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Transcribing the Contemporary City: Le Corbusier, Adelaide and Chandigarh

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Abstract

Within the space of seven months in 1950-51, Le Corbusier committed two seminal city plans to paper. One was his celebrated plan of Chandigarh, the modern capital of the Punjab, made in February 1951. The other, made earlier in August 1950, was a re-drawing of Colonel William Light's Plan of Adelaide, South Australia, the result of a chance meeting between Le Corbusier and a Professor of the University of Adelaide on secondment in the Americas. This paper brings attention to the unusual circumstances surrounding the making of Le Corbusier's Adelaide plan and observes parallels in the planning of Chandigarh and the processes of design and drawing attributed to Le Corbusier through his association with the CIAM group. Out of this discussion the paper also reconsiders the question of Chandigarh's origins as a work of design and speculates on the significance of the Adelaide drawing to Le Corbusier's post-war career.

Introduction

Alan Colquhoun makes a critical observation of the relation of theory to design in Le Corbusier's work when he states that theory, for the architect, is always "justificatory."¹ By this he means to contrast Le Corbusier's approach to theory from that of other modernists such as Walter Gropius for whom, Colquhoun argues, "theory was instrumental and design its direct product."² Two related observations might flow from this. The first observation is that by using theory in a justificatory manner Le Corbusier invariably seeks to state the terms of his reception. Famously he does this through various media, particularly his writing, drawing and publishing, in ways that are simultaneously didactic and rhetorical. The second and related observation is that by de-coupling theory from a direct link with design, Le Corbusier inevitably obscures the relation of precedent to his design work, that is, those relations on the production side of his design work rather than on the side of its reception.

Much of the critical assessment of Le Corbusier's work through scholarship is an investment in this reception side of his work, that is, it largely expands the received and authorised view promoted by the architect.

For instance, in the case of Le Corbusier's Chandigarh, there is a drawing made by the architect that directly compares the city's master plan (1951) with Edwin Lutyens master plan for New Delhi (1912).³ As recently shown, some scholars take this drawing alongside pronouncements by Le Corbusier of his admiration for Lutyen's design as indicative of some original or intended connection between the two plans.⁴ Yet this comparison made by the architect in drawing is justificatory rather than prospective. The drawing is made in Paris and is dated April 18, 1951, more than a month after Le Corbusier had essentially drawn and finalised the Chandigarh master plan with Maxwell Fry and others on-site in India.⁵ In short, it is a drawing that has little to do with the actual production of Chandigarh's master plan. What the drawing does do, to borrow from Colquhoun again, is "to justify architecture as an autonomous and normative discipline."⁶ Here Le Corbusier is establishing his claims to contribute to the discipline by holding up his work alongside that of others, who are already acknowledged within the discipline. The drawing is a rhetorical device like many others by Le Corbusier that ascribes the general claim of a body of theory in relation to architecture but refer little to the actual production of design.

There are other possible comparisons to be made between urban plan forms in relation to Chandigarh that can assist in playing out this question concerning the alliance of theory and design in Le Corbusier's oeuvre. This paper reveals a drawing held in the collection of the *Fondation Le Corbusier*, a diagrammatic plan of the city of Adelaide, South Australia, drawn by Le Corbusier in 1950⁷ that provides an intriguing opportunity to do so, which has never previously been discussed.

Le Corbusier's Adelaide Plan Drawing

The circumstances surrounding the making of Le Corbusier's drawing of Adelaide are unusual. The drawing, dated 17 September 1950, was made in Bogotá, Colombia, most likely at the Hotel Continental, where the architect stayed while working on his commission for an urban plan for the city.⁸ The drawing clearly marked 'Adelaide, Australia' is made up of three sections that appear as loose pages taped together. In the central section there is a simple sketch plan of the southern portion of the city (part of that famously surveyed by

