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Creating the Charter of Athens

CIAM and the functional city, 1933–43

The Athens Charter, supposedly produced by the Fourth Congress of the *Congrès Internationaux d'Architecture Moderne* (CIAM IV) in 1933, is regarded as an important watershed in defining a functional approach to modern city planning. There are, however, reasons for questioning the validity of published versions. Using neglected primary documentation, this paper examines the origins, revisions and final versions of the Athens Charter produced between 1933 and 1943. It also considers the events that led to CIAM IV, the history of the publications subsequently associated with that meeting, and the elements involved in shaping the findings in those documents.

In July 1933, a select band of European modern architects gathered on the quayside at Marseilles to board the cruise ship SS 'Patris II' *en route* to Athens. They were members of the *Congrès Internationaux d'Architecture Moderne* (CIAM), a multinational body formed in 1928 to discuss matters of shared interest to the national groups that were its members. From the outset, CIAM was unusual among architectural organisations for the fact that its proceedings addressed town planning issues. Its first three Congresses (CIAM I–III) presented the architect's credentials for being concerned with urban problems and emphasised the value of functional approaches in resolving housing and associated land use problems. Now, during the sea voyages and land-based symposia in Athens, CIAM IV would address the wider scale of the 'Functional City'. Eighteen member groups supplied analyses of cities within their own countries. Each designed their exhibits to a common brief and classification system to permit comparisons.

Conventional wisdom insists that the Congress's deliberations then led directly to a document known as the 'Athens Charter'. Certainly its status as the

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authentic product of the 1933 Congress was already part of the official history of CIAM by the early 1940s. The organisation's Secretary-General Sigfried Giedion, for example, argued that the 'excellent studies' prepared for CIAM IV made it possible to 'lay down the principles of contemporary city planning in the Athens Charter' (1941; 1967, 699). A similar view was expressed by Oscar Newman when introducing the proceedings of a subsequent Congress. Looking back to the interwar period, he described the 'Charter of Athens' as 'the conclusive outcome of a period of concrete and fruitful work' (Newman, 1961, 11) carried out at CIAM IV. Moreover, there was a broad consensus in the official history of CIAM about the radical vision set out in the Athens Charter. The archivist Jan Bosman, for example, sketched its character as integrating

> everything contained in the Taylor–Ford conception of the beautiful new world: a comprehensively coordinated growth model conducive to the attainment of a balance between the city and the country, the control of urban functions . . . in short, the transformation of a previously empirically developed urban conglomeration into an organised, flawlessly hygienic and structurally transparent urban machine. (Bosman, 1993, 6)

Writers outside the ranks of CIAM widely accepted the idea that this radical vision of urban functional order was a consensual expression of the discussions at CIAM IV. In his study of postmodernity, for example, David Harvey argued that the

> powerful Congress of International Modern Architects (CIAM) came together to adopt its celebrated Athens Charter of 1933, a charter that for the next thirty years or so was to define broadly what modernist architectural practice was to be about. (Harvey, 1989, 32)

Similarly, Leonard Currie wrote about the '1933 proclamation which had served effectively as a guide in the development of contemporary architecture and urban planning' (Currie, 1989, 18). Others found the Athens Charter a convenient landmark around which to base their critiques of the limitations and arrogance of early modernist thinking about the city. Curtis, for instance, stated that the Athens Charter summed up the 'grand-slam urban theories of the 1930s . . . with their mechanical separation of living, working, circulation and leisure' (Curtis, 1994, 40). Echoing the words of the late Reyner Banham (1966, 70), Kenneth Frampton described the Athens Charter as the 'most Olympian, rhetorical and ultimately destructive document to come out of CIAM' (Frampton, 1992, 270).

Despite the stridency of these statements, there remain other commentators who cast doubts on the factual basis of these interpretations, questioning whether CIAM IV ever produced a single consensual document known as the 'Athens Charter'. These included some participants in CIAM IV. Ernö Goldfinger, then a member of the French delegation, denied that a statement of principles was forthcoming from that meeting. He suggested that the sheer bulk of exhibits meant there had been very little time for such a document to

emerge and that retrospective attempts to produce an Athens Charter did not do justice to the proceedings of CIAM IV:

> Seven or eight years later, Le Corbusier in Paris and Sert, who had already gone to the United States, wrote this *Charte d'Athènes*. There was never any question of any such document when we were in Athens. There was a large exhibition, but that is all. (Goldfinger, 1986, 2)

Maxwell Fry (1986, 11), a member of the English delegation, largely agreed. He stressed that there may have been genuine intention to produce a statement of principles of town planning, but there was insufficient time to do so.

Their views gain support from historians using archives containing primary sources relating to CIAM. Martin Steinmann (see also Hilpert, 1978; 1984), for instance, pointed to the lengthy process of evolution from 'the preliminary results of the discussion on the last day of the Congress, shortly before landing in Marseilles' (Steinmann, 1972a, 39) to the document known as *The Athens Charter* published by Le Corbusier (1943; 1973). Auke van der Woud hinted at the ideological dimension of that process. He noted that the 'lustre of the fourth congress would certainly be dimmed' without the notion of the Athens Charter since 'it suggests a binding agreement, a policy, a coherent programme—in short something on which the fourth congress had only made an early start' (van der Woud, 1983, 74).

This paper builds on previous work (Gold, 1997, 56–77) to substantiate and develop this line of argument. Using previously under-utilised primary documentary sources,[1] it traces the tortuous stages in the history of the publications associated with CIAM IV. In doing so, it shows how the crusading Athens Charter was effectively as much a product of its time as a simple extension of the milder statements of 10 years earlier, and reflects on the reasons for the changes that were made.

