

## EARTHQUAKE SCIENCES AND CITY PLANNING

ARE STILL DISCONNECTED<sup>1</sup>

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It is our conviction that if city planning, and regional planning, are to contribute to disaster prevention or "mitigation", the starting points should not be in city or regional planning, but planning principles should be derived from geophysics, tectonics, structural engineering, relief and rehabilitation operations, and certain social processes. This raises the question of evaluation of each field in itself, and also the contributions they should be making to each other. In this paper the "input" from structural engineering to city planning, and certain internal characteristics of city planning will be emphasized over other relationships.

One main reason for this is that there is not a general usage at the present to rely on geophysical data for location decisions, without first having them "translated" and transformed through structural engineering.

Of the disaster phases, "prevention" and preparedness will be implicitly emphasized over relief and rehabilitation periods, even if it is clear that at the present city planning gains most significance at the rehabilitation phase, and that its major decisions are forced and formed in the relief phase. Instead of inquiring for more input from relief workers and social scientists, I prefer to leave the question open for them to express whether they see any significant role for city planning, and if so, in what phases, details, or "functions".

Still more important, do any of the earthquake sciences see the contribution of city planning through land use controls, should lifeline planning and investment be expressed through city planning, should administrative difficulties be coupled to it, or if it is to be seen mainly as a social process, could it be a good way of coordination with respect to hazard, risk, warning, disaster psychology, and relief?

The Main Thrust of Engineering Research

Japan, and the State of California possess institutions which engage in the broadest front of research with respect to earthquakes. However, much of the structural engineering research in these two leading centers seems to be removed from a broad front approach.