Colonel William Light in 1836).⁹ The city's grid is shown indicatively with both single and double lines designating a layout of streets. This grid of lines is interrupted by rectangles that denote the city's five squares – Light, Hindmarsh, Whitmore, Hurtle, with Victoria at the centre – laid out in their symmetrical pattern. There is no indication of the feathered eastern edge of the street grid that featured in Light's survey. Instead the border of the city is shown definitely square with a continuous pair of lines around the edge indicating enclosing streets. There is a further set of rectangles drawn outside on the top edge of the grid indicating generically the civic buildings along North Terrace. The angled grid layout of North Adelaide and the Torrens River, which should have been indicated beyond North Terrace, are not shown. Forming a rough circle around the grid of South Adelaide is a series of dash marks, indicative of the belt of parklands that encircle the city. Some criss-crossed lines on the right, outside the circle, indicate the position of the Adelaide Hills to the east. The left section of the drawing is a continuation of the central one, identifying features to the west including an industrial zone, waterways and a loose mark representing the Gulf of St Vincent.

How Le Corbusier came to make this diagrammatic plan of Adelaide in distant South America is indicated by an acknowledgement situated along the top of the drawing. There the architect writes that he has made the drawing "with Dr Hugh C. Trumble, University of Adelaide, South Australia."¹⁰ The details of this fortuitous meeting and the manner in which the plan of Adelaide became its object remain somewhat obscure, however it is worth remarking on the unusual nature of the plan drawing created. For Le Corbusier to acknowledge a collaborator in this way is indeed rare. It may have been the result of the unusual context of the meeting or as an aid to memory. In either case the architect's obsession with the authorship of his work is set aside in this instance. So who is Hugh Trumble, Le Corbusier's acknowledged collaborator?

Hugh Christian Trumble, born on 13 April 1903 at Caulfield, Victoria, was named for his father, the famous cricketer and medium paced bowler who successfully captained Australia against England in the 1890s.¹¹ In a memoir of his early life and career Trumble recalls his young days watching his father play cricket, and describes his passion for the game and also the 'greensward', that is, the grassy turf on which it is played.¹² This latter passion leads him to a distinguished career as an agronomist at the Waite Agricultural Research Institute, University of Adelaide, where he becomes Professor in 1941. Through his university work he travels extensively through Europe, North Africa and the Middle East inspecting grasslands

and assisting in the development of agriculture. On 5 September 1949 Trumble is seconded from the University of Adelaide to the Food and Agriculture Organization of the United Nations (FAO) for a six-month period.¹³ Though the FAO was based in Washington D.C., officers of the organization traveled extensively, reporting on, and assisting with strategies for improving agricultural production in countries around the globe. At the FAO Trumble is able to build upon his early experiences and lead an agricultural mission to Nicaragua. In a letter dated 31 March 1950, the University of Adelaide received a request from Herbert Broadley, Acting Director-General of the FAO, for the extension of Trumble's six-month leave of absence.¹⁴ The letter stated that the organization had much to gain from "men of his outlook and experience."¹⁵ The extension was approved. Trumble continued his travels for the FAO in late 1950 and a letter to the University of Adelaide, dated 12 September, confirms that the agronomist was in South America at the time of his unscheduled meeting with Le Corbusier.¹⁶ The meeting is also confirmed by the architect himself who writes from Bogotá to Paris on the 19th September, saying that he has met a "bright Australian"¹⁷ there.

Though Le Corbusier's drawing of Adelaide is diagrammatic it holds an extensive amount of information about the city. With Trumble's assistance, Le Corbusier fashions a key to his drawing of 15 separate items. He begins by noting dimensions, stating, "lines for one block = one square mile."¹⁸ He then notes the preserved open space around the city grid writing, "continuous park, one mile long, building prohibited."¹⁹ Beyond this ring of parkland he notes a zone of, "houses and residences."²⁰ In and around the city grid Le Corbusier also marks the position of the Hindley/Rundle street axis as "Main Street."²¹ Next, the important civic buildings and structures situated outside the city grid on North Terrace are shown, noted as – "government, memorial, university, etc, etc."²² Other key elements of the city's infrastructure are also shown. The city railway station is positioned outside the northwest corner of the grid aligned on North Terrace and, beyond that, an industrial zone linked to the Gulf of St Vincent – a place for the arrival of large ships including, according to Le Corbusier, the "Queen Mary."²³ On the reverse side of the drawing are handwritten notes by Trumble that confirm many of the features sketched by Le Corbusier, and which give some indication of what must have been a lengthy conversation between the two. Trumble writes:

