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Fatemeh Farnaz Arefian

Organising Post-Disaster Reconstruction Processes

Housing Reconstruction after the Bam
Earthquake

 Springer

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*“Some Hindus have an elephant to show.
No one here has ever seen an elephant.
They bring it at night to a dark room.*

*One by one, we go in the dark and come out
saying how we experience the animal.
One of us happens to touch the trunk.
A water-pipe kind of creature.*

*Another, the ear. A strong, always moving
back and forth, fan-animal. Another, the leg.
I find it still, like a column on a temple.*

*Another touches the curve back.
A leathery throne. Another, the cleverest,
feels the tusk. A rounded sword made of
porcelain.
He is proud of his description.*

*Each of us touches one place
and understands the whole in that way.
The palm and the fingers feeling in the dark
are how the senses explore the reality of the
elephant.*

*If each of us held a candle there,
and if we went in together, we could see it.”*

Elephant in Dark

Rumi, the 13th Century Persian poet and teacher of Sufism

From The Masnavi, Book III, Story V

Translation by Coleman Barks

To Maryam, Farangis and memory of Ali

Preface

The story of this book somehow mirrors a personal quest for understanding a contemporary challenging issue with global importance. The book draws on my Ph. D. research at the Bartlett Development Planning Unit (DPU), University College London, and my real-time involvement in the implementation of Bam reconstruction that triggered my doctoral studies and subsequent work leading to a collective 11 years of practice and research.

As a reflective practitioner who returned to academia to investigate the questions reached through practice, I hope publishing this book will contribute to bridging the gap between theory and practice in this field. It is a milestone in this personal journey to share learning opportunities we can extract from the Bam experience that are nevertheless helpful for other reconstruction cases, whether to manage them or to participate in planning and implementation. The evidence-based learning opportunities and research propositions advance the practice theory knowledge and contributes to bridging the existing theoretical gap. In particular, the book contributes to:

- Understand, from the literature on reconstruction, recovery and development, the expectations a reconstruction programme can be expected to fulfil.
- Understand the organisational characteristics of reconstruction programmes and how they influence the programme's ability to approach and achieve its stated objectives.
- Enable a deeper understanding and support better practice on organising reconstruction through the contribution of a multi-perspective conceptual framework for organisational configuration and management for post-disaster reconstruction programmes.

At the time of the Bam earthquake, I had my urban design and architectural consultancy company based in Tehran undertaking large-scale urban design, planning projects and affordable housing. The Bam earthquake was a national disaster in Iran and touched all. The earthquake destroyed 80% of a city, which was internationally famous for its ancient citadel (Arg-e-Bam) and historical urban identity. Immediate inspections showed that even newly-built buildings were

destroyed because they did not comply with the existing national seismic regulations. I first visited Bam 40 days after the earthquake, at a time when local people were living in temporary accommodation. Soon after, a call was announced for identifying qualified interested consultancy companies to be engaged in housing reconstruction. Consultancies were requested to establish their local branch in Bam, be ready to work in difficult conditions, and to work within the overall programme framework. Each consultancy company would directly work with an estimated 2,000 disaster affected families on architectural and technical requirements for the reconstruction of their houses on an individual basis. Similar to many other companies, we applied and got involved. There was a sense of duty and desire to contribute to reconstruction beyond the difficult practicalities and financial matters. Later, with a few other consultancies, we were chosen to work on a few urban design projects. These projects were combined with the reconstruction of adjacent retail units and a collaborative effort with the respective owners on an individual basis. The first days started with having all consultancy representatives placed in a school, one of the few safe buildings in the area. Those extraordinary days included frequent meetings and efforts in Tehran and Bam to build the required project teams, trying internal and external mechanisms to get ready to face the unknown trend of demands and requests. Simultaneously we were developing broad housing typologies based on potential specifications of building plots, for example, direction, proportions, location and access as requested by the reconstruction executive body Housing Foundation of Islamic Revolution (HFIR) and The Bam Architectural and Urbanism Council (BAUC), which was established quickly after the earthquake to guide us. We later moved to a purpose-built construction bazaar, a one-stop-shop for disaster-affected people.

I was the project director for the housing reconstruction of 2,100 houses and the streetscape urban design project of the reconstruction of adjacent buildings during the Bam reconstruction period for my company. Over the course of 4 years in the Bam case, my company worked with local beneficiaries and reconstruction stakeholders and actors, dealing with the realities and emerging issues of the highly complex, traumatic and complex post-disaster condition. My reflections on my personal experience in Bam follow two distinct directions. The first was recognizing an insufficiency of traditional architectural professional routines and educational curriculums to balance other pressing issues in extreme traumatic situations. The second was the importance of the programme level operational framework and its organisational configurations for reconstruction activities that define the process of who does what and when, tying us all stakeholders together. While the first direction can be the subject of further examination, this book reflects on the latter. Reading international cases and noticing that there is indeed a gap or at least imbalance in disaster-development that leans towards *what* is expected from reconstruction than *how* to approach these expectations prompted a personal journey for understanding of the bigger picture on '*how*'.

