

BOOK REVIEW

Shaken Allegiances: Two Days from the Continuum of Nonsense

Michel Bruneau 2009. CePages Press, East Amherst, New York, 412 pp., \$15

Reviewed by Robert Reitherman,^{a)} M.EERI

In most books written by earthquake engineering professors, the theme is illustrated with equations that are accompanied by explanations of fault rupture and ground motion, dynamic response and building performance. In this well-written book by Professor Bruneau, the theme is illustrated by fictional characters who are accompanied by scenes of an earthquake disaster and the surreal level of incompetence and pettiness with which they respond to it. Most earthquake engineers write their books with dry, third-person diction. Bruneau wrote this book with a combination of blunt first-person language spoken by the novel's characters and well-crafted narrative sentences that include such picturesque metaphors as "violent trespasser" (the earthquake that suddenly enters your house and trashes it), or the way a warehouse littered with debris looks like "the bedroom of some giant teenager." He portrays the perception of a person undergoing the earthquake in a way that you will recognize as quite accurate, if you have ever undergone one: "seconds and inches became minutes and feet."

The magnitude 7 earthquake that sets the plot in motion hits Montreal with bull's eye accuracy right under the city, disabling all the bridges across the rivers that surround and divide it. Over 3.5 million people live in that urban region. Without giving away any of the plot, we can say that by the end of the book, the population is reduced by over 1,000—a plausible loss estimate for this scenario and one that certainly isn't sensationalist. The earthquake devastation—collapsed or uninhabitable buildings, hazardous material releases and fires, disabled emergency services facilities—happens in the midst of forty-below weather. Conveniently, -40° is the one spot on the temperature scales where Celsius and Fahrenheit temperatures match, so readers in the United States, as well as those familiar with metric units (the latter also known as "the rest of the world"), will quickly understand how lethal that weather is in a city with no utility services intact. One need not know French to follow the plot and dialogue, though the frequent use of Québécois swear words is a treat reserved only for those who do. (My high school French classes failed to cover that vocabulary, so I had to look them up; as foreign-language phrases in this English-language book, they are conveniently italicized.) Profanity in any language is not usually found in books written by earthquake engineering professors, but then again, novels are not usually written by earthquake engineering professors.

The vivid and realistic speech is coarse, but coarse phrases in French are also mellifluous, something like bittersweet chocolate. The novel's earthy sarcasm is not a substitute for solid content about earthquakes, but rather an aid in communicating information about that subject. In its explanation of earthquake engineering facts, usually through the device of the dialogue of a structural engineer conducting earthquake recon-

^{a)} Consortium of Universities for Research in Earthquake Engineering, 1301 S. 46th Street, Building 420, Richmond, CA 98404

naissance in Montreal who is being interviewed by a radio reporter who is as shallow as he is unprincipled, this work of fiction integrates a number of valid seismic facts into its exciting story.

The description of one important character, the Premier of Canada, fits most of the others in the book: “a sophist working for the best interest of no one but himself.” The national government characters in Ottawa are portrayed as being stuffed full of anti-Quebec arrogance. Flip a few pages and the other side gets its fair share of abuse, as Bruneau mixes in venal pro-separatist characters, starting with the Premier of Quebec. The head of emergency management in Quebec is especially memorable for the way she finds her husband’s bloodied body where he was crushed at his jobsite and is cheered up to hear the ringtone of the cell phone she had loaned him that day that she now dearly needs. She quickly proceeds to her office thinking only of how to advance her political fortunes. She not only displays the incompetence of having nothing in her head about her agency’s emergency response procedures or how to find them but invents some that are worse than nothing. This is not a book biased against the managerial class—there is also equal time for self-serving unions and opportunistic people working for the print and electronic media, the latter often called journalists as if they were a profession, but seek not in this book for support for that claim. Media-craving structural engineers with slight knowledge but with compensating readiness to promote themselves in front of a microphone; incompetent academics whose lack of talent and expertise have not been barriers to promotion, because they work in academia; a president of the United States who is as crass as his Canadian counterparts and never mastered fifth grade geography—this is not a novel in which to find role models.

Social scientist readers may object to the uniformly pessimistic portrayal of psychological (individual) and sociological (group) response to this disaster. It is true that in general the problems of absenteeism and lack of sense of duty on the part of emergency response personnel are over-played here, compared to the way most disasters have turned out. But the author of the novel has license to work out his theme of skepticism about humanity in general, using the earthquake as a backdrop. Those who wish to write an earthquake disaster novel that takes an uncritical viewpoint, featuring heroes and clockwork-efficient emergency response, are free to do so. But Michel Bruneau has set the standard for combining excitement with factual content in the earthquake-fiction genre. Consider the passage where a government official reflects on his equally prominent politician lover—“she could do things he’d once thought were physiologically impossible.” Aren’t you curious how they will portray that scene if they make the book into a movie?

Giving a book about earthquake engineering to a friend who is not an earthquake engineer is generally not advised—in fact it’s as inadvisable as giving fruitcake to relatives during the holidays. This book about earthquake engineering is an exception, and it is recommended for that purpose of gift giving to those who are not in the field.

Some of the supposedly nonfiction works about earthquakes are filled with so many errors and so much made-up content that they should be shelved over on the fiction side of the library (John McPhee’s *Assembling California* and Simon Winchester’s *A Crack in the Edge of the World* come to mind). *Shaken Allegiances*, however, is recommended to earthquake engineering experts as well as to the general public. The book has succinct,

accurate, colloquial explanations that would make valuable additions to lectures to civil engineering students, such as how the rebar in concrete works (or doesn't) in an earthquake, soft stories, the significance of studying incipient damage in modern code-conforming buildings rather than only taking photographs of the piles of rubble that were once unreinforced masonry ones, the meaning of the 2,500-year mean return period. The earthquake engineering accuracy of the story is in keeping with the characteristics of the author. Michel Bruneau, a professor of civil, structural, and environmental engineering at the University at Buffalo, has been the head of the Multidisciplinary Center for Earthquake Engineering Research, and he has the technical expertise that is needed to go with his literary skill.

(Received 24 November 2009; accepted 26 November 2009)