City of Adelaide/ South Australia/ 360, 000 people/ Centre – one square mile with a central square and four subsidiary squares. All streets at right angles and continuously straight. Sea five miles to the west, mountains 2,700 ft to the east. Parklands extend around the city and cannot be built upon. All residences and

industries must be built outside these.²⁴

By any account Le Corbusier's Adelaide plan drawing is fortuitously made and yet its making can be seen as oddly critical to developments in the architect's career, particularly in the development of the Le Corbusier's thinking and practice on urban design. It is on his return home from this South American trip that Le Corbusier finds a letter from the Indian Embassy in Paris inviting him to participate in the design of the city of Chandigarh, the modern capital of the Punjab.²⁵ This commission, that he later accepts, becomes the most significant of his career. In addition to this, Le Corbusier is at a crucial moment with respect to his leading role within the *Congres Internationaux d'Architecture Moderne* (International Congresses of Modern Architecture) known as CIAM. Having held great influence over the congress from its inception and heavily promoting ideas on the modern 'functional city', it is at the CIAM 8 (Hoddesdon, 1951) that Le Corbusier will receive his first serious challenge from a generation of younger architects. The Adelaide plan drawing can be viewed in these two contexts, firstly, with respect to the processes and ideas of design and drawing attributed to Le Corbusier through his association with the CIAM group up to the 1950s and, secondly, in relation to the design of the master plan for Chandigarh made in February 1951.

Le Corbusier, CIAM and Chandigarh

CIAM had a key role in the development of European architecture, particularly concerning the ideological basis of modernism in the relationship of architecture and town planning; an ideology that framed the concept of urbanism. Ostensibly dominated by Le Corbusier and the Swiss architectural historian Siegfried Giedon in its early period, the organization was surprisingly diverse in terms of the individuals and ideas that it came to represent over its 32 year life-span. CIAM saw itself as an avant-garde group characterised by the "combining of scientific analysis with political and artistic radicalism."²⁶ The declarations of the organization had overtly rational and positivist overtones, generating a polemic that "defined a new and perhaps overly ambitious socially transformative role for architects and architecture."²⁷ Its methods for design incorporated quasi-scientific analysis of both old and new cities alongside a rationalist functionalist categorization of human activities into "dwelling, work, transportation, and recreation." In turn, these categories had a direct relation to the organization and form of proposed cities that would mirror these functionalist divisions, providing the primary elements of the so-called "Functional City."²⁸

The quasi-scientific aspect of CIAM's research of urban form was reflected in its methods of graphic presentation. When architects presented their analyses of cities in the context of the CIAM congresses all submissions were made to a specific grid format (21 x 33 cm panels that were colour coded in common and according to function).²⁹ The method, promoted by Le Corbusier at CIAM 6 (Bridgwater, England, 1947), had been devised in concert with members of ASCORAL (*Assemblée des Constructeurs pour une Rénovation Architecturale*) a multi-disciplinary research collective formed in Paris in 1943 to plan city reconstruction. The Grid, as it became known, formed a matrix through which a broad range of information regarding themes and functions of the city could be clearly and effectively organized.³⁰

