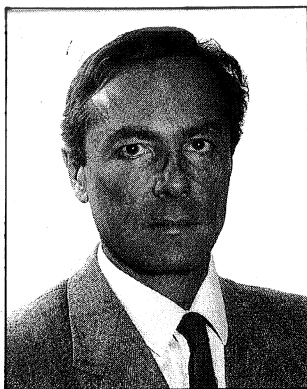


地工技術

PREFACE

C. Vita-Finzi



Claudio Vita-Finzi is Professor of Neotectonics at University College London. He was educated in Argentina and England, where he graduated from the University of Cambridge. His PhD at the same University was devoted to the alluvial history of western Libya. Following a further period at Cambridge as Research Fellow he moved to University College as Lecturer first in the Department of Geography and then in the Department of Geological Sciences. He has done fieldwork on Quaternary Geology and Neotectonics in many parts of the Middle East, N. Africa, S. America, Europe and the Far East, notably Indonesia. He has recently initiated a project in E. Taiwan. His latest book is *Recent Earth Movements* (Academic Press 1986).

The range of contributions in this special issue of Sino-Geotechnics is a vivid reminder that the assessment and management of seismic hazard is a collaborative enterprise requiring inputs from geologists, engineers and soil scientists as well as seismologists. The visitor to Taiwan is impressed by the success of this collaboration in countering a lethal mixture of dense population and vigorous seismicity. But, as the experts are the first to admit, there is room for further progress both in our understanding of seismic processes and in implementing measures to reduce the impact.

One of the questions that is bound to arise in evaluating current work or considering the allocation of funds is how much prominence is to be accorded to earthquake prediction and the related issues of recurrence intervals and seismic gaps. My own view is the rather prosaic one that prediction (and its pragmatic cousin forecasting) must always take second place to the design of earthquake-resistant structures and the identification of sites which are earthquake-prone. Clearly the two aims are intertwined: the design of structures requires a good understanding of the levels of seismicity to be expected at a specified level of probability. If this issue of the journal is a fair reflection of local thinking the engineering community in Taiwan is very interested in the response of individual terrains to specific seismic events.

In my own work I try to contribute to the chronological side of the problem primarily as a means of understanding the mechanics of earthquakes rather than as a direct route to prediction but the paper below (pp.5-17) tries to illustrate some of the ways in which earthquake chronology can be of immediate service to the seismic engineer. It is an honour for me to contribute to Sino-Geotechnics.

地工技術

贈言

*Claudio Vita-Finzi*是倫敦大學大學學院的新地體構造運動學教授，他曾在阿根廷及英國受教育，畢業於英國劍橋大學，博士論文專注於利比亞西部之沖積史，畢業後曾留在劍橋當研究員，接著先後於大學學院地理學系及地質科學系當講師，他曾在中東、北非、南美、歐洲及遠東地區，尤其是印度尼西亞群島從事第四紀地質及新地體構造運動之實地研究，最近又推動東台灣的一個研究計劃，他最近出版的一本書是「近代地殼運動」(*Recent Earth Movements*, Academic Press 1986.) 。

此期「地工雜誌」所刊登的文章，正好顯示出有關地震災害的評估及防治，應該是由地質學家、工程師、土壤科學家，以及地震學家共同參與合作的一項大事業。台灣因為人口稠密及地震活動頻仍，這兩項因素的結合，可能造成致命的傷害，然而到過台灣的人，對此地在這方面的成就都留下極深刻的印象。但是，不容諱言的，內行人都知道，不管是在對地震過程的了解，或是在提供各種方法以減少它的衝擊等方面，仍有甚多的空間值得進一步的發展。

當我們在評估目前的工作或考慮經費該如何分配的時候，必然要面對的一個問題是：到底我們應該投注多少心力在地震的預測以及與其相關的重現週期和空隙區等問題上面。對此，我倒有一個較平實的看法，我認為地震預測（或

更實用的地震預報）應該擺到第二位，而結構耐震設計以及對於易受地震侵襲地區的確認才是第一要務。當然，這兩個目標亦是彼此相控的：結構設計必需以地震大小及其機率作基礎。

如果這一期的雜誌是反映了本地的想法，表示台灣的工程界對於個別地區在某些地震時的反應有很高的興趣。我自己的研究工作嘗試的方向是偏重在有關地震的年代學方面，以之來做為了解地震機制的方法，而不是用來做為預測地震的直接途徑。然而，本人在這期雜誌所發表的文章，亦在試圖說明地震年代學對地震工程師可提供的一些立即的幫助。有機會為「地工雜誌」略盡棉薄，是我的榮幸。