The ensuing paper contains six sections. The first considers the malleable notion of 'functionalism' and its application in the early discourse of modern architects. This is followed by contextual background concerning CIAM's early Congresses, analysis of the proceedings of CIAM IV, and discussion of the events and actors involved in creating the Athens Charter. The final sections consider in great depth the nature of and reasons for the textual changes made from the findings (*Constatations*) of CIAM IV that originally emerged in late

1 Most previous studies rely on archive material available from the Fondation Le Corbusier in Paris and the CIAM archive at the Swiss Federal Institute of Technology in Zurich, the most significant elements of which have already been placed in the public domain by Trebbi (1976); Gerosa (1978); and Steinmann (1979). While this material remains central to the arguments advanced in this paper, additional insights are available from other archive sources in Britain and North America, particularly the Frances Loeb Library at Harvard University, the Royal Institute of British Architects in London, and the Canadian Centre for Architecture in Montreal. With the notable exception of Eric Mumford (1992), few have yet made use of these sources.

1933 into the more forceful versions produced by José-Luis Sert and Le Corbusier.

The meanings of functionalism

Although commonly treated as virtually synonymous with early twentieth-century European modernism, 'functionalism' has older roots and far wider cultural references. Elements of functionalism—which is understood as the doctrine that claims that form is somehow predicated by function—were present in the works of the classical Roman writer Vitruvius and were restated in fifteenth-century Florence by Leon Battista Alberti. In nineteenth-century England, Pugin claimed that 'there should be no features about a building which are not necessary for construction, convenience and propriety' (Pugin, 1841; Blundell Jones, 1996, 840). Comparable ideas appeared in mid-nineteenth-century France, notably in the writings of Eugène-Emmanuel Viollet-le-Duc and Henri Labrouste. Viollet-le-Duc, a restorer of ancient French chateaux, concluded that everything in a building needed to have a structural purpose (Peter, 1994, 15). Labrouste stressed the importance of function in architecture and argued that there was a close relationship between fitness for purpose and beauty in that 'The beauty of a monument resides in the expression of a harmony between needs and means used to satisfy them' (Zanten, 1982, 594).

Functionalism also gained adherents in the USA. In 1843, the sculptor Horatio Greenough looked to functionalism as a means of fostering an indigenous American approach to design that might be independent of European traditions (Bletter, 1996, 10). Greenough drew upon observations of nature to argue for 'primal law of unflinching adaptation of form to function' (Behrendt, 1938, 116) in which architecture should be trying to force the functions of every sort of building into one general formula (De Zurko, 1957). A fuller and more influential statement of such principles was supplied by the Chicago-based architect Louis H. Sullivan. Influenced by Darwinist evolutionary theory, Sullivan declared in 1896 that 'form follows function', or that a building's form could be derived from knowing fully the purpose to which it would be put (Sullivan, 1896; see Twombly, 1988, 111).

Functionalism gained a strong intellectual foothold as modern architects struggled to come to terms with the implications of new technology, most notably in Germany with the *Neues Bauen* (New Building) movement (Behne, 1927; Meyer, 1928). As such, functionalism represented the intersection of brute facts of utility with objective design methodologies and standardised means of production (Hays, 1992, 11), although it always embraced 'a rich hierarchy of primary and ultimate values' (De Zurko, 1957, 232). Sullivan, for example, always used the word 'function' to mean intellectual, emotional and spiritual as well as physical aspects of the use of a building (Ligo, 1984, 10). Many German architects interpreted the term in a narrower fashion, comparing the characteristics of buildings with those of machines and likening the architect's search for functional buildings to the engineer's quest for mechanical

efficiency.[2] Others, like Le Corbusier, would both subscribe to and oppose various conceptions of functionalism during the course of their careers.

Moreover, functionalism could also be applied to the architect's work at varying scales. The Modern Movement espoused the idea that the scope of modern architecture could extend from design of household artefacts and interior design to the city and region. Experiments in social housing (Zukowsky, 1994) brought awareness of how innovative functional dwellings could be incorporated into planned estates of worker housing (*Siedlungen*). In 1926 town planning was added to the curriculum of the Bauhaus, one of the bastions of functionalist thought in the 1920s, with notable theoretical exercises in plan making by Ludwig Hilberseimer and others (Larsson, 1984; Bach, 1989; Hays, 1992). Opinion varied, however, as to the nature of the relationship between the individual units and the city as a whole. For example, although an advocate of the multiplication of standardised forms, Hilberseimer construed the city as a molar machine, which represented more than the sum of its component parts. Other theoretical works, such as the early writings of Giedion (1928) offered a more simplistic and mechanistic belief that 'Just as the individual cell of habitation leads to the organisation of the methods of construction, so too the methods of construction lead to the organisation of the entire city' (quoted in Tafuri and Dal Co, 1976, 219).[3]

Beyond housing

Although international contacts between modern architects had steadily developed in the 1920s, the immediate stimulus for the foundation of CIAM came in 1927, with the apparent disqualification of a winning entry by Le Corbusier in a competition to design the new League of Nations' building in Zurich. Interpreting that incident as being due to attack from reactionary forces, F. T. Gubler, secretary of the Swiss chapter of the Deutscher Werkbund,[4] suggested holding a meeting of European modern architects to discuss matters

2 It is not possible here to develop a related theme, namely, that truly functional architecture would come to share the form and look of the machine. Critics, however, often argued that in reality most modern architects knew in their mind's eye beforehand what form they wanted (Richards, 1972, 192) and the doctrine of functionalism became just another justification for passing off the Modern Movement's own stylistic preferences as an expression of rational design. For more on the 'machine aesthetic' and associated issues, see the development of the idea in the early works of Le Corbusier (for example 1923) and commentaries by Banham (1955), Holgate (1992) and Trommler (1995).

3 It would be unfair to Giedion not to point out that his early support of a purely rational and functional approach to architecture was later countered by his pioneering criticism of the sterility of such approaches (for example see Giedion, 1941).

4 The Werkbund was formed in 1907 to promote synthesis between creative design and industry. Although not a 'modernist' grouping as such, many of its members were sympathetic to modern archtecture. In 1927, it had promoted an exhibition of industrialised architecture at Stuttgart that gave rise to the Weissenhof Siedlung, one of the most important public displays of early modern architecture.

involving mutual support and interest. Hélène de Mandrot, a local dignitary, offered her château at La Sarraz, a small Vaudois town near Lausanne, as a possible venue. Le Corbusier supported the idea of a meeting and took the lead in writing the agenda for the Preparatory International Congress on Modern Architecture (later known as CIAM I).