This book, per se, is an advocacy of an interdisciplinary approach and outreach to organisation theory to help us organising reconstruction activities that is more complex than construction management. As you might think,

understanding the bigger picture required going beyond my disciplinary-self. Reflecting on this I undertook a post-graduate course on Strategic Management and Leadership offered by the Chartered Management Institute (CMI) and pursued my Prince 2 management qualification. So you will see the analytical approach to the subject and tone of the book reflects the ‘wholeness’ of the delivery system of the programme organisation, instead of focusing on one system element (the actor position).

As you will see, this book presents debates on how reconstruction would address the Bam characteristics and how ‘urbanising’ the existing know-how led to the introduction of three objectives: safeguarding historical urban identity, building earthquake resistant buildings, and mobilising people to participate. This book explores, within the case of Bam following the 2003 earthquake, how *organisational design* and *management* of the reconstruction programme have influenced the approach and achievement of the *objectives* of the reconstruction process. The housing reconstruction programme in Bam was a complex case, offering learning opportunities to understand *organisational design* and *management*. An examination of organisational characteristics of reconstruction programmes at the international level provides entry points to organisation theory for the examination of the Bam case. Furthermore, it provides organisational configuration of the delivery system and its evolution after being put into practice. Examples of the complementing and interconnected insights examine the following points: influential organisational attributes linked with consistencies and inconsistencies of the system; strategic characteristics of the case and the application of strategic thinking approach during the configuration and its implementation; the social characteristics of reconstruction and the very interesting construct of social learning during the housing reconstruction programme; and multi-organisational characteristics of reconstruction activities and related hidden threats and potentials. The book introduces visual analytical methods for understanding and analysing organisational configurations for reconstruction processes and programmes. The book offers a multi-perspective conceptual analytical framework for understanding and examining organisational aspects of post-disaster reconstruction programmes in order to organise related processes.

The completion of the original research and preparation of this book owes to generous support provided by many people. Thanks to Dr. Cassidy Johnson and Prof. Julio Davila, my research supervisors, whose generous support went well beyond the doctoral studies and extended to the Silk Cities initiative, which I founded as a doctoral researcher at DPU/UCL. Silk Cities is an independent, professional and academic initiative for contextual knowledge exchange, research and advocacy, and has an initial focus of the Middle East and Central Asia (www.silk-cities.org). I must also thank Dr. John Twigg and Tony Lloyd-Jones for their reading and the questions which shaped the original research. It was also heart-warming to see how key people from organisations involved in the Bam reconstruction, from the policy formulation and initial formation of the delivery system to putting the programme into practice, were supportive of an independent research that would be useful for the future of reconstruction activities in the

country and beyond. I am thankful to Eng. Majid Joody and Dr. Pirooz Hanachi, Mr. Roohollah Abyari and Dr. Abbas Esmaeili, Eng. Mohammad Tofigh and Dr. Victoria Kianpour, Dr. Mohamoud Fatemi Aghda and all colleagues involved in the Bam reconstruction. I must also thank my good old friends for all their on-going supports. Therefore, in-depth and semi-structured interviews with key and knowledgeable people from involved organisations, other related organisations and beneficiaries became possible. I owe special thanks to all 59 interviewees for their insights and generosity. Reaching a deeper level of understanding of the bigger picture—*‘the wholeness of the multi-organisational system’*—became possible because all those allocated time and shared their experiences and reflections in a depth beyond their formal positions. And last but not least, I am indebted to my family for all their support, especially my daughter Maryam, mother Farangis and my late father Ali for their unconditional love and patience. The original research was self-funded and the fieldwork expenses were partially covered by the DPU doctoral research bursary and UCL Institute for Risk and Disaster Reduction (IRDR).

I Hope You Enjoy the Book.

London, UK

Fatemeh Farnaz Arefian

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Acronyms

| | |
|-------|--|
| BAUC | Bam Architecture and Urbanism Council |
| BRCSR | Bureau for Research and Coordination of Reconstruction Affairs |
| BTID | Building Technical Identification Document |
| CMI | Chartered Management Institute |
| DAU | Department of Architecture and Urbanism |
| DM | Disaster Management |
| DRR | Disaster Risk Reduction |
| GFDRR | Global Facility for Disaster Reduction and Recovery |
| HDI | Human Development Index |
| HFA | Hyogo Framework for Action |
| HFIR | Housing Foundation of Islamic Revolution |
| IDNDR | International Decade for Natural Disaster Reduction |
| IFRC | International Federation of the Red Cross and Red Crescent Societies |
| IIEES | International Institute for Earthquake Engineering and Seismology |
| INSC | Iran National Statistical Centre |
| ISMN | Iran Strong Motion Network |
| KEO | Kerman Engineering Organisation |
| MDG | Millennium Development Goals |
| MHUD | Ministry of Housing and Urban Development |
| NBC | National Building Codes |
| NCEO | National Construction Engineering Organisation |
| NDMO | National Disaster Management Organisation |
| NHD | Natural Disaster Headquarters |
| OCHA | United Nations Office for the Coordination of Humanitarian Affairs |
| ODI | Oversees Development Institute |
| ODR | Owner Driven Reconstruction |

| | |
|--------------------|--|
| ORA | Office of Reconstruction Affairs |
| PRP | International Recovery Platform |
| SBU | Shahid Beheshti University |
| Steering Committee | Steering Committee of Bam Reconstruction |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNISDR | The United Nations Office for Disaster Risk Reduction |
| WCDRR | UN World Conference on Disaster Risk Reduction |