Introduction

The title of this Congress '*Second International Congress on Construction History*' implies the existence of a progenitor. The Congress has been inspired by the '*First International Congress on Construction History*' held in Madrid in 2003 and organised by Professor Santiago Huerta. This was the first event of its kind where large numbers of construction historians from all round the world and with many different research interests were able to meet and share their ideas. Such an event has the effect of breaking down the barriers between scholars and practioners of different nations and not only enables scholarly debate to be disseminated worldwide but also generates new ideas and helps avoid the danger of parochialism. While the Madrid Congress was a brilliant success it left open the question of further international conferences dedicated to construction history; the Construction History Society of Great Britain therefore decided to end this uncertainty by organising a similar Congress. Since imitation is the sincerest form of flattery, the Cambridge Congress has been modelled on the Madrid Congress and has similar aims and objectives and is a continuation of the idea of encouraging colleagues in different countries to exchange ideas with each other.

When large numbers of specialist gather for an event it is traditional to review the nature and scope of the subject under investigation. This is both an interesting thing to do, but is also fraught with danger. The Call for Papers for the Cambridge Congress was disseminated internationally, mostly by electronic means but also by word of mouth. The organisers received over 400 abstracts from all continents except Africa. This huge number of abstracts meant the Scientific Committee were very busy assessing the proposals in terms of whether they represented progress in the subject area, displayed originality, were thought provoking in some way or would be of interest to construction historians. Over 290 abstracts were accepted by the Scientific Committee and of this number 194 authors have submitted papers to the Congress. Many practising construction historians may not have seen the Call for Papers and therefore did not submit an abstract; others may have been too busy to submit or could not afford the registration fee; yet others may be only interested in research and attending conferences is seen as interfering with this activity; some practitioners with an interest in construction history may have felt intimidated by attending a Congress with distinguished academics etc. Although both the Madrid and Cambridge congresses have been very successful in attracting large numbers of construction historians, there are many more who have not attended. The Cambridge Congress organisers estimate (loosely!) that there are about 3 000 construction historians working worldwide. These are people who have some interest in how the historic built environment was pieced together and have bothered to research and write about the topic. Given these sorts of figures it would be very remiss to make definitive statements about the identity and scope of construction history based on papers aired at the Congress. A further complication is the way a Congress is set up in the first place: the Cambridge Congress organising committee took the view that all 'branches' of construction history should be heard at the Congress

in order to excite an interesting dialogue and cross fertilisation of the subject. This presents the view of a discipline with many sub-divisions that is not united in a single subject area. This may or may not reflect the truth of this particular historical specialism.

It is apparent from the number of papers at both the Madrid and Cambridge Congresses that the discipline of construction history is growing. It is probably fair to say there are more construction historians alive today than in all previous ages and there is an interesting and pluralistic flow of ideas taking place. A large number of papers deal with the history of structural engineering and it is a source of fascination to many scholars how human beings have creatively managed to defy gravity and build upwards and outwards. This subject has endless research possibilities: only a small number of structures have been properly researched; those that exist are difficult to analyse since forces in real buildings often behave contrary to theory; and modern methods of analysis and instrumentation continually lead to reassessments of how structures behave. There is a mass of writings, notebooks, diaries, drawings, letters, lectures, reports, specifications, speeches, office accounts etc. by engineers that will keep generations of construction historians busy in assessing the engineering of buildings and bridges and the development of the engineering profession. If construction history has a 'core' area, based on the number of papers appearing at the Madrid and Cambridge Congresses it is reasonable to say it is associated with the history of structural engineering. In both Congresses this topic has dominated the concerns of those presenting papers.

This perception of construction history as a 'technical' subject is further reinforced by the many interesting papers dealing with the history of building materials and also building services. This latter topic has been neglected in recent years and much interesting research has yet to develop, not just on the engineering of services but also the important economic/social/cultural impact such technology has on the lives of people working and living inside buildings. The traditional building materials – stone, timber and brick – still attract research and no definitive study exists on any of these materials and in particular how knowledge of their manufacture was spread. Some interesting papers have been presented on what is the traditional building material in many parts of the world: earth.