He argued that the meeting would not make progress unless it had firm objectives and framed six questions in a short brochure as the basis for its proceedings. These mirrored his own current preoccupations, including the virtues of standardisation and rationalisation in the production of built forms, the links between architecture and the wider economic order, and the significance for architects of addressing town planning (Steinmann, 1979, 12–21; Boesinger and Stonorow, 1964, 175). At a stroke his schedule prescribed rationality, standardisation, geometric form, functionalist architecture and an explicit concern for town planning as starting points for the discussions of the three-day meeting in June 1928.

In the event, the Congress resisted Le Corbusier's more blatant attempts to impose his conceptions on the meeting, with a group of socialist architects[5] taking the leading role in creating the closing 'Declaration' on 28 June. Nevertheless, the strong interest in town planning persisted. It featured strongly in the 'Declaration of La Sarraz' (Steinmann, 1979, 12–21) and left an indelible imprint on the outlook of the new association. For CIAM, architecture's realm extended well beyond traditional preoccupations with the design of specialised buildings or estates for commercial, industrial, ecclesiastical or wealthy private clients. Instead it was now relocated 'in its true sphere which is economic, sociological, and altogether at the service of humanity'.[6] Town planning, in turn, was critical to that endeavour. Five of the 23 statements in the Declaration addressed town planning, with the opening clause leaving no doubt about the centrality of a functional approach:

> Town planning is the organisation of the functions of collective life; it embraces the countryside as well as the cities . . . Town planning cannot be determined by the claims of a pre-existing aestheticism; its essence is *functional order* (author's emphasis).[7]

Subsequent clauses mapped out four key functions of the city: dwelling, work, leisure, and circulation (transport and communications). The key mechanisms for carrying out town planning were identified as control over land use, legislation and regulation of traffic.

'Dwelling', however, was always regarded as the most important of the four functions. Inspired by the German delegation, the only group with sufficient

5 Principally Mart Stam, Hannes Meyer and Hans Schmidt.

6 Author's translation from the 'Déclaration' of the Congrès Preparatoire d'Architecture Moderne. Quoted from typescript version, Folder B1, CIAM Archive, Frances Loeb Library, Harvard University, 2.

7 Ibid., clauses II.1 and II.2.

critical mass and coherence to sustain the new association, the early Congresses focused on mass housing. Meeting in Frankfurt (1929) at the invitation of its Chief Architect, Ernst May, a prominent innovator in the design of social housing, CIAM II examined the 'minimum habitation' (*Existenzminimum*)—small, functional dwelling units for lower income groups that made the best possible use of space. CIAM III (Brussels, 1930) again visited a city closely associated with social housing. Its remit sought to consolidate the theme of the previous Congress by discussing how to organise whole groups of dwellings into planned neighbourhoods, weighing the relative merits of laying out areas with terraced houses, walk ups and high-rise flats.

At this point Le Corbusier and others succeeded in persuading CIAM to broaden its discussions so that housing estates were not seen in isolation from their urban context. Delegates at Brussels therefore agreed to devote their next Congress to the subject of the 'Functional City'. Moreover it was decided to create a set of guidelines so that analytical plans of existing cities prepared by member groups could be directly compared with one another. These were prepared by the Dutch group and were presented to an Extraordinary Congress of CIAM at Berlin in June 1931 and, in revised form, to a meeting of CIRPAC[8] at Barcelona in March 1932. They had two main elements. The first was the functional classification of urban elements decided at La Sarraz, which were broadly accepted as an *a priori* element in CIAM's thinking about town planning. The second was a set of standardised cartographic conventions, including scale, colour scheme and symbols, that were first devised for the Plan for Greater Amsterdam (Sert, 1942, 7–9).

By accident or design, the Guidelines specified both the approach and method of execution of the task. Member delegations were given instructions about the format for collection of written information in questionnaire form and for preparing plans that would show, respectively: residential, work and recreational areas; the traffic network; and the relationship between the city and its surrounding region. That effectively committed them to a specific type of plan making, partly based on the Geddesian sequence of survey–analysis–plan, but with each state constrained by the predetermined functional approach. Extensive survey work was retained, but information gathered was prescribed by the needs of the exercise. There was, for example, collection of data relating to social and economic conditions but other areas of potential interest, such as civic and cultural life, were largely neglected. Similarly, analysis was shaped by the requirement of mapping data into the four functional categories and reporting general features of needs and wants on that basis. That, in turn, would inevitably affect any broader principles that might emerge from the resulting plan.

8 The imposingly named *Le Comité International pour la Réalisation des Problèmes de l'Architecture Contemporaine* (CIRPAC) was effectively a ruling council, comprising the delegates of the accredited national delegates to CIAM.

CIAM IV and the 'Constatations'

From the outset, CIAM IV proved a difficult event to stage. Originally scheduled for Moscow in 1932, political and logistical difficulties caused it to be postponed until June 1933. When the Moscow organisers requested a further postponement until 1934, CIAM's leadership quickly decided to seek a new venue. Acting on a suggestion made by Marcel Breuer, the leadership chartered a Greek-owned cruise vessel, the SS 'Patris II', for a round trip between Marseilles and Athens with an eight-day stop over in the Greek capital.

CIAM IV, held between 29 July–14 August 1933, mixed together formal sessions with vacation visits to the Greek islands and official receptions. Its official proceedings were held during the outward leg of the sea voyage (29 July–1 August), in Athens (2–4 August) and the return leg to Marseilles (10–13 August), with closing sessions in Marseilles (14 August). During the working sessions (Fig. 1), the member groups took turns to present and discuss the exhibits that they had prepared.[9] While in Athens, the plans, some of which measured over 100 square feet in area, were displayed alongside one another in the Hall of the Institute of Technology, together with other works that individual members wished to display. There was also a series of lectures by major participants that interspersed these sessions. These included Le Corbusier on 'Air, Sound, Light', Cornelius van Eesteren on the Greater Amsterdam Plan, and the Austrian statistician Otto Neurath on his graphical system of representing social statistics.

