



HABITAT

**ECOLOGY THINKING
IN ARCHITECTURE**

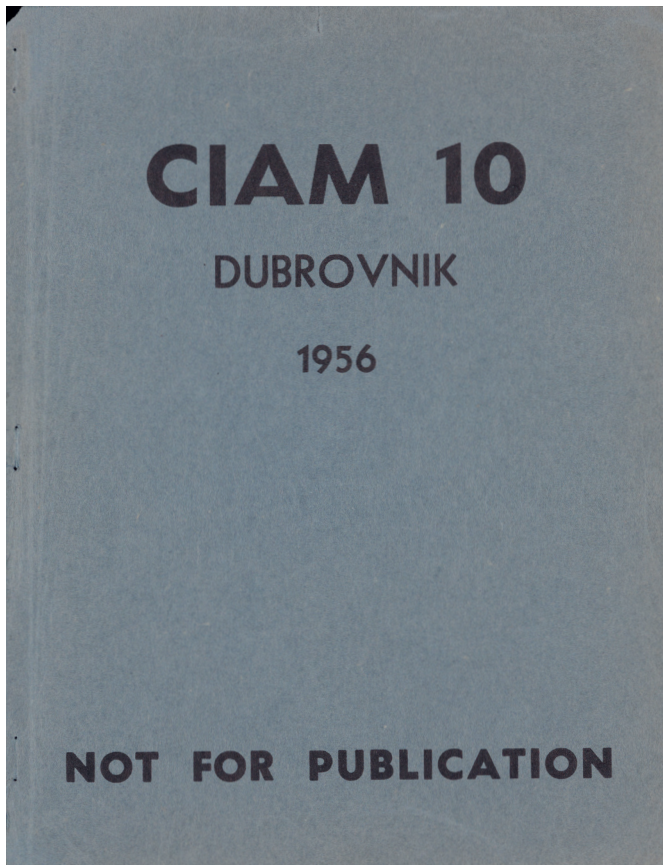
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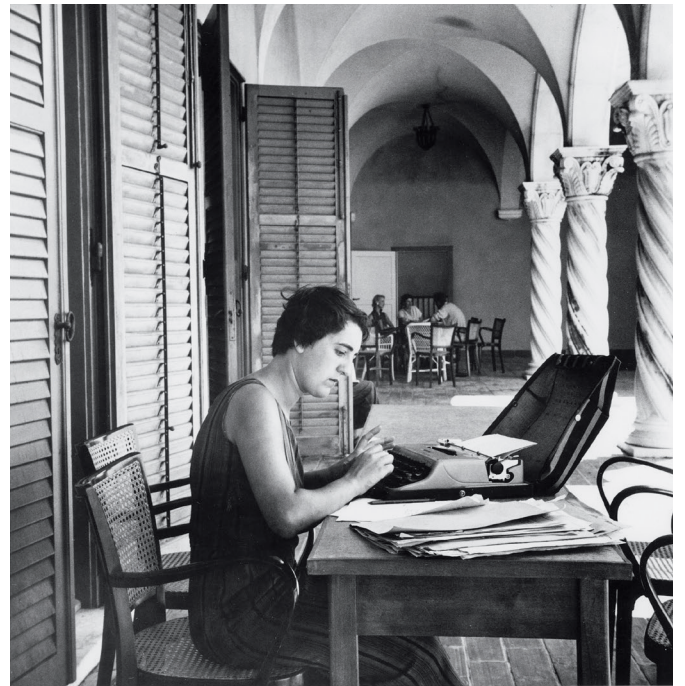
HABITAT AND ARCHITECTURE

Disruption and Expansion



Cover of the proceedings of
CIAM 10, 1956

Alison Smithson, future
chronicler of Team 10, at
the Dubrovnik CIAM congress,
1956, photograph by
John Voelcker



1 Alison and Peter Smithson,
comments as part of 'Thoughts in
Progress: The New Brutalism',
Architectural Design (April 1957),
113.

2 Besides the National
Collection at Het Nieuwe Instituut in
Rotterdam, other architecture
archives that hold CIAM materials
include the GTA institute ETH Zurich
and the Special Collections at GSD
Harvard University.

3 For an overview of the history
of the CIAM see: Eric Mumford,
*The CIAM Discourse on Urbanism,
1928-1960* (Cambridge, MA: MIT
Press, 2000). For the post-war period
see the special issue of *Rassegna*
(December 1992), 'The Last CIAMs',
compiled by Jos Bosman.

4 Archive of Cornelis van
Eesteren, Collection Het Nieuwe
Instituut (EEST_4.200). Copies of
these proceedings are also in other
CIAM archives, including the ETH
Zurich and GSD Harvard University.

