

---

# Contents

---

<b>FOREWORD</b> . . . . .	xi
Agathe EUZEN	
<b>INTRODUCTION</b> . . . . .	xiii
Magali REGHEZZA-ZITT and Samuel RUFAT	
<b>CHAPTER 1. DEFINING RESILIENCE: WHEN THE CONCEPT RESISTS</b> . . . . .	1
Magali REGHEZZA-ZITT, Serge LHOMME and Damienne PROVITOLLO	
1.1. A multidisciplinary construct . . . . .	2
1.1.1. Material physics: resilience and resistance . . . . .	2
1.1.2. Psychology: resilience, processes and properties of overcoming, reconstruction and reinforcement . . . . .	3
1.1.3. Ecology: resilience, persistence and adaptation . . . . .	4
1.2. Transfers in cindynics . . . . .	5
1.2.1. The early 2000s . . . . .	6
1.2.2. A response to theoretical and methodological issues. . . . .	9
1.3. Defining resilience . . . . .	12
1.3.1. The “rainbow” of meanings . . . . .	12
1.3.2. Recognizing resilience . . . . .	16
1.4. Two concepts for a single word . . . . .	18
1.4.1. Resilience in the “techno-centric” paradigm . . . . .	18
1.4.2. Resilience in the social sciences. . . . .	20
1.5. Conclusion . . . . .	22
1.6. Bibliography . . . . .	24

<b>CHAPTER 2. RESILIENCE AND VULNERABILITY: FROM OPPOSITION TOWARDS A CONTINUUM.</b> . . . . .	29
Damienne PROVITOLLO and Magali REGHEZZA-ZITT	
2.1. One or several vulnerabilities? . . . . .	30
2.1.1. Biophysical vulnerability . . . . .	30
2.1.2. Social vulnerability . . . . .	31
2.1.3. Territorial vulnerability . . . . .	32
2.2. The vulnerability/resilience pair . . . . .	34
2.2.1. Resilience as the opposite of vulnerability. . . . .	34
2.2.2. Resilience as a component of vulnerability . . . . .	36
2.3. Beyond opposition: the notion of “resiliency vulnerability” . . . . .	37
2.3.1. Explanation of the factual part of the model. . . . .	38
2.3.2. Explanation of the “resiliency vulnerability” part of the model. . . . .	40
2.3.3. The vulnerability/resilience pair in the “resiliency vulnerability” model . . . . .	44
2.4. Conclusion . . . . .	46
2.5. Bibliography . . . . .	46
 <b>CHAPTER 3. RESILIENCE: A QUESTION OF SCALE</b> . . . . .	 51
Géraldine DJAMENT-TRAN	
3.1. Resilience as a scalar problem . . . . .	52
3.1.1. Resilience and temporal scales . . . . .	52
3.1.2. Resilience and spatial scales . . . . .	55
3.1.3. Resilience to the issue of the desynchronization of spatial and temporal scales . . . . .	56
3.2. The “glocalization” of risk and scalar reconfiguration of resilience . . . . .	57
3.2.1. Globalization changes the scale of the event and of vulnerability . . . . .	57
3.2.2. Globalization leads to a re-thinking of the scales of resilience . . . . .	58
3.2.3. Who controls resilience? How to find the correct management scale . . . . .	60
3.3. Changing scales to explain resilience . . . . .	62
3.3.1. From individual resilience to the resilience of territories . . . . .	62
3.3.2. Historicizing resilience: working with temporal scales. . . . .	65

3.3.3. Scalar interactions, fundamental elements of the resilience process. . . . .	67
3.4. Conclusion. . . . .	69
3.5. Bibliography. . . . .	69
<b>CHAPTER 4. RESILIENCE: A SYSTEMIC PROPERTY</b> . . . . .	<b>75</b>
Céline PIERDET	
4.1. Resilience and systemic analysis. . . . .	76
4.1.1. Defining a spatial system. . . . .	76
4.1.2. Criteria for a resilient spatial system. . . . .	78
4.2. The case of the city, a complex sociosystem. . . . .	80
4.2.1. The synthetic approach to systemic analysis. . . . .	80
4.2.2. The nature of interactions in a spatial system. . . . .	82
4.3. Maintaining the cohesion of the system to overcome the crisis. . . . .	85
4.3.1. A dichotomy of "kernels"/"margins". . . . .	85
4.3.2. Disturbances with different origins. . . . .	86
4.3.3. The system's response to disturbances. . . . .	87
4.4. Conclusion. . . . .	89
4.5. Bibliography. . . . .	90
<b>CHAPTER 5. FROM THE RESILIENCE OF CONSTRUCTIONS TO THE RESILIENCE OF TERRITORIES: A NEW FRAMEWORK FOR THOUGHT AND FOR ACTION</b> . . . . .	<b>93</b>
Bruno BARROCA	
5.1. The conditions of resilient planning on the scale of the territory. . . . .	94
5.1.1. Project urbanism, a new reference framework. . . . .	94
5.1.2. A risk-integrating place-based project. . . . .	96
5.2. Applying resilience: adaptation and resistance of the material components. . . . .	98
5.2.1. Example of resistance to earthquakes. . . . .	99
5.2.2. Example of resistance to flooding. . . . .	103
5.3. Conclusion. . . . .	106
5.4. Bibliography. . . . .	107
<b>CHAPTER 6. ADAPTING TERRITORIAL SYSTEMS THROUGH THEIR COMPONENTS: THE CASE OF CRITICAL NETWORKS.</b> . . . .	<b>109</b>
Damien SERRE	
6.1. Technical and critical networks, strategic elements of resilience. . . . .	110