The plenary sessions were paralleled by smaller groupings, primarily functioning through six committees appointed at the start of the Congress. Two were specifically charged with making arrangements for the Athens Exhibition and reviewing CIAM's own protocol. The four remaining committees were established with remits that specifically reflected the collective wish to ensure a tangible outcome to the Congress, dealing respectively with the Press, Statistics, Resolutions and Publications. The Resolutions Committee, for instance, had responsibility for the short-term task of preparing the closing communiqué and drawing up summary lists of the common threads of interest that emerged from consideration of the city plans and associated questionnaires. The Publications Committee was required to look to the longer term, preparing the ground for creation of a conference volume similar to those produced after earlier Congresses (CIAM, 1930; 1931).

Superficially, CIAM IV was a considerable success. It was a major achievement to hold a Congress at all in the light of the political turbulence then decimating modern movements in Germany, the Soviet Union and

9 The plans exhibited were Dessau, Frankfurt, Cologne and Berlin; Oslo; Stockholm; Prague; Budapest and Zagreb; Dalat (French Indo-China); Bandoeng (Java); Athens; Brussels and Charleroi; Paris; London; Amsterdam, Rotterdam, Utrecht and The Hague; Littoria, Como, Rome, Genoa and Verona; Warsaw; Madrid and Barcelona; Zurich and Geneva; Los Angeles, Baltimore and Detroit. The plates of the 33 urban analyses are housed at the CIAM Archive in Zurich.

Fig. 1 A working session on the promenade deck of the SS 'Patris II' (source: photograph by Laszlo Moholy-Nagy; Sert Archive, Frances Loeb Library, Harvard University. Reproduced by permission of Harvard University)

elsewhere. The Congress managed to work through a large number of presentations while still allowing time for social activities. The functional classification and cartographic conventions did provide a common basis for presentation of analyses of the 33 city plans. Identification of points of agreement was also facilitated by consideration of the completed written questionnaires, with their sections relating to housing, work, leisure and transport.

Yet despite these positive points, it proved difficult to extract real consensus from the meeting. Part of the problem lay in the logistical, organisational and procedural problems surrounding a hastily rearranged Congress. In addition, the meeting was beset by divisions and rumours of schism. Reports about the possible establishment of a rival organisation of left-wing architects by André Lurçat, a founder member of CIAM, came to nothing. Yet such was the poor record of inter-group cooperation that the Finnish architect Alvar Aalto tentatively suggested reorganising CIAM into three 'temperamentally similar' geographical groups. These groups, the Anglo-Scandinavian, central European and Mediterranean, might then talk to one another rather than retain the existing pattern of unified international gatherings.[10]

The Congress's proceedings expressed a measure of that 'fissiparousness'. Although some member groups believed that functionalism was an end in itself, others held quite different conceptions of the meaning of functional analysis and how it might be applied to the experience of the cities that they were analysing. Lacking the coordinating abilities of the absent German delegation, discussion revealed the extent of 'different theoretical and circumstantial points of view' (Morales, 1989). This resulted in sharp exchanges about principle and strategy that were unresolvable precisely because they began from different initial premises. Related to this were profound disagreements about the type of publication that should come from the Congress. Wells Coates noted that opinion among participants divided into roughly three parties, with various intermediate positions. These were:

> 1. 'Say Something' (not necessarily connected with work presented to Congress—Le Corbusier) 2. 'Do nothing' (with work presented, except to publish it as quickly as possible without further analytical research—van Eesteren, Giedion and most of the Swiss Group, with other adherents) 3. 'Do this' (with work presented, and lead to further work—MARS, Spaniards, Yugo-Slavs, and others).[11]

These divergences immediately expressed themselves in failure to achieve unanimity with regard to a final communiqué. Three separate drafts were produced,[12] but none proved acceptable to the assembly. The Congress finished

10 MARS Circular Letter II, 29 August 1993, file SaG/94/1, British Architectural Library (henceforth BAL), 4.

11 Ibid., 4–5.

12 The first version was presented on 10 August 1933. It is reproduced in Le Corbusier (1935; 1966, 187–89).

by affirming that it was necessary for a declaration to be found that would meet with the common approval of members, but recognised that this would only be reached after further discussion. A group was therefore established to undertake the necessary consultations in the next few months.[13] Immediately after the Congress, Giedion and his Swiss colleagues Werner Moser and Rudolf Steiger set to work to produce the final Declaration, with a first draft completed in German and in French translation by 4 September 1933. This was then sent to Le Corbusier in Paris for changes and modifications. Comparison between the preliminary drafts produced by the two sides shows subtle, sometimes pronounced, textual differences (Steinmann, 1979, 146–59). Terminology was changed and the document became considerably longer, especially regarding its closing resumé. New clauses were added on the role of the architect and the relationship of private to public interest. In many places, the text incorporated elements of both texts. At other points, items were omitted where they revealed disagreement between the parties involved. When discussing the implementation of town planning, for instance, the Zurich version called for the 'expropriation' of land and the French for its 'mobilisation'. Significantly the definitive version dropped the clause and thereby circumvented the differing political connotations of the rival terms.[14]

The results were known as *Feststellungen* (Statements) in German and *Constatations* (Conclusions) in French.[15] They were published in relatively obscure outlets, first in Greek and French in November 1933 (CIAM, 1933), then in German in 1934 (CIAM, 1934) and subsequently in other European languages (Steinmann, 1972a). Perhaps the most surprising feature of these brief documents[16] was their mild tone and contents. Despite the iconoclastic reputation of modernism, there was a section on conservation of historic buildings that was added at the insistence of the Italian group. It was argued, for example, that buildings were worth conserving if they truly represented the past, if they did not constitute a health hazard and if they neither stood in the way of developing the transport system nor affected the organic growth of the city. There was broad commitment to a functional analysis but few specific statements about the nature of its application. Moreover, apart from statements that envisaged modern technology reshaping street patterns, the Constatations mostly stated ideas that were common currency at that time. They offered little more than the gentle reformism that would have typified many groups, modernist or otherwise, interested in social improvement through redesigning the built environment.

