

REMARKS BY RODRIGO FLORES^I, CHAIRMAN OF THEME 9

Faced with the excellent papers presented at this session, and with their summaries so ably prepared by the rapporteur Dr. Penzien, it only seems appropriate for me to make on them just a few remarks of a rather general nature.

More than once, it has been said that, when faced with seismic engineering research—divided rather arbitrarily into theoretical and experimental — the latter ought to be undertaken by the more developed countries, while the underdeveloped nations should only participate in the former. Of course, this is just a half-truth.

In effect, only the more affluent countries have the resources necessary to set up costly shaking tables, while the possibilities of undertaking theoretical research and of carrying out complex calculations by means of computers are now open to both rich and poor nations.

On the other hand, many of these poor countries — located in areas of high seismic risk— should be able to contribute to the advance of earthquake engineering by making use of the actual effect of earthquakes on their buildings.

The period of recurrence of destructive earthquakes is relatively long and it should be possible to noticeably speed up the process of acquiring knowledge on them if enough buildings, located in areas of recognized high seismicity, were properly instrumented.

I do realize, that many factors make it not easy to obtain the best benefits from a program like this. Financial difficulties, not too well known local conditions: design standards, material properties, construction methods, etc. Nevertheless, the potential benefits of a program such as this make it an advisable international undertaking.

There have been already too many structures which were exposed to destructive earthquakes in many countries around the world and which could have yielded valuable knowledge had they only been adequately instrumented.

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From an statistical point of view, it may be observed, that only a single one of the thirty papers refers specifically to a minor structure. This is certainly a field which deserves more attention, as it is a well known fact that most of the casualties of a strong earthquake occur by failure of this type of dwellings.