Griffiths said in an interview. “Some people think that we may be witnessing the birth of historic empowerment in terms of the county's relationship with the city of Los Angeles”.* [LAT-10]

Contradictions between the goals of solar development and preservation of the natural environment became a trigger for meaning construction:

> *"We're also doing further planning to determine how the Inyo County community would like to proceed with renewable energy development in Owens Valley, if at all," said Joshua Hart, Inyo County's planning director.* [LAT-10]

### F.5.3. Treatment recommendation for the problem of social participation in the *Los Angeles Times*

Ironically, the goals of social participation in the FiT resulted in the participation in opposition movements. These movements also provided a fruitful ground for meaning construction. The quotations of the local residents in the *Los Angeles Times* showed a good knowledge of the topic and independent opinions as a result of the meaning construction of sustainability.

In particular, the residents offered the following treatments to the solar development with the community needs in mind:

- Awarding of bids should be transparent.
- Hidden costs of solar plants should be revealed. Hidden costs included the economic damage to the existing economy, such as the livelihood of the residents in Owens Valley, their trade based on the attractiveness of the area. These costs also included the emotional value of the Manzanar Historic Site and economic value of tourism in the area.
- Ecological atrocities are to be reported.
- Instead of big, utility-scale developments, more and smaller projects in already connected areas should be built.

The last item was an example of value convergence. The goal of developing small solar projects in already connected area coincided with the initial proposal of the LABC. However, the LABC's proposal resonated with the values of

efficiency and cost saving. The same action proposal from the residents was additionally motivated by universalist and local benevolence values: preservation, the beauty of nature, responsibility for the environment.

### F.5.4. The element of actors' roles in the frame of social participation in the *Los Angeles Times*

The solar developers were portrayed as *villains* and the communities and animals whose habitat was damaged were the *victims*. The communities also acted as *heroes* by self-organising and protecting themselves and the environment.

### F.5.5. The role of values in the frame of social participation in the *Los Angeles Times*

The discussion in this frame demonstrated that the values of economic rationality were not as much motivating for the residents as the values of local benevolence, transparency, and environmental protection. Transparency was required as in support of the empowerment that was related to the ability to make sense of the situation and react accordingly. The environmental concern was interpreted differently than the commonly used goal of GHG reduction. Instead, the environment was associated with the preservation of species and their natural habitat. The value of the environment was also aesthetic and cultural.

An example of value-framing convergence was discussed in relation to the suggestion to develop small solar projects in already connected areas. The values of efficiency, cost saving, nature preservation, and the appreciation of the beauty of nature converged in this development suggestion.

## F.6. The Public Media Frames: Costing of the FiT

The *Los Angeles Times* discussed various opinions on what the cost of the FiT should be. These costs involved the tariffs and the cost to taxpayers.

### F.6.1. The definition of the costing problem in the *Los Angeles Times*

The problem of the FiT pricing was in the potential cost burden on the taxpayers: "You need to focus on that pricing issue to make sure we don't buy energy far beyond what the ratepayers would consider to be normal since they will be paying for it" [LAT-11].

The other problem was in the unfair allocation of subsidies. The rooftop panel owners' contribution to solar production did not count towards the state goals. It meant that the customers who invested in own solar panels did not lower the still outstanding amount of electricity that the state had to produce. Because the taxpayers had to finance the state requirement, the solar owners, effectively, paid twice:

> *"Ratepayers essentially subsidize utility companies," said Bernadette Del Chiaro, executive director of the California Solar Energy Industries Assn. "We all get taken to the bank" if utilities are spending to reach a 50% clean-energy mandate that could be attained faster and cheaper with the help of roof panels.* [LAT-4]

This regulation made the solar owners feel unfairly cheated. The explanation for such exclusion blamed the big developers:

> *The rooftop solar industry and consumer advocates say opposition to including rooftop solar in California's renewable energy mandate came from large developers that feared competition for subsidies as well as unions that were upset because rooftop solar installers typically aren't members.* [LAT-4]

### F.6.2. Causal interpretation of the frame of the FiT's costing in the *Los Angeles Times*

Solar proponents, such as the LABC, claimed that the solar customers created so many benefits on the state level that their contribution was much more than the cost for the taxpayers.