13 It comprised seven individuals: Giedion (as Secretary-General), van Eesteren, Coates, Le Corbusier, José-Luis Sert, Piero Bottoni and Walter Gropius (Gerosa, 1978, 75).

14 Quoted material here from 'La Ville Fonctionelle: Constatations du IVme Congrès International (*sic*) d'Architecture Moderne', typescript version, Folder B3, CIAM Archive, Frances Loeb Library, Harvard University.

15 The latter term is used here, largely due to its suggestion of the findings of an enquiry.

16 The length varied with the language concerned, but amounted to around seven pages of printed text.

Observations about 'dwelling' emphasised the relationship between buildings and open space and indicated the importance of zoning laws to improve supply of open space, tackle poor sanitation, pollution, and overcrowding, and separate dwellings from corridors carrying heavy traffic. The findings on 'leisure' pointed to the inadequate supply of green space and leisure facilities for most of the city's inhabitants; the need to protect green space by land use controls; and the possibility of using land reclamation to increase the supply of leisure space. Clauses about 'work' highlighted its locational mismatch with dwelling as expressed in lengthy journeys to work, rush-hour congestion and business districts having no room to expand. The Constatations argued for locating industrial areas close to major road and rail transport routes while ensuring there was no erosion of open space between residential and industrial areas. Observations about 'circulation' argued for rigorous analysis to regulate and organise the transport network, especially recognising the different speeds of movement and varying functions of traffic within networks. Recommendations for improving flows included creation of multi-level crossing points and separation of pedestrian routes from roads used by cars.

In many respects, the Constatations was a pale shadow of what some of CIAM's protagonists would have wished. Yet, looked at another way, it was a permissive document. In laying out a list of principles, the Constatations effectively offered a ready-made structure for a conference volume. All that was apparently necessary was for an individual or group to flesh that structure with a selection of the wealth of empirical material available from the conference presentations. What no-one could then have realised is that the process of producing that volume would take a full decade to complete (see Table 1).

Publication history

The first phase of the publication task saw the Swiss group, led by Rudolf Steiger and assisted by Wilhelm Hess, attempt to collate materials from the national groups. This proved a difficult exercise. Available correspondence with the English group, for example, revealed continual problems, as well as an innovative catalogue of excuses from members about why no materials had been sent.[17] After more than two years a CIRPAC meeting at La Sarraz (September 1936) supplied an opportunity to take stock, with Steiger inviting other members of the Publications Committee[18] to assemble several days before the formal meeting to discuss progress.

17 In particular, see an extraordinary and occasionally vitriolic exchange of letters between Steiger and various MARS members about packages placed in the charge of emissaries for safe keeping and then lost: file SaG/94/1, BAL.

18 Listed as Giedion, Gropius, Weissmann, Le Corbusier, Wells Coates, Sert, Stam and Steiger in a letter sent to other members of the Committee by Steiger, 28 July 1936. Folder C1, CIAM Archive, Frances Loeb Library, Harvard University. This was seemingly reconstituted under the chairmanship of van Eesteren during the meeting with a membership that now comprised Giedion, Gropius, Benjamin Merkelbach, Perriand, Stam, Steiger and José Torres Clavé. Minutes of the CIRPAC meeting, La Sarraz, 9–12 September 1936. File SaG/91/1, BAL.

Table 1 *Brief history of publications associated with CIAM IV*

Date	*History of publications*
1933	CIAM IV (29 July–14 August).
	Publication of *Constatations* (November).
1934	Publication of *Festellungen*.
	Swiss Group, led by Steiger, take charge of main publication.
1935	Swiss Group encounter difficulties in getting cooperation from national Groups in collation tasks.
1936	CIRPAC meeting (September): decision to split book project into popular and substantive editions, edited respectively by French/Catalan and Dutch Groups.
1937	CIAM V produces volume *Logis et Loisirs*.
	First official use of term 'La Charte d'Athènes'.
	Both book projects stalled.
1938	CIAM Reunion (July): book titles changed to 'Resolutions of the Congress of Athens' (popular version) and 'Analysis of Towns' (technical volume).
1939	Sert moves to exile in USA (June).
	CIAM VI (Liège, September) cancelled.
1940	Sert attempts to find US publisher for substantive volume.
1941	Le Corbusier edits popular version as *The Athens Charter*.
	Sert obtains contract from Harvard University Press.
1942	Publication of *Can Our Cities Survive?*.
1943	Publication of *La Charte d'Athènes* by Le Groupe CIAM–France.

As a means of expediting publication, the meeting decided to produce two publications rather than one. Rapid publication of a popular edition would provide at least some tangible result to emerge from CIAM IV, while recognising that more time was required for the main volume. The French and Catalonian groups, led by Charlotte Perriand, Le Corbusier, Weissmann and Sert took charge of the popular edition under the working title 'Town Building in Creation'. This would draw on initial manuscripts and materials collected by Steiger, including examples of the original maps exhibited at CIAM IV. The book would contain around 200 foolscap pages 'opening lengthwise', 60 per cent of which would be photographs or maps and blocks. It was scheduled for publication 'well before' CIAM V in 1937. The Dutch group, led by van Eesteren and Stam, took responsibility for a fuller, scientific edition called 'The Functional Town', which would contain revised versions of the maps accompanied by reflective commentary. This too was intended for early publication, with a commitment to complete the main preparation tasks by January 1937.[19]

Some initial progress was made. By October 1936, Perriand reported that the French group had completed a dummy version of the popular edition. The book

19 There is a suggestion by Serenyi (1968), based on an interview with Sert, that these two projects were based on separate French and English versions of the final declaration which emerged during the return sea voyage of CIAM IV. There is, however, no other verification of this suggestion.

would be trilingual, with English now added to the official languages of German and French. Members' plans would each receive some four pages of text.[20] Yet more than a year later, the minutes of a meeting in London revealed that both books remained stalled, held up by inability to find a publisher, the perennial problem of gathering material from members, and lack of funds.[21] By mid-1938, plans were still fluid, with mounting indecision about the titles and purpose of the books readily apparent. Minutes of a Reunion conference in Brussels in July,[22] for example, stated that:

> Sert showed the model of the small publication 'Resolutions of the Congress of Athens' which was approved, and will be published in English this summer. Van Eesteren showed the model of the big book 'Analysis of Towns' intended for a non-technical public.