6.1.1. Technical networks in towns. . . . .	111
6.1.2. Technical networks: critical infrastructures . . . . .	112
6.2. Choosing adaptations. . . . .	113
6.2.1. Modeling the urban system. . . . .	114
6.2.2. The role of networks in the urban system . . . . .	116
6.2.3. The tools at our disposal . . . . .	119
6.2.4. The development of decision-making tools . . . . .	120
6.3. Conclusion. . . . .	121
6.4. Bibliography. . . . .	123
<b>CHAPTER 7. RESILIENCE AND GLOBAL CLIMATE CHANGE. . . . .</b>	<b>125</b>
Claude KERGOMARD	
7.1. Resilience and global change: scales, temporalities and uncertainty. . . . .	127
7.1.1. Global change and the city: a problem of scale? . . . . .	127
7.1.2. Global change, disasters and resilience: questions of temporalities . . . . .	129
7.1.3. Uncertainty: a key issue. . . . .	130
7.2. Adaptation to global change and resilience. . . . .	131
7.2.1. Climate change: from impacts to adaptation . . . . .	132
7.2.2. Adaptation to climate change: the diversity of themes and ambiguities . . . . .	134
7.2.3. Adaptation in question . . . . .	136
7.3. Urban resilience and sustainable urban planning practices . . . . .	137
7.3.1. Temporal horizons and diversity in practices for sustainable urban development . . . . .	137
7.3.2. Eco-districts, ecological cities: what level of resilience? . . . . .	139
7.4. Conclusion. . . . .	142
7.5. Bibliography. . . . .	143
<b>CHAPTER 8. ORGANIZATIONAL RESILIENCE: PREPARING AND OVERCOMING CRISIS. . . . .</b>	<b>147</b>
Richard LAGANIER	
8.1. The components and temporalities of a crisis . . . . .	148
8.1.1. System disruption . . . . .	148
8.1.2. The components of a crisis . . . . .	149
8.1.3. The time of crisis. . . . .	150
8.2. Lessons from feedback. . . . .	151
8.2.1. Managerial flaws. . . . .	153
8.2.2. Cultural deficiencies. . . . .	154
8.2.3. Organizational failings . . . . .	155

8.3. Organizing to overcome a crisis . . . . .	156
8.3.1. Before: mitigating and preparing for future crises . . . . .	157
8.3.2. During the crisis: intervening to limit impacts and control the situation . . . . .	163
8.3.3. After the crisis: re-establishment . . . . .	165
8.4. Conclusion . . . . .	166
8.5. Bibliography . . . . .	166
<b>CHAPTER 9. (RE)CONSTRUCTING RESILIENT DISTRICTS: EXPERIENCES COMPARED . . . . .</b>	<b>169</b>
Julie HERNANDEZ and Stéphanie BEUCHER	
9.1. (Re)New Orleans: Big Easy as a resilience laboratory . . . . .	170
9.1.1. "Rebuild it bigger" and "the optimism of disaster" in the United States . . . . .	170
9.1.2. "Rebuild it safer": impossible strategies for urban retreat . . . . .	172
9.1.3. "Rebuild it fairer": how to negotiate "resilience" and "spatial justice" . . . . .	174
9.1.4. Resilience is not always a good thing. . . . .	175
9.2. Urban renewal and resilience in East London: the Thames Gateway . . . . .	177
9.2.1. A development project: a beacon in the context of major risk . . . . .	178
9.2.2. From sustainable development to resilience. . . . .	179
9.2.3. Resilience as a multiplicity of crisis preparation structures . . . . .	181
9.2.4. TE2100: a resilience strategy . . . . .	182
9.3. Conclusion . . . . .	184
9.4. Bibliography . . . . .	185
<b>CHAPTER 10. RESILIENCE, MEMORY AND PRACTICES . . . . .</b>	<b>187</b>
Antoine LE BLANC	
10.1. The resilient system between identity and evolution . . . . .	188
10.1.1. Resilience and district identities . . . . .	188
10.1.2. Temporalities and memories . . . . .	190
10.1.3. The conservation of ruins: an example . . . . .	191
10.2. Resilience and retaining a memory of risk . . . . .	192
10.2.1. The ambiguities of preserving traces of catastrophes as heritage. . . . .	193
10.2.2. The symbolic construction of disaster and risk . . . . .	194
10.2.3. Resilience and forgetting . . . . .	195

---

10.3. The problem of identity . . . . .	195
10.3.1. Resilience confronted by the urban palimpsest . . . . .	195
10.3.2. The example of Dresden . . . . .	196
10.4. Conclusion . . . . .	197
10.5. Bibliography . . . . .	198
<b>CHAPTER 11. CRITIQUE OF PURE RESILIENCE.</b> . . . . .	<b>201</b>
Samuel RUFAT	
11.1. Resilience to the test of discourses . . . . .	202
11.1.1. Resilience as a new label . . . . .	202
11.1.2. Resilience between risk production and risk construction . . . . .	204
11.1.3. The waltz of notions . . . . .	206
11.1.4. Resilience as a political discourse . . . . .	208
11.2. The dark side of resilience . . . . .	210
11.2.1. The fallacies of resilience . . . . .	211
11.2.2. The resilience imperative and social Darwinism . . . . .	212
11.2.3. Adapt or perish! . . . . .	213
11.2.4. The return of a moral interpretation of disasters. . . . .	214
11.2.5. "There is no alternative" . . . . .	216
11.3. "Good" or "bad", who is declaring resilience? . . . . .	220
11.3.1. The resilience of slums . . . . .	221
11.3.2. Resilience and governmentality . . . . .	223
11.4. Conclusion . . . . .	224
11.5. Bibliography . . . . .	226
<b>CONCLUSION</b> . . . . .	<b>229</b>
<b>LIST OF AUTHORS</b> . . . . .	<b>235</b>
<b>INDEX.</b> . . . . .	<b>239</b>