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Earthquakes and Human Behavior: A Sociological Perspective

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Abstract

Human behavioral response to strong earthquake ground motion has not received the level of attention from social scientists that it merits and the scarcity of such studies has allowed a conventional wisdom to prevail suggesting that such behavior is driven by emotion, individualistic in character and largely maladaptive in result. In this study, three California earthquakes will be the focus for a comparative analysis of survey findings that attempt to identify the actions people take during ground motion generated by these earthquakes as well as the demographic, situational and cultural factors associated with these actions. Though now occupying “historic” status, two of the three earthquakes examined in this study remain the most recent earthquake disasters to impact northern and southern California. The study is informed by the existing literature on human behavioral response to earthquakes and the results are consistent with previous studies that suggest that behavior during a rapid onset disaster is diverse, varies with social context, is largely rational, adaptive and consistent with norms and role performance.

Keywords: earthquakes, human behavior, fear

The behavior examined in this study occurs as individuals, small collectivities or large groups cope with an unexpected and sudden environmental event that could cause death, injury or serious property damage. In contrast to hurricanes, floods, volcanic eruptions or tornadoes that forecast their occurrence in minutes, hours or days prior to causing danger to populations and infrastructure, large earthquakes begin suddenly and are preceded by immanent alerts only in a few regions where earthquake early warning systems exist. Human response and the emotional, situational and demographic factors associated with response will be the focus of this study of three California earthquakes: Whittier Narrows, a magnitude 5.9 event that occurred on October 1, 1987; Loma Prieta, magnitude 6.9 on October 17, 1989; and Northridge, magnitude 6.7 which struck urban Los Angeles on January 17, 1994.

Contrasting Images of Human Behavior in Disaster

Social science literature on disaster response suggests that behavior, including immediate response, is controlled, rational, normative, active and consistent with pre-disaster roles (e.g., Tierney, Lindell and Perry, 2001). If response in an earthquake...
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