Increasingly, too, there was the problem of a steadily ageing project. No matter how much the leadership wanted publications that portrayed CIAM IV as a defining moment in architectural thinking about town planning, new thinking had to be accommodated. Part of that new thinking was generated by more recent developments in architectural theory and practice, but part also reflected the need to accommodate CIAM's own activities. CIAM V, held concurrently with the Paris International Exposition, had taken place in July 1937 on the theme of 'Logis et Loisirs' (Housing and Leisure). Seen as a chance to extend the 'Functional City' theme, CIAM V brought together a new set of exhibits linked by a loose functionalist theme and had itself generated a low-budget conference volume (CIAM, 1937; Giedion, 1951). Plans were also initiated for CIAM VI in Liège between 15 and 19 September 1939; intended as the third Congress on the Functional City, it was to concentrate on 'Open Space (Air, Light, Greenery)'.

Yet perhaps the most indicative signs of new thinking were the subtle changes in the terminology applied to CIAM IV. During his Presidential address to CIAM V, for example, van Eesteren suggested that a 'Charter of Town Planning' had been formulated from the city plans at the previous Congress (CIAM, 1937, 14). In another contribution, Sert (CIAM, 1937, 115) made the first official mention of the 'Athens Charter' when he referred to the possibility of CIAM working towards implementation of the conclusions of 'la Charte d'Athènes'.

However, time had run out for any formal publications to appear before Europe slid into the Second World War. CIAM VI was abruptly cancelled,

20 Letter from Charlotte Perriand to Wells Coates, 16 October 1936, file SaG/93/3, BAL.

21 Minutes of the MARS Group, 30 November 1937. Folder C2, CIAM Archive, Frances Loeb Library, Harvard University, 1–2. It was suggested that Sert could come to London in January 1938 during the time that the MARS Group's 'New Architecture' Exhibition was open to explain the work of CIAM and appeal for funds. All such appeals, however, were doomed to failure given the MARS Group's own parlous finances at that time (see Gold, 1993).

22 Minutes of the CIAM Reunion for Preparation of CIAM VI, Brussels, 10 July 1938. File SaG/93/3, BAL.

although in reality few delegations were in a position to prepare appropriate exhibits. The European Modern Movement was scattered and CIAM's activities were suspended for the duration of the war. Yet, if group undertakings were impossible, individuals could still act independently to complete the much-delayed publication projects. Working in completely separate milieux during wartime, José-Luis Sert and Le Corbusier would each produce a volume that had claims to be an authentic record of CIAM IV: namely, *Can Our Cities Survive?* (Sert, 1942) and *The Athens Charter* (Le Corbusier, 1943; 1973).

CAN OUR CITIES SURVIVE?

Sert retained responsibility for the popular edition. Branded as unfit to follow his calling in his native Spain, he moved to exile in New York in June 1939, where he formed a practice with Paul Lester Wiener and Paul Schultz. Once he had re-established his affairs, Sert continued for several years to look for a publisher for the book, now solely an English-language volume. Although several American publishing houses rejected the manuscript, his growing links with Harvard eventually helped him to secure a contract with its University Press in October 1941 for a book provisionally entitled *Should Cities Survive?*. Although that title clearly connected the book's contents to a prevailing debate about urban transformation versus deurbanism (Giedion, 1941; 1967, 720–27), a handwritten note from Dumas Malone, Director of the Harvard University Press, suggested that they were unhappy with it.[23] Largely as a result, the title was changed to the enigmatic *Can Our Cities Survive?* when the book was finally published in 1942.

In many respects, this 250-page book was still unmistakably the product of CIAM IV. Sert used CIAM's 'Town Planning Chart', a lightly amended version of the Constatations, as the structuring device for the text. The 15 individual chapters were arranged according to the sequence of topics in the Chart, with direct quotations from it used to introduce many of the book's sub-sections. An initial chapter explained how the Chart was produced and presented, but did not justify, the fourfold classification of urban functions. Subsequent chapters then discussed dwelling, recreation, work and transport in turn before turning to the question of integrated planning. The book closed with an appeal for a holistic view that could overcome barriers to large-scale planning and implement planned action to 'save our cities'.

There was, however, much about the book that indicated it was a product of a specific time and place, As Giedion's introduction (1942, x) stressed, Sert had been given free rein to craft the book as he wished. Commercial realities meant that it had to provide examples and illustrations relevant to a contemporary American audience regardless of whether these were discussed in 1933. Photographs depicting American cities and urban planning practices were

23 It bears this title on the Memorandum of Agreement between the author and the Harvard University Press, October 1941. This and correspondence between Sert and the Press may be found in Folder C1, Sert Archive, Frances Loeb Library, Harvard University.

added to illustrations derived from CIAM IV. The advent of war in Europe brought at least an edgeways penetration of examples that addressed urban reconstruction, for example, with photographs of London during the Blitz, and air-raid defences. The switch to non-metric systems of measurement also brought alterations to the few indices of density mentioned in the Constatations.[24]

THE ATHENS CHARTER

For his part, Le Corbusier spent the war isolated in France, engaged in painting and in producing abortive plans for housing and town planning schemes.[25] During 1941, the time when he actually compiled *The Athens Charter*, Le Corbusier was involved in lengthy, and ultimately abortive, negotiations with the unpredictable Vichy régime over projects such as the Algiers Plan.[26] Given the sensitivities of the time, the book was not technically an 'official' CIAM publication (Steinmann, 1972b, 55), nor did it carry Le Corbusier's name but instead attributed authorship to 'Le Groupe CIAM–France'. Nevertheless, *The Athens Charter* (Le Corbusier, 1943; 1973) would become widely regarded as both the key expression of CIAM's views on town planning and an important statement of Le Corbusier's thought.