Crucially this rational mode of presentation applied uniformly to the 'analysis' of proposed as well as existing cities. For instance, at CIAM 9 (Aix-en-Provence, 1953) 40 Grids were shown, with only 6 Grids presenting new work (including built schemes as well as conceptual ones).³¹ This uniform presentation was a not-so-subtle evocation of the objective claims of CIAM's urbanist discourse that, rhetorically at least, positioned urban design as a scientific practice rather than an artistic one. In effect, the CIAM Grid was more than a repository of information about the city it had become "a conceptual tool for urbanism."³²

Another less remarked type of conceptual tool for the production of urbanism instituted by Le Corbusier and CIAM is centred upon the act of drawing, an act that begins with the formation of an initial plan drawing that denotes the parameters or setting of the urban 'problem', that is, the marking out of key elements of geography, landscape and infrastructure related to the site under consideration. According to Maxwell Fry, this is the key method employed by Le Corbusier in March 1951 as he fashions his own master plan for Chandigarh, the commission that dominates his post-war career.³³ Fry writes of witnessing Le Corbusier's drawing as follows:

... Corbusier started on large sheets of paper to approach a plan by a method of rough and ready analysis familiar to me from the workings of the Congrès Internationaux d'Architecture Moderne (CIAM). First he outlined the main communications with the site on the map of India – air, railway, road. Then he dealt with the site itself – its immediate background of low foothills rising to the sheer mountains of the Himalaya with the peaks beyond ...³⁴

In Fry's description Le Corbusier continues to add elements to his drawing – dry riverbeds that define the broad plain that will receive the city, plus a diagonal road and a railway line to

the right – and commentates as he draws, “Here is the railway station and the commercial road.”³⁵ Le Corbusier then proceeds to draw the city centre – the “stomach” - and forms his city around it:

Then he delineated the massive sectors, measuring each half by three-quarters of a mile and filling out the extent of the plain between the river valleys, with extension to the south.³⁶

In the drawing above his grid of sectors, Le Corbusier places the capitol complex of main governmental and civic buildings, essentially free of the grid and related to the landscape beyond – the foothills of the Himalayas.

Chandigarh and Adelaide

At this point it is worth observing that Le Corbusier’s Adelaide Plan drawing, made seven months earlier, is essentially similar in its method of drawing – corresponding with the ‘rough and ready analysis’ performed in presenting and tackling urban problems attributed to CIAM by Fry. In the Adelaide Plan drawing key elements of geography and landscape are picked out – the Adelaide foothills and the Gulf of St Vincent – as well as infrastructure – a shipping port, an industrial zone, the railway station and main roads. Against this setting appears the ‘universal’ rectilinear grid of the city that is situated with an apparently inevitable logic in relation to the particulars of its setting – a city generated as if automatically out of a clear and objective process of analysis and action. An obvious distinction between the two drawings is that Le Corbusier’s master plan for Chandigarh is a projected urbanism whereas the Adelaide Plan is a transcribed one. Even beyond this direct comparison of ‘methods’ in the production of the contemporary modernist city, however, is the manner in which Le Corbusier’s Adelaide Plan reiterates the general principles of the ‘Functional City’ paradigm adopted by CIAM. The articulation and separation of the functions of ‘dwelling, work, transportation and recreation’ are highlighted in the Adelaide Plan – the city grid separated by a belt of recreational parklands from an area of dwelling beyond, an industrial zone ostensibly separated from the city grid, parklands and dwelling linked to a port and so on.

The ‘Adelaide’ produced by Le Corbusier (one that he pictures back to himself in drawing) is an efficacious representation of the architect’s ideology on urbanism – appearing like a self-fulfilling prophesy of CIAM ideals in sketch form. Indeed it is through the process of ‘re-drawing’ Adelaide that this ideology achieves what seems a perfect clarity. This process is aided by the circumstances in which the plan is made, with Hugh Trumble as advisor to Le

