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Alexandra Jayeun Lee

Resilience by Design

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USA

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To Alexander

Foreword

The serious climate changes we observe these days are, without a doubt, increasing the chances of harsh natural disasters—flooding, tsunamis, typhoons, hurricanes, landslides, etc.—to hit human habitats the world over. Likewise, earthquakes remain an inevitable threat, except perhaps those provoked by human activities such as fracking. How are we to prepare for such disasters and, more importantly, how are we to manage the aftermaths; the long periods of recovery? These vital questions are at the core of Alexandra Jayeun Lee's timely book.

Her careful study of the aftermaths of three major natural disasters—Hurricane Katrina, which hit New Orleans in 2005, and the earthquakes which shook Haiti in 2010 and Christchurch in New Zealand in 2010–2011—led Lee to the conclusion that "decision-making in the aftermath of disasters is inherently different from that when the machinery of government was functioning" and that it has all the characteristics of wicked problems as first defined by Horst Rittel, my late colleague at UC Berkeley and whose work laid the groundwork for current paradigms in design thinking.

One of the characteristics of wicked problems is that they are essentially unique, that is, no two wicked problems are the same, however similar they may appear. Lee's case studies clearly illustrate how the different historical, political, socioeconomical conditions in the three countries pre-disaster very differently influenced and guided the post-disaster decisions and interventions.

Wicked problems don't have any clear formulations or any evident solutions. The many parties involved in the aftermath of disaster—government agencies, NGO's and other humanitarian organizations, engineers, architects, property owners, citizens, etc.—may have very different, often conflicting, perceptions and understandings of what is at stake and how to deal with it. As the case study of the Haiti earthquake's aftermath reveals such conflicts can lead to well-intentioned, yet more damaging decisions.

The resolving of wicked problems, if it is at all possible, lies far beyond the expertise of any professional. This is clearly illustrated, for example, by the shortcomings of FEMA, which took days to establish operations in New Orleans,

and even then failed to present a sound plan of action. As Rittel argued, the expertise and skills needed in dealing with wicked problems is typically distributed over all the people and organizations involved in and affected by the problem. As a consequence, if a wicked problem is to be resolved productively, all the people involved in and affected by the problem should be made active participants in the planning, decision-making, and the recovery activities.

Throughout her book Lee documents the many shortcomings and failures of human interventions, but she also reveals the powers of an encouraging strategy: Resilience. She writes: "Because disasters seem inevitable, resilience remains the last line of defense we have." In agreement with Rittel and to the surprise of many experts she found that the most "successful post-disaster interventions are more about building resilient communities through equity in decision making, discovering shared competencies, values, and visions than they are about rebuilding architecture as a destination." Indeed, *Resilience by Design* offers an antidote to prescriptive, linear problem-solving methods still used by many and, more importantly, reminds us that every decision has a consequence—a lot sooner than we think.

January 2016

Jean-Pierre Protzen
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Preface

Change is the only constant

—Heraclitus

(Disaster) brings about social change, though not necessarily progress

—Rebecca Solnit

Resilience has become a ubiquitous buzzword in recent decades as the global awareness of natural hazards and their impact on society has deepened. The need for resilience in social, political, and economic upheaval that often accompany natural disasters prompt many of those affected by the event to take action. Resilience is slowly emerging alongside sustainability as a recurring theme amongst the thought-leaders of technology, design, and architecture as well as in the social fields and politics. The definition of resilience is nuanced by the given social context, yet the common thread that weaves through the narratives is the realization that we as species are beyond the point at which we can depend on the sustainable adjustments alone to counteract the forces that are endangering our global ecosystem. Traditional measures that we have relied on to keep human species sustainable have failed in the face of insatiable growth that feeds the vicious cycle of consumption. In the current post-industrial era, the promise of technology to solve all of the world's problems has failed to deliver, and because disasters seem inevitable, resilience remains the last line of defense we have to change.

Indeed, since sociologists first developed the concept of disaster as a catalyst for social change, the field of disaster research has since exploded to become a thoroughly interdisciplinary affair. At first glance, the architectural voice is all but missing in the mainstream disaster research literature, but we find that the architectural narrative on disasters is not as well integrated as with all the other disciplines. Architectural points of view on disasters are embedded in topics of historic preservation, planning, and vernacular buildings, as disasters have been part of an

urban layer that is constantly changing and evolving with the built environment in which building activities occur.

The architectural narrative is an important one, because of its ability to represent multiple viewpoints across time and space. This book takes a number of transdisciplinary strategies developed in the design field to help key decision-makers of our cities, organizations, and communities navigate the urban politics of cities in crisis—what Horst Rittel calls “wicked problems.”

List of Interviewees

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Allison, R., Social Entrepreneur, NZ
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Van der Lingen, J., Architect, Christchurch, NZ
Vittori, G., US Architect, CMPBS, TX, USA
Watkins, T., Co-Director, Sustainability Work Program, UIA, Auckland, NZ

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Abbreviations

AFH	Architecture for Humanity
AIA	American Institute of Architects
ALNAP	Active Learning Network for Accountability and Performance in Humanitarian Action
ATC-20	Applied Technology Council (Document 20)
BBBC	Build Back Better Communities
BNOP	Bring New Orleans Back
CanCERN	Canterbury Citizens Earthquake Recovery Network
CCC	Christchurch City Council
CCDU	Christchurch Central Development Unit
CCRP	Christchurch City Recovery Plan
CDEM	Civil Defense Emergency Management
CERA	Canterbury Earthquake Recovery Authority
DAP	Disaster Accountability Project
DHS	Department of Homeland Security
EBNet	Ecological Building Network
EQC	Earthquake Commission
FEMA	Federal Emergency Management Agency
GCCDS	Gulf Coast Community Design Studio
GNS	GNS Science, New Zealand Crown Research Institute
GoH	Government of Haiti
HRF	Haiti Reconstruction Fund
IDP	Internally Displaced Persons
IFRC	International Federation of Red Cross
IHRC	Interim Haiti Reconstruction Commission
INGO	International Non-governmental Organization
LEED	Leadership in Energy and Environmental Design
LRA	Louisiana Reconstruction Authority
MINUSTAH	United Nations Stabilization Mission in Haiti Mission des Nations Unies pour la stabilization en Haiti
MRN	Maori Recovery Network

NGO	Non-governmental Organization
NZIA	New Zealand Institute of Architects
OSE	UN Office of the Special Envoy
PID	Public Interest Design
SEED	Social Economic Environmental Design
SPRPAU	Social Policy Research and Parliamentary Affairs Unit
TCC	Tulane City Centre
UC	The University of Canterbury
UCAONG	Unité de Coordination des Activités des Organisations Non-gouvernementales, Government of Haiti Ministry of Planning
UC SVA	The University of Canterbury Student Volunteer Army
UIA	International Union of Architects
ULI	Urban Land Institute
UN	United Nations
UN-HABITAT	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
UNOP	Unified New Orleans Plan
USACE	US Army Corps of Engineers
USGBC	US Green Building Council

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