In style and format, it gave every impression of sticking closely to the text of the Constatations. After an introduction by the playwright Jean Giraudoux, an enthusiastic admirer of Le Corbusier, the text comprised two main sections. The first provided a summary of CIAM since 1928 told from Le Corbusier's standpoint. This, in itself, was not a new phenomenon. Le Corbusier had failed to get the assembly to accept the key thrust of his ideas at La Sarraz in 1928, had spent much of CIAM IV engaged in 'airy superfoetations',[27] and had consistently tried to exert influence through his contributions to the groups working on the publications from CIAM IV. It was always likely that if he had a free hand to recast the Constatations in a manner more of his choosing, the result would not necessarily be an exercise in dispassionate historical scholarship. With regard to CIAM IV in particular, the reader was informed that after the 'two weeks of fervent work' came 'a precious result: *The Athens Charter*'. This unlocked 'all doors to the urbanism of modern times . . . (and) in the hands of

24 The Constatations, for instance, defined the excessive density of central districts of towns as 1025 per hectare. Due to having to adjust to a different system of measurement, this was reduced to an equivalent of 1000 per hectare to accord with 400 per acre.

25 Particularly in collaboration with ASCORAL (Assemblée de Constructeurs pour une Renovation Architecturale) in 1942–43. Meeting in secret, ASCORAL undertook conceptual studies of housing, prefabrication, standardisation and town planning with an eye to forthcoming reconstruction.

26 Le Corbusier's activities during the Second World War are a controversial, if not to say embarrassing, matter for some historians as can be seen by comparing the treatment in Jencks (1973, 130–33) with that of Baudoui (1990, 33–35). For an excellent study of this period of Le Corbusier's career, see Fishman (1977, 243–52).

27 A comment by Wells Coates. See MARS Circular Letter II, 29 August 1933. File SaG/94/1, 3, BAL.

the authorities, itemised, annotated, clarified with an adequate explanation, the Athens Charter is the implement by which the destiny of cities will be set right' (Le Corbusier, 1943; 1973, 26).

The remainder of the book presented the Charter itself as a 62-page document divided into 95 numbered clauses. At first glance, these appear to constitute a straightforward rendition of the Constatations, albeit with each clause carrying an amplifying and often polemic explanatory note. The clauses themselves broadly followed the same order as the Constatations with small amounts of rearrangement and any 'adjustments' in terminology are justified on the grounds that the text was 'the result of debates among the assembled representatives speaking ten different languages'. (Le Corbusier, 1943; 1973, 40). The clauses themselves were grouped into three sections. The first contained a short set of 'generalities' on the city and its region. The second dealt with the four urban functions, offering 'observations' and 'requirements' on each. The final section, corresponding to the resumé of the Constatations, was devoted to 'conclusions' and 'main points of doctrine'.

Discussion

Superficially, there was little hint of just how far Le Corbusier's version had transformed the Constatations. Three examples, however, help to gauge this point. The first concerned the use of high buildings in urban areas. The Constatations gave mild support, but less than ringing endorsement, to the idea that modern technology made possible the construction of high buildings which, when widely spaced, could create large amounts of open space and parks. Sert's version of the 'Town Planning Chart' elaborated on this sentiment but retained its broad spirit:

> Modern building technics should be employed in constructing high, widely spaced apartment blocks whenever the necessity of housing high densities of population exists. Only such treatment of dwellings will liberate the necessary land surface for recreation purposes, community services, and parking places, and provide dwellings with light, sun, air and view. (Sert, 1942, 247)

This point was illustrated in the text by monochrome photographs of housing schemes from France, Finland, Denmark, Switzerland and the USA, seemingly showing that good practice was already internationally recognised. Le Corbusier, by contrast, boosted the rhetoric. The relevant portion of the Constatations was rendered as 'The resources offered by modern techniques must be taken into account. . . . High buildings, set far apart from one another, must free the ground for broad verdant areas' (Le Corbusier, 1943; 1973, 65). The explanatory notes stated that, provided the most suitable height, building tall blocks for housing could facilitate

> the choice of the most agreeable view, the search for the purest air and the most complete exposure to sunshine, and finally, the possibility of

> establishing communal facilities—school buildings, welfare centres, and playing fields—within the immediate proximity of the dwelling, to form its extensions. Only structures of a certain height can satisfactorily meet these legitimate requirements (Le Corbusier, 1943; 1973, 65).

The problem of the street provides a second example of the freewheeling approach adopted towards the Constatations. As noted above, the clauses on traffic were already the most radical aspects of the Constatations, recognising the different speeds of movement and varying functions of traffic within networks and recommending technological solutions to improve flows. Sert broadly supported these provisions, providing extensive examples of recent practice—including parkways, segregated expressways and clover-leaf intersections—that were not necessarily part of the discussions at CIAM IV. Le Corbusier went somewhat further. He had long vilified the traditional *rue corridor* with its rigid line of buildings and intermingling of traffic and pedestrians (Gold, 1998), claiming in an article in 1929 that:

> It is the street of the pedestrian of a thousand years ago, it is a relic of the centuries: it is a non-functioning, an obsolete organ. The street wears us out. It is altogether disgusting! Why, then, does it still exist? (Moos, 1979, 196)

In his version, the Athens Charter codified much of what would become the paradigm of post-war road policy. The modern road network would differentiate between various types of traffic, classifying them according to vehicle speed and restricting them to their own channels. On that basis, he argued for major functional transformations that would equip city and region with a road network: 'that incorporates modern traffic techniques and is directly proportionate to its purposes and usage'. Use of height would also help matters. Building high could free ground areas in order to 'recover the open land necessary for communications'. Multilevel road systems could be used 'to regularise certain heavy flows of vehicular traffic' (Le Corbusier, 1943; 1973, 98).