Corbusier, presenting a version of the city tempered by his own clear but imperfect recollections – allowing Le Corbusier license for interpretation and also omission. For example, there is no description of North Adelaide whatsoever, no representation of the Torrens River running between the parts of the city and no reference to the ragged eastern edge of the city grid. This kind of editing, conscious or unconscious, is perhaps inevitable. Without an actual plan of Adelaide before them, the act of committing the city to paper is, for both men, an act of imaginative projection – and yet it crystallises a set of relationships between an actualised urban condition and its geographical setting that seems to achieve a logical perfection. The desire of Le Corbusier to see the methods of his urbanism as a type of science is equally matched by Trumble’s ability, as an agricultural scientist, to assist and verify this kind of thinking. It could be speculated that there is a reciprocal scopic command between the two within their respective fields. Le Corbusier’s architectural ability in the mastery of the plan and the ‘god-like’ overview is equally matched by Trumble’s commanding knowledge of the land and his familiarity with maps as a means to objectively view and collate data. Trumble’s possession of such knowledge is evident in his memoir, *Blades of Grass*, which includes maps and detailed discussion of the “Agro-climatic Regions of South Australia.”³⁷ It is perhaps this sense of a shared knowledge and a ‘scientific’ approach that may well have made for such a productive encounter between the two.

Le Corbusier was certainly impressed by Trumble in their meeting, enough to mention him in two separate letters to his wife made in the days following.³⁸ Trumble had also impressed his colleagues at the FAO with a letter from the Organisation to the Vice-Chancellor of the University of Adelaide describing Trumble as “one of the most stimulating people we have ever had in our Agriculture Division.”³⁹ Though the meeting of these two men was brief there appears to have been a significant ‘meeting of minds’ enough that they could collaborate upon, and seek to produce, the drawing of Adelaide made on a particular Sunday in September 1950 – a drawing that has remained firmly out of sight, and yet is no less part of Le Corbusier’s *oeuvre*.

In relation to the design of the master plan for Chandigarh made in February 1951, Le Corbusier’s never before seen Adelaide plan makes an intriguing companion. Not only are the two plans made according to CIAM methods and principles, as already outlined, there are also obvious similarities between each in terms of their layout. In both instances the city is drawn as a self-contained rectilinear grid with the major civic buildings located outside it,

coincidentally on the northern edge. Both plans feature a city encircled by parks and green space, “never to be built upon”, and each grid is drawn in relation to a landscape ‘backdrop’ – the hills or mountains against which it is viewed. Trumble’s scripted instructions to Le Corbusier in the making of the Adelaide plan have, it seems, an uncanny echo in the architect’s orchestration of the elements of his Chandigarh master plan made only seven months later.

Some of the similarities are certainly formal and procedural, a result of Le Corbusier’s iterative and symbolic approach to urban planning. The isolated rectilinear grid, a formal image that occupies the architect from the 1923 onwards, is clearly presented in both plans. The tendency to represent anthropometric qualities in the plan – head, body and stomach – is also evident in each, a legacy of the formal arrangement of Le Corbusier’s *Ville Radieuse* project (1931).⁴⁰ And yet this iterative formal repertoire is applied quite differently in each case, firstly, in the act of transcribing an existing city and, secondly, in the act of projecting an entirely new one. The curious value to Le Corbusier of Adelaide as an existing city to be transcribed is the way that it doubly rewards his efforts in transcription. It confirms broadly held ideological beliefs about modern urbanism that he has arrived at through his own design work while representing them back in the material form of a ‘realised’ contemporary city.

Beyond this resemblance is the question of the Adelaide plan as a precedent for Chandigarh’s plan; a question that is usefully returned to issues in the relation of theory to design in Le Corbusier’s oeuvre raised at the beginning of this paper. Out of the commentary of Alan Colquhoun it was noted how there are problems in the nature of precedent in Le Corbusier’s work where the justification of designs is so often couched in rhetorical terms. As identified earlier this is a particular issue in the case of Chandigarh, a project that wears the burdens of precedent heavily through the kinds of rhetorical claims made by the architect. Add to this Chandigarh’s connection to a broad range of historical narratives. In relation to India and nation building after its 1948 partition from Pakistan, Chandigarh is crucial as a symbol of modernity and the move of a country away from its colonial past.⁴¹ In the trajectory of Le Corbusier’s career, the city is seen as representing the realisation of Le Corbusier’s accumulated thinking on urbanism from the 1920s onwards.⁴² There are also broader historical links made to other planned cities, not simply of India’s ancient and imperial past – the city of Jaipur and Edwin Lutyen’s New Delhi are noted – but that of Europe and America too – the monumental plans of Haussmann’s Paris and L’Enfant’s Washington.⁴³ There is