However, anti-solar groups reasoned that the solar costs were unfairly distributed becoming a burden for less affluent population:

> *"If you are using the grid and benefiting from the grid, you should pay for it," said David Owens, executive vice president of the Edison Electric Institute, the advocacy arm for the industry. "If you don't, other customers have to absorb those costs".* [LAT-2]

Another opinion was that the cost of solar could be recovered from the federal incentive, thus, being free for the local population:

> *It's an opportunity to take advantage of the federal tax credits and depreciation and to have solar installed on their roofs and reduce their electric bills and potentially generate a new source of income, making their rooftop now an asset.* [CLEANLAS-9]

The arguments also underlined the inherent cost-saving nature of the FiT. The mechanisms for the cost saving included reusing resources, reduced maintenance, and lower transmission costs:

> *"A big advantage of local solar installations is that they generate clean, sustainable power right here in Los Angeles, avoiding the cost of building new transmission or taking up capacity on existing lines," Nichols said. "This also avoids the cost of energy losses that occur when transporting energy from several hundred miles away".* [LAT-1]

### F.6.3. Treatment recommendation for the FiT's costing problem in the *Los Angeles Times*

The issue of cost was well-covered in the *Los Angeles Times.* The suggestions for treatment depended on the interests and values of the supporting groups.

The anti-solar groups advocated for the legislation to be changed to penalise net metering customers and reduce the renewable energy quotas. The strategic work of Koch brothers resulted in penalties on net-metering in one of the states, but not

in Los Angeles.

Some of the utilities supported this proposal because solar was taking away their business. However, the proponents of solar supported the subsidies and the utility business transformation. They saw the solution in economic development and the growth of the solar market.

### F.6.4. The element of actors' roles in the FiT's costing frame in the *Los Angeles Times*

The attribution of the roles of *victims*, *villains*, and *heroes* was discussed in relation to the group's position. The solar proponents saw solar customers as *heroes* and supported the incentives for them. On the contrary, solar opponents portrayed the solar customers as *villains* whose avoidance of the grid costs and profits from solar sales were unjustified. The opponents of solar also claimed the low-income population to be the *victims* because they had to shoulder the rising costs of maintaining the grid. The residential solar customers had yet another opinion. They attributed the role of *villains* to the big developers who profited from the incentives that could have been fairly distributed to all solar owners.

### F.6.5. The role of values in the costing frame in the *Los Angeles Times*

The problem of the FiT costing was discussed in the *Los Angeles Times* as an issue of fairness. Such discussion was underpinned to a certain degree by economic rationality. Economic rationality was used to weigh-in benefits and costs for various interested groups. However, the fairness reasoning, essentially, could not be objective because the benefits and costs could only be estimated within one value system. For example, the value of the reduction in GHG emissions would be different for the environmentalists as compared to the utilities.

## F.7. The Public Media Frames: Environment and Location

The frame of environment and location discussed the issues related to the location of the new solar projects and environmental impacts of these projects. The issues of environmental protection were interpreted in a broader sense than just emissions. These issues included the appreciation of the environmental beauty and the preservation of species and their habitat.

### F.7.1. The definition of the problem of environment and location in the *Los Angeles Times*

The *Los Angeles Times* discussed the problem of environment and location as the destruction of the neighbourhood attraction, degradation of the natural environment, and the emotional damage from altering the look of the historical Manzanar site. The residents expressed their concern for the decimation of open land:

> *Critics of the [FiT development] plan say they have little leverage to stop it. "There is no agency that regulates vistas and views," said Bruce Embrey, co-chair of the Manzanar Committee, a nonprofit dedicated to preserving the site. "We have moral authority, an appeal to the city's social conscience. We are urging the DWP to consider alternative sites for its solar farm, perhaps on structures in downtown Los Angeles."* [LAT-9]