The final, and related, example is the notion of the 'Functional City' itself. The Constatations used the notion of *La Ville Fonctionelle* sparingly and saw functionalist approaches as combining spiritual with material values, liberty with collective action. Planning for the various urban functions must refer to the human scale, to the daily rhythm of work, recuperation and leisure. Sert proceeded in similar manner. Influenced by comments from pre-publication readers, particularly Lewis Mumford, Sert had moved away from narrower materialistic approaches to functionalism to emphasise more organic interpretations. He noted that the urban unit: 'should be able to develop organically in all its different parts. And each phase of its development should assure a state of equilibrium among its respective functions' (Sert, 1942, 249). The cultural and spiritual dimensions were also emphasised:

> a city would not be functional unless it satisfied and stimulated the more noble aspirations of its people as well—aspirations which strive towards a better life and which have always impelled men to seek a community

> existence. For these aspirations toward well being and spiritual perfection are enlarged and stimulated in the exchange of ideas which characterise civilisations. (Sert, 1942, 228)

At the same time, Sert drew attention to elements not covered by the Constatations. He emphasised the significance of civic centres in human affairs as 'visible expression of man's higher aspirations' (Sert, 1942, 230), a subject that would exercise CIAM's attention in post-war Congresses but was not part of the agenda in 1933 (Gold, 1997, 215–19).

Le Corbusier (1943; 1973, 95–100) proceeded with less compromise. His rationalist interpretation of the 'Functional City' held that the keys to urbanism were 'found in the four functions'. Plans would 'determine the structure of each of the sectors allocated to the four key functions and they will also determine their respective locations within the whole'. The cycle of daily functions would be regulated with the 'strictest emphasis on time saving'. Road networks, as noted above, would be reorganised according to the functional needs of the different types of traffic that they had to accommodate. Tellingly, Le Corbusier argued that the city as a functional unit should be able to 'grow harmoniously' in all its different parts rather than the expression 'develop organically' used by Sert. As Le Corbusier explained:

> The city will take on the character of an enterprise that has been carefully studied in advance and subjected to the rigour of an overall plan . . . Subordinated to the needs of the region, assigned to provide a framework for the four key functions, the city will no longer be the disorderly result of random ventures. Its growth, instead of producing a catastrophe, will be a crowning achievement. (Le Corbusier 1943; 1973, 99–100)

Conclusion

During the course of this paper, we have seen how the process of creating the Athens Charter took 10 years to complete rather than being the immediate product of CIAM IV. We saw how CIAM's Fourth Congress in 1933 was initially unable to agree on a set of closing resolutions, delegating the task to a small group of senior members. After three months and the exchange of contested drafts, they produced the anodyne outline of principles known as the Constatations. For the next three years, the Swiss group attempted without success to collate a single volume. Thereafter groups with constantly changing memberships and remits attempted to make progress on a pair of linked volumes. Eventually, after responsibility for publication had passed to two individuals, the 'findings' of CIAM IV were represented to the wider world through Sert's illustrated sourcebook of planning practice and Le Corbusier's crusading manifesto. The latter, in particular, effectively popularised both the name of 'The Athens Charter' and its reputation as an uncompromising statement of the modern architect's approach to town planning.

The fact that it was possible for these heavily revised texts to maintain

continuity with the discussions of CIAM IV was due in no small measure to three characteristics of the Constatations. First, it was a truly permissive document. Its fragmentary nature left gaps that were an open invitation for others to fill with qualifications, examples and alternative interpretations. Sert filled many such gaps with illustrations of hopeful prototypes and case studies; Le Corbusier with new statements of doctrine. Secondly, its negotiated and compromise character tended to flatten out diversity and rationalise the mutually contradictory experiences of CIAM IV: a characteristic that also permeated the books of Sert and Le Corbusier. Thirdly, and related, the contents of the Constatations illustrated the notorious elasticity of 'functionalism' in architectural discourse (Hitchcock and Johnson, 1932; 1966, 35). Essentially, all that member groups were required to do when preparing their exhibits was to use the four 'urban functions' as a basis for mapping. They were not tied to any specific concept of 'functionalism'. That flexibility would remain, with Sert and Le Corbusier similarly free to embrace philosophically divergent concepts of functionalism in their respective texts without difficulty.

The changes that were introduced, of course, went far beyond mere updating. The war had brought entirely different sets of social, economic and political circumstances. At the time when they compiled *Can Our Cities Survive?* and *The Athens Charter*, Sert and Le Corbusier were living precariously during wartime, the Modern Movement was scattered, CIAM had been dissolved and urban reconstruction was a distant dream. Those books were as much ideologically-motivated attempts to adapt the Constatations in order to address current circumstances as they were efforts to complete long-standing publication tasks.

To elaborate, ideology here needs to be interpreted from the standpoint of both the individual authors and CIAM. From the individual point of view, the contents of these books partly reflected personal projects. There is no doubt that there was a history of 'jockeying for position' (Drew, 1986, 16) among the leadership of CIAM, which began at La Sarraz and continued throughout the 1930s. By rewriting the history of CIAM IV to promote their respective interpretations of the relationship between architecture and town planning, Sert and Le Corbusier were, in some measure, bolstering the centrality of their own views within CIAM and, by extension, their position within the international Modern Movement.

Yet, as their texts clearly show, both individuals also clearly saw their role as standard-bearers for CIAM and for modern architecture at a bleak moment in world history. With little to gain from equivocation, Sert and Le Corbusier recognised that the post-war situation might present a historic opportunity for an erstwhile marginal group of architects to build a new future for themselves. Certainly Le Corbusier's ringing rhetoric that architecture 'presides over the destinies of the city' and was 'the key to everything' (Le Corbusier, 1943; 1973, 103–04) was intended as a rallying cry. In presenting their case, both authors stressed the importance of elements that signified consensus and common purpose rather than diversity and conflict. Doubts, for example, over the value and utility of the fourfold classification of urban elements or the failure to address the need for monumentality were submerged (Gold, 1997). In doing so,

they may well have reinforced an ideology that endowed 'architects with a model of action as flexible as it was already out of date' (Tafuri and Dal Co, 1980, 220).

That lesson, however, would only be revealed by the experience of post-war urban development. For the meantime, Sert and Le Corbusier had taken the opportunity to emphasise the legitimacy of the architect's credentials to participate in matters involving town planning and to help design the new housing, neighbourhoods and road systems of the future city. They stressed the continuing relevance of CIAM's thought at a time when CIAM itself faced extinction. There could be few more cogent reasons for bringing the unfinished business of CIAM IV to a close.

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