A Disruptive Term

Habitat was not always a central concept in architecture. As a specialist term from biology, anthropology and social geography, it has a life and history of its own outside architecture. When it was appropriated by architects in the mid-twentieth century, it was a source of inspiration and innovation, yet also caused strife and upheaval. As such, the term habitat has been disruptive to architecture. This might be surprising, since the two seem naturally and closely related. After all, the term stems from the Latin *habitare*, or to dwell. And architecture provides houses and housing.

Ecology has become most popular in reconceptualizing not only architecture, but our whole way of being in the world, due to such provocative thinkers as Gilles Deleuze and Felix Guattari, and Donna Haraway. The aim of this book is not an exercise in theory, however, but to present a close reading of recent architecture history to positions of today. It does so by a selection from various archives that aims to identify a burgeoning ecology thinking in architecture and planning, and its impact on current ideas.

So how could habitat be disruptive to architecture? Why and how exactly? And what came out of this disruption that might be of interest today?

A Larger Whole

When the term was introduced in architecture in the circles of the CIAM, the renowned *Congrès Internationaux d'Architecture Moderne*, it became a hotly debated and contested topic. It was the aftermath of the Second World War. In Europe, architects and planners put all their energy in the reconstruction of cities and their new expansions, into modernizing national economies and literally building the new post-war, collective welfare arrangements – either in the liberal democracies in the West, the autocratic regimes on the Iberic peninsula, or state communism in the East.

Besides rethinking the urgent housing question, the notion of habitat brought a profoundly new way of conceiving architecture and planning. No longer could one consider buildings and cities as discrete, isolated objects, instead they were to be understood as part of a larger whole, an environment or indeed a habitat. Architecture was no longer a discipline of autonomy, but something relational, embedded, conditional as well as contextual. To think of architecture in terms of habitat set off a shift from a world of pure form towards a social pattern.

Architectural values of permanence and durability were combined with, or made way for, those of growth

and change. Habitat as a central concept in architecture brought a change from architecture as an abstract, intellectual construct to a practice of working intuitively with the raw situation and matter at hand, to 'drag a rough poetry out of the confused and powerful forces which are at work' as the proponents of New Brutalism, Alison and Peter Smithson, stated in 1957.¹

Not for Publication

The archives of the National Collection for Dutch Architecture and Urbanism hold numerous dossiers that document the discussions on modern architecture within the CIAM.² Set up in 1928 with the sponsorship of Hélène de Mandrot, patron of the arts and an artist herself, the CIAM was to become one of the most influential international architects' associations to promote the cause of modern architecture. Twenty-four architects from eight countries came together in La Sarraz to sign its foundational declaration, among whom such illustrious but also very different characters as Hendrik Berlage, Gerrit Rietveld, Ernst May, Hugo Häring, André Lurçat, Gabriel Guévrékian, and perhaps most notably, Sigfried Giedion and Le Corbusier, who would be among the leading voices of the new organization.³

The CIAM soon developed into what we now might call a platform for architectural design research in response to the issue of large-scale urbanization and industrialization, and their concomitant social problems. While most of these archival documents are solely interesting for specialists, they also hold the key to start unpacking the history of our cities and buildings, and how they are theorized and conceived. One such document is the proceedings of the tenth CIAM congress, held in Dubrovnik in 1956.⁴ Its dark-blue cover holds a clear message: 'not for publication', a gesture of censorship that seems contradictory to the spirit of the CIAM, whose leading figures were such eloquent masters in propagating their ideas.

The compiled contents are basically a report of the discussions on the issue of habitat, the main topic of the congress. In those years, the CIAM had assigned itself to formulate a so-called Charter of Habitat, in order to clarify the necessary future direction of architecture and planning, especially in the field of housing. However, despite earlier attempts, the congress ended without a shared ambition that could be translated into a proper Charter. There would be no official synthesizing document on the particular topic of habitat. The historical proceedings are a testimony of discord and internal criticism, a clash of ideas and minds.

Agonistics and Knowledge Production

Despite the CIAM's failure to produce a clearly formulated Charter of Habitat, its legacy has turned out to be a rich body for continuous historical and theoretical research. It is exactly because of the belligerent and agonistic quality of the debates, on habitat among other things, that the CIAM legacy lends itself as such productive research material with a special role for the surviving archival documents. As becomes clear from past and ongoing research, the body of historical documents demonstrates how the CIAM was not simply a platform for the promotion of a clear-cut, unified ideology, but rather how the association of architects created an arena for exchange between peers, and clearly, for dispute and strife, too.

Today, the notion of agonistics is popular through the writings of Chantal Mouffe, who situates it in the political realