

NEW ZEALAND EARTHQUAKE ENGINEERING EDUCATION

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Appreciation of some basic aspects of earthquake engineering was probably stimulated by the 1848 and 1855 Wellington earthquakes which caused major damage to one of the first organised European settlements, shortly after its inception. Certainly the satisfactory performance of timber framed structures prompted the general adoption of this constructional form at the expense of the traditional masonry bearing-wall type of building, which suffered severely in these disturbances.

However more than seventy years passed before another New Zealand earthquake caused loss of life and in that time many of the lessons learnt by the early settlers had been forgotten. During this period the seismic disturbances which occurred were not sufficiently close to populated areas to cause major structural damage, but the 1929 Murchison and the 1931 Napier shocks, with their consequent toll of lives and property, refocussed attention on the seismic risk problem.

Following the Napier earthquake much attention was devoted to earthquake engineering study in New Zealand. The British Building Research Station was commissioned to undertake a literature survey and various groups within the country including the Department of Scientific and Industrial Research, the Institute of Architects, the Public Works Department and the Society of Civil Engineers contributed towards the specification of adequate and acceptable seismic design criteria. As a result in 1935 a New Zealand Standard Model Building Bylaw, incorporating a rational seismic design procedure, was published.

In the following thirty years only minor modifications to this code reflected the slow progress made in accumulating the basic information necessary to enable the obvious inadequacies of the code to be improved. Nevertheless in 1965 the current building code was published and for the first time the dynamic nature of the problem was recognised in the code provisions. 1965 was significant also for the holding, in Auckland and Wellington, of the Third World Earthquake Engineering Conference

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which enormously stimulated interest in the subject within New Zealand. Geographical isolation had for generations hindered the efforts of local engineers to keep abreast with current developments but the 1965 conference provided an unrivalled opportunity for all New Zealand engineers interested in seismic design to bring themselves up to date on current practices and recent researches.

Following the conference it appeared highly desirable that the interest aroused and the expertise gained should be preserved, and preferably increased, for the benefit of the engineering profession. It was less obvious how a continuing program of earthquake engineering education could be initiated. Certainly over the years the Civil Engineering Departments at Auckland and Canterbury Universities had endeavoured to introduce fundamental concepts of seismic design to their students but even now formal courses specifically dealing with earthquake engineering are only in an embryonic state. The national professional engineering journal - New Zealand Engineering - has to attempt to cater for the whole spectrum of engineering activity within approximately fifty papers which it publishes each year and hence could hardly be expected to improve upon the reasonable proportion - but small number - of specialised papers printed.

It was in this environment that the New Zealand Society for Earthquake Engineering was conceived. Within its objectives of advancing the science and practice of earthquake engineering it will endeavour to encourage the collation and dissemination of knowledge. One of the main avenues through which this aim will be met is this quarterly Bulletin. Earlier numbers included reports of engineering investigations following the Inangahua earthquake and in this particular number several papers which were first presented at a seminar on seismic problems in structural engineering in May 1968 are included. The object of the seminar was to present accepted principles and current practices with particular reference to their application in this country. By making such material generally available the Society aims to provide at least part of the educational service which New Zealand earthquake engineers previously lacked.