also the initial master plan for Chandigarh (1950) prepared by the American architects, Albert Mayer and Mathew Nowicki, that shares similarities of layout with Le Corbusier's master plan. Recently, in the paper, "Contesting Visions: Hybridity, Liminality and Authorship of the Chandigarh Plan"⁴⁴, Nahil Perera has put a strong case for arguing that Mayer and Nowicki be acknowledged as co-authors of Chandigarh's plan on the basis that its making be best understood as "a hybrid of imaginations negotiated between multiple agencies, rather than the creation of a single author."⁴⁵ While this is an appealing argument with broader implications it does have a specific problem applied in the case of Le Corbusier. One consequence of Le Corbusier's separation of theory (as ideal) from his designs projects (as empirically situated) was his insistence on the transcendence of the former.⁴⁶ In this respect the architect is unlikely to have thought of his role simply as that of form-giver to the ideas of others (the Radburn garden city principles of the Mayer/Nowicki plan, for instance) that bore no relation to his latent construction of the ideal. In the case of Chandigarh's plan and despite its empirical basis, it would ultimately stand, and be formed, in relation to Le Corbusier's ideal.

Conclusion

This brings us back to the question of the Adelaide plan as a precedent for Chandigarh's plan. How might we understand such previously unseen and unregarded material and deal with it adequately as a contemporary historical document? By setting this drawing against other kinds of rhetorical drawings (and methods of drawings) produced by Le Corbusier this paper has attempted such a task, yet, in its own terms the Adelaide Plan remains a strange anomaly. While Le Corbusier's grand urban plans such as *La Ville Radieuse* might be considered a demonstration of the ideal rather than an actual city design, in Le Corbusier's Adelaide Plan we are paradoxically presented with a single image of both – a plan apparently ideal yet also empirical, projected toward an impossible but logical perfection yet also transcribed from reality. As such the drawing remains resolutely outside the 'set' as there is no aspect of Le Corbusier's overt theorising or rhetoric in relation to design that would admit the plan of Adelaide – a nineteenth century British colonial city founded in southern Australia – as a source or influence for the master plan of Chandigarh. Yet on the evidence of his careful making of the plan of Adelaide and the knowledge transcribed by the architect as a result can it be entirely excluded? It is compelling, I believe, to think otherwise. At the least Le Corbusier uses his drawing of Adelaide to rehearse his ideological claims about urbanism as a practice and this makes it at least as 'influential' for his work as any of the kinds of

CIAM-inspired analyses he may have performed to deal with existing cities in Europe, Africa and North America. Yet more than this, with its unequivocal presentation of the ideal in relation to the empirical, Le Corbusier's Adelaide Plan (1950) can be seen as a vital link between his ideal urban plans (La Ville Radieuse for example) and the empirically determined master plan of Chandigarh. By presupposing, in its form, his most ambitious claims on urbanism, Le Corbusier's rendering of Adelaide may well have played a critical role in the architect's post-war career.