### F.7.2. Causal interpretation of the problem of environment and location in the *Los Angeles Times*

The *Los Angeles Times* discussed two main arguments. The first associated the non-local businesses with the careless installations of the ground-mounted solar in the open space. The residents "have been fighting a proposal to sandwich 3,500 solar cells between houses and horse stable" [LAT-13]. Such "sandwiching" was deemed undesirable for the aesthetic look of the neighbourhood. Apart from the

beauty of the environment, cultural reasons were also brought up in another LADWP's project: "[T]he project would mar the land and spoil the isolation of Manzanar National Historic Site" [LAT-10]. The second argument claimed that renewable energy is a state-wide concern and "it would be a mistake to delay ground-based arrays" [LAT-6].

Another opinion was that the ground-mounted solar was not a problem. Despite "[n]ineteen of the 119 sought-after or approved Feed-in Tariff projects in Los Angeles [were] mounted on the ground" [LAT-6], the LABC representative said: "I don't think it's a systemic problem." [LAT-6]. Such denial of problem encouraged silencing sensemaking and did not contribute to the resolution of the conflict.

### F.7.3. Treatment recommendation for the problem of environment and location in the *Los Angeles Times*

The residents and their supporters proposed to take additional measures to ensure that solar installations do not cause unnecessary harm. Their argument was not against solar, but suggested that "[they] shouldn't be covering open space with solar panels when [they] ha[d] all these buildings and parking lots.". Essentially, this was an example of value-framing convergence. The residents proposed the same treatment as the LABC, specifically, the option of installing solar panels on empty roofs. However, these treatment options were underpinned by different values: cost saving and efficiency values in the LABC's recommendation and environmental and local benevolence in the resident's frame.

To ensure that the open space stays open, the following suggestions were recorded by the *Los Angeles Times*:

- The LADWP should craft a new process requiring residents' feedback before approval.

- The LADWP should put ground mounted projects on hold.

Another option was to add an economic penalty: "In reaction to community

concerns, the DWP [was] also weighing whether it could offer to pay different prices for energy generated by solar cells mounted on the ground and those on rooftops" [LAT-7].

### F.7.4. The element of actors' roles in the frame of environment and location in the *Los Angeles Times*

The allocation of the actor roles was dependent on the value position. From the residents' point of view, several *villains* were blamed for the problems. The LADWP was blamed for initiating the development and the insufficient regulations. The out-of-state businesses were blamed for greed and the lack of discernment. The *victims* were the neighbouring communities, animals, and those who valued the historical heritage. From the point of view of the business community, the residents and opponents of the development were the *villains* and the businesses that were delayed were the *victims*. From a more inclusive perspective, the whole society of the country was portrayed as the *victim* suffering from the delayed development of the clean solar market.

### F.7.5. The role of values in the environment and location frame in the *Los Angeles Times*

The reasoning for environmental protection and protection of the aesthetic feel of the neighbourhood was reliant on the values of local benevolence and universalism. At the same time, universalism values supported the argument for no delays in the solar installations as these installations were deemed to benefit the nation. This was an example of value-framing divergence; that is, the same values of universalism underpinned opposing action proposals.

The values of local benevolence were evident in the reasoning for the preservation of community. Traditional values were evident in the concern for the preservation of the Manzanar historical-monument.

## F.8. Quotation Analysis in the *Los Angeles Times*

The *Los Angeles Times* relied on a variety of quotations from the LABC, businesses, the LADWP, the governments, the community, and various community and non-profit organisations. LABC's quotations were used only three times. They were used to confirm the benefits of the FiT and also to reinforce the value of FiT, which was portrayed as "a major step forward for the economic and environmental sustainability of Los Angeles" [LAT-12].

The LADWP's quotations were used to give a feeling of the internal organisational culture and the problems experienced by the LADWP: "The staff says, 'Hey, we should be doing this.' The board goes along with that. Now the City Council has to approve it - it's like, 'Who is responsible?' Moss [former DWP board member] said" [LAT-8].

The *Los Angeles Times* used many quotations from community organisations, such as environmental protection groups, industry representatives, Americans for Prosperity, and neighbourhood councils. The *Los Angeles Times* also quoted government officials to show how they justified their actions and explain the drawbacks in the programme implementation:

> *Fuentes said the department had already postponed a first deadline by six months because of those city delays, before the companies sought a second extension to the agreed-upon deadlines. "If DWP were to allow these companies to miss deadlines without penalty, it would set a costly precedent," signaling that its contracts "have no teeth," Fuentes said.* [LAT-8]

Quotations from the public were used to show distress caused by some of the FiT developments:

> *"It's not about being against solar power. I'm all for it," said Eddie Conna, who lives just outside of Los Angeles in Kagel Canyon and has raised concerns about proposed installations nearby. "But we shouldn't be covering open space with solar panels when we have*

*all these buildings and parking lots".* [LAT-6]

Quotations were also used to reflect public feedback and questions:

> *What's the (environmental) good, bad and evil of those systems? What's their life-cycle cost for housing, fuel, maintenance, repair and replacement? Is the cost of converting direct-current battery power via expensive inverters to usable alternating-current power accounted for separately?*
>
> *I am all for implementing solar and wind power if it's done responsibly and the total amortized cost for an integrated system is transparent. Off-the-grid solar arrays are only one part of the system.* [LAT-3]

These questions showed that the public was willing to gain knowledge and understanding and that the reporting of the solar development was insufficient for developing its meaning.

## F.9. Emotional Analysis in the *Los Angeles Times*

The focus of the *Los Angeles Times* on the community allowed portrayal of the emotional context of the FiT. The *Los Angeles Times* devoted significant effort to the positive emotions associated with leadership: "We are leading the region and the nation with FiT" [LAT-5]. Leadership was associated with achievement. It was used to praise and encourage: "McCandless said she would give tours of her home to encourage others to go solar, and she's tried to stay informed about developments in the rooftop solar industry" [LAT-4].

The negative emotions were a response to the LADWP's inefficiencies: "That sour taste is shared by other solar customers and installers who have similar tales of missteps, delays and poor customer service in connection with the net-metering program" [LAT-4]. The sense of unfairness arose even stronger emotions: "'We all think we're making a difference and contributing,' McCandless said. 'I'm just so angry'" [LAT-4]. Overall, the emotions intensified the values in reasoning,

namely, the values of achievement, fairness, and effectiveness.

## F.10. Summary of the Role of Values in the *Los Angeles Times*

As a reporter of a variety of opinions, the *Los Angeles Times* discussed various values. The values of economic rationality were attributed to the design of the FiT. Local benevolence was omnipresent in the reasoning and motivation. Such reasoning also included equality, fairness, inclusiveness, and responsibility for the local environment. Achievement values, transparency, and self-direction supported empowerment reasoning. Universalism values were evident in the reasoning for the national and global effects.

Universalism values demonstrated an example of value-framing divergence in supporting and opposing the ground-mounted FiT development. The universalism values, in this case, had a different focus on the environment. In the case of the FiT support, the environment was viewed as the global environment critical for the survival of the human race. In the case of the opposition to the ground-mounted FiT, the environment was valued for its beauty. A case of value-framing convergence resulted in the support for the rooftop solar from the residents and the LABC, who used different value priorities in their reasoning. The LABC relied more on the values of economic rationality, while the residents emphasised local benevolence.

## F.11. The Utility and City Transformation in the *Los Angeles Times*

The *Los Angeles Times* acknowledged the transformative power of the FiT. The programme was expected to transform the city by modifying the role of commercial property owners: “It would spur more commercial property owners to go solar” [LAT-12]. It was expected to reduce the city’s dependence on other states: “[T]he vote [for the FiT would] allow the DWP to curtail its dependence on out-of-state energy generators” [LAT-12]. The FiT was the mechanism for the

market development: “Backers say it will chip away at the utility's dependence on electricity from coal-fired plants and create thousands of local jobs in the developing, but still fragile, solar market” [LAT-11].

In summary, the FiT was expected to result in the economic development, the establishment of the solar market, and pollution reduction. Overall, the positive effects of the FiT would enable Los Angeles’s transformation into a more sustainable urban environment.