One current of research that appeared in Madrid has reappeared at the Cambridge Congress: that of the role of disaster in shaping the history of building. Great earthquakes and fires and tsunamis and explosions have not only destroyed thousands of buildings but often – as a consequence – radically change the way particular countries organise their building production process. Societies building in geologically difficult parts of the world have been forced to address the stability of their buildings and many interesting engineering solutions have resulted. Work in this area may add value to the idea of learning lessons from history (which many historians deny is possible). Some disasters – like the Great Fire of London in 1666 – had a transformative effect on the local building industry, resulting in the breakdown of guild power. Much useful research waits to be done on the consequences of disasters.

A few papers deal with what might be called the building production process. The logistics of assembling buildings and engineering structures is worthy of detailed study. Temporary works are often as sophisticated and ingenious in their engineering as the final structure itself. However, unlike the final structure, temporary works are disassembled and very little trace of them remains beyond a few drawings, prints and paintings and mentions in contract documents. How things are constructed can present the profoundest of intellectual problems to historians and requires much detective work and imagination. A great deal of history arises from concerns that occur in contemporary society and the wish to trace their historical antecedents. Many advanced countries are currently researching ways of making their construction industries more efficient: offsite manufacture (prefabrication) is seen as having the potential to improve productivity in construction. It is interesting to note that several papers address the history of this technology.

Building has nearly always been closely connected to money: its presence and abundance is reflected in the confidence to build sumptuously, or on a large scale, or in a new way. Wage rates in building have been an important source of data for economic historians and studies of construction firms have enriched our understanding of how these organisations operate and whether they were different from typical organisations of their day. Despite the importance of economics in underpinning construction a surprisingly small number of papers have been received on this topic.

A growth area of research in construction history can be broadly categorised as 'building archaeology', where a detailed study and survey of the remains of buildings is used to recreate the society/technology/culture that brought the building into being. Careful studies of the remains of buildings can not only determine the sequence of construction work, but also the amount and type of labour involved, the source and location of building materials and even the cost of the structure. The Romans were one of the great building cultures of all time and necessarily Roman remains have attracted a lot of interest. Judging by the evidence of papers submitted to the Cambridge Congress, building archaeology has opened a new chapter by the use of scientific testing that accurately dates buildings. The application of Accelerator Mass Spectrometer analysis to mortar has resulted in centuries old mysteries and arguments about the dates of buildings being resolved. This is a relatively young technique but has the potential to radically alter opinions on the sources and spread of architectural style. In this case archaeologists and construction historians appear to have crossed boundaries to the mutual benefit of both disciplines.

The Congress has attracted some interesting papers on building conservation, vernacular architecture, the history of design and an anthropological study on the meaning of building in a particular culture. A small number of papers have been submitted on what is a very important topic – how to research, write and study construction history and what should be included in this discipline. This has been the subject of much discussion in recent years and its importance and status varies across countries. However, it is important such a debate takes place since every new

generation of construction historians needs to face up to why they are doing their work and how it should be done.

Future Congresses would benefit from contributions from African and Asian colleagues since these continents have experienced large scale and continuous building programmes where different technologies and architectural styles were used. Also, most papers at the Madrid and Cambridge Congresses are focused on a relatively narrow time period – the last 4 500 years. It is debatable how long modern humans have existed, but the current fossil record suggests this is at least 140 000 years. This means that very little consideration has been given to building activity throughout 96% of time we have been on the planet.

It is quite apparent construction history as an intellectual discipline is buoyant at the moment with many exciting areas of research and no clear agreement as to what constitutes the subject matter. This is probably a good thing since too sectarian an approach is never a good idea for historians. Instead, being open to many influences and other disciplines leads to genuine debate on how we – throughout our time on this planet – have gone about building.

I would like to thank all those people who have made the Cambridge Congress possible: the authors for submitting papers and contributing to the intellectual debate; to Professor Jacques Heyman for agreeing to Chair the Scientific Committee; to the Scientific Committee itself for reading and reviewing all the abstracts; to the Editorial Board for their hard work in preparing the papers for publication. But most of all I would like to thank all my colleagues on the Congress Organising Committee – Dr. Hentie Louw, Dr. James Campbell and Michael Tutton – for their exceptional hard work in bringing the Congress to fruition.

Malcolm Dunkeld
(Chair, Congress Organising Committee)

Keynote Lectures