Endnotes

- ¹ Alan Colquhoun, "Architecture and Engineering: Le Corbusier and the Paradox of Reason", in his *Modernity and the Classical Tradition: Architectural Essay 1980-1987* (Cambridge, Massachusetts: MIT Press, 1989), 89-119.
- ² Colquhoun, "Architecture and Engineering", 90.
- ³ See Vikramaditya Prakash, *Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India* (Seattle: University of Washington Press, 2002), 48.
- ⁴ Prakash, *Chandigarh's Le Corbusier*, 44-45.
- ⁵ Le Corbusier arrived at Chandigarh in late February, 1951 to work on the master plan. See Norma Evenson, *Chandigarh*, (Berkeley: University of California Press, 1966), 26.
- ⁶ Colquhoun, "Architecture and Engineering", 90.
- ⁷ *Fondation Le Corbusier* (FLC) I16177.
- ⁸ A letter sent by Le Corbusier, dated 19 September, 1950, is written on stationery of the Hotel Continental, Bogota, Colombia, FLC R11282.
- ⁹ Dutton and Elder, *Colonel William Light – Founder of a City* (Melbourne: Melbourne University Press, 1991), 387.
- ¹⁰ FLC I16177.
- ¹¹ Peter Pierce, "Trumble, Hugh (1867 - 1938)", *Australian Dictionary of Biography, Vol 12*, (Melbourne: Melbourne University Press, 1990), 268.
- ¹² Hugh C. Trumble, *Blades of Grass*, (Melbourne: Georgian House, 1946), 1-10.
- ¹³ Date confirmed in letter from Trumble to the University, 10 November 1950. University of Adelaide Archives (UAA): Series 200.
- ¹⁴ Letter dated 31 March, 1950, UAA/S200.
- ¹⁵ Letter dated 31 March, 1950, UAA/S200.
- ¹⁶ Letter dated 12 September, 1950, UAA/S200.
- ¹⁷ Letter dated 19 September, 1950, FLC R11282.
- ¹⁸ FLC I16177.
- ¹⁹ FLC I16177.
- ²⁰ FLC I16177.
- ²¹ FLC I16177.
- ²² FLC I16177.
- ²³ FLC I16177.
- ²⁴ FLC I16177.
- ²⁵ Letter dated 30 September, 1950, FLC P21112.
- ²⁶ Eric Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, Massachusetts: MIT Press, 2000), 2.
- ²⁷ Mumford, *The CIAM Discourse*, 4.
- ²⁸ Mumford, *The CIAM Discourse*, 5.
- ²⁹ Mumford, *The CIAM Discourse*, 226.
- ³⁰ Mumford, *The CIAM Discourse*, 180-182.

³¹ Mumford, *The CIAM Discourse*, 228.

³² Mumford, *The CIAM Discourse*, 182.

³³ Maxwell Fry, "Le Corbusier at Chandigarh", in Russell Walden (ed.), *The Open Hand: Essays on Le Corbusier* (Cambridge, Massachusetts, 1977), 350-363.

³⁴ Maxwell Fry, "Le Corbusier at Chandigarh", 354.

³⁵ Maxwell Fry, "Le Corbusier at Chandigarh", 354.

³⁶ Maxwell Fry, "Le Corbusier at Chandigarh", 354.

³⁷ Trumble, *Blades of Grass*, 259-269.

³⁸ Letter dated 19 September, 1950, FLC R11282, and Letter dated 28 September, 1950, FLC R11283.

³⁹ Letter dated 22 February, 1951, UAA/S200.

⁴⁰ Kenneth Frampton, *Modern Architecture: A Critical History* (London: Thames and Hudson, 1992), 180.

⁴¹ See Vikramaditya Prakash, *Chandigarh's Le Corbusier*, 9.

⁴² Stanislaus von Moos, "The Politics of the Open Hand", in Russell Walden (ed.), *The Open Hand: Essays on Le Corbusier* (Cambridge, Massachusetts, 1977), 422-423.

⁴³ Stanislaus von Moos, "The Politics of the Open Hand", 426.

⁴⁴ Nihal Perera, "Contesting Visions: Hybridity, Liminality and Authorship of the Chandigarh Plan", in *Planning Perspectives*, 19 (April 2004) 175-199.

⁴⁵ Perera, "Contesting Visions", 179.

⁴⁶ Colquhoun, "Architecture and Engineering", 90.