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collapse was caused by an earthquake.

The worst building failures in history were also related to force majeure events, i.e. natural (geological or weather) phenomena or violent events (wars, terrorist attacks, gas explosions and fires). The failures mentioned above, the reasons of which are obvious, are not the main focus of this book however. The authors rather intended to show the activities or procedures which should be undertaken when damage is visible, but its reasons are to be found.

The degree of damage and material losses, the number of dead or injured people are different for each type of failure. That is why any construction work failures should not be identified with catastrophes only. For the same reason, in this book 'failure' is rather construed according to the definition by the American Society of Civil Engineers (ASCE), i.e. "Failure is an unacceptable difference between expected and observed performance" [17]. This means that excessive, unacceptable deformations or cracks are a failure, too.

Regardless of failure extent, three important questions must always be answered:

- What was the reason(s)?
- What is the range of destruction?
- Is it safe to use the building or structure after failure, and what repairs should be undertaken?

Answers should be based on a detailed inspection of the damaged structure. A very important issue is the personal experience of the expert assessing the structure and analysis of similar cases. The diagnosis should be based not only on the technical background but, in the more difficult cases, also on scientific assumptions and research.

This book addresses two initial questions; the repairs are not considered. The authors' main aim was to systematise information about failures and their symptoms, and to provide updated information about building structures diagnostics. For purposes of this book, diagnostics shall mean inspections leading to identification of failure and causes of damage.