

Lebbeus Woods

EARTHQUAKE: A post-Biblical view

Earthquakes are the result of natural, tectonic changes in the solid crust of the earth and, as such, are not inherently catastrophic. Their bad reputation comes from the destruction to human settlements that accompanies them, when buildings collapse under the stress of forces produced by earthquakes. This destruction is not the 'fault' of earthquakes, but rather of the buildings, which, even in regions regularly visited by earthquakes, are not designed to work harmoniously with the violent forces periodically released. So buildings collapse, usually with considerable loss of life and injuries. The earthquakes are blamed, as though the purpose of these sublimely unself-conscious phenomena was to damage and destroy the human. "Earthquake Kills Thousands!" "Killer Quake Strikes!" "Earthquake Levels Town!" are typical aftermath headlines. What they should say is "Falling Buildings Kill Thousands!" "Killer Buildings Strike!" "Inadequately Designed Town Leveled!"

Such headlines will not, of course, appear. If they did, architects, town-planners, engineers, and the entire army of professionals responsible for the design, construction, and maintenance of the affected buildings would be called to account. If that were to happen, they would certainly implicate politicians, developers, banks and the entire army of private and public officials controlling what gets built and where, the financial/economic community that finds it more profitable to rebuild what has been destroyed than to commission the development of architectures that would work with earthquakes and thus survive them. If this profit-driven community was called to account by public outcry, it would almost certainly turn the blame back on the public itself. After all, corporations and government are under constant pressure to give the public what it wants, which today means the same products, the same lifestyles, the same buildings and types of buildings to be found anywhere on the planet, regardless of the planet's extremely varied processes of transformation. If all these individuals and social institutions were held responsible for the destruction caused by earthquakes, then the public in earthquake regions would have no choice but to demand radical changes of them. But this would be an expensive revolution, one that all the interests involved could afford only at great cost to their reputations, knowledge and technical expertise, and to their present economic prosperity.

There is, however, a deeper structure of resistance to investing in the invention of new architectures of and for earthquake, and this is formed by the most venerable beliefs about the relationship between the human and natural worlds, considered to be essentially hostile. The 'Man versus Nature' attitude begins in the founding stories of some of the world's dominant religions. Christianity, Judaism and Islam share the Biblical account of the expulsion of Adam and Eve from the Garden of Eden, which came as a result of their

desire for self-knowledge and, thereby, for independence from the rest of the unself-aware, wholly interdependent world. Many philosophers over the past epochs have rationalized this belief, but it was Ren Descartes who best codified it for the modern era. His philosophy postulates an essential duality of the world, comprised of the human and the Divine, which cannot be bridged, at least by the human. Not coincidentally, he also invented a mathematical system—analytical geometry—that organized the spatial and temporal properties of the human domain with great efficacy. Cartesian logic and geometry offer a pragmatic usefulness that shows no signs of diminishing, more than three hundred years after their inception, and in spite of immense cultural and technological changes to the society they serve. But, while Cartesian thought and method succeeded in freeing science, and therefore technology, from the grip of religion per se, it maintained the adversarial Biblical relationship between the domain of the human and the realm of ‘Divine’ nature. Nowhere is its fragility in this regard more clearly demonstrated than in earthquake regions. There, not only has the idea of the Cartesian ‘grid’ as a symbol of rational efficiency and stability been overturned (literally) by the nature of earthquake forces, but the civilizational cornerstone of human independence from Nature (a conceit, however transparent, that has propelled the notion of human progress) has been broken to bits. In light of the consistent failure of leading societies such as the United States and Japan to build effectively against earthquake, it is reasonable to reconsider the dominant philosophies, techniques and goals of building and urban design in earthquake regions.

At this writing, such a reconsideration by architects and planners has hardly begun. What is needed now are new ideas and approaches that go beyond the defensive reinforcement of existing conceptual and physical structures, and open up genuinely new possibilities for architecture in relation to the earth’s continuing process of transformation. My own efforts in this direction have been sporadic and sketchy, resulting in two sets of highly speculative projects, which were published in my book of 1997, *Radical Reconstruction*. The San Francisco ‘houses’ of 1995, completed after research at the Berkeley Engineering Library, propose architectures extending the forces of earthquake into the dynamics of private life and social change. The ‘terrain’ projects of 1999, summarized in this book and completed after the cycle of disastrous earthquakes that struck around the world last autumn, propose that architecture be considered as an integral part of landscapes undergoing regular seismic upheavals. Both sets of projects look forward to a post-Biblical reconciliation of the human and the natural, through the conceptual and tectonic reformation of architecture itself.

16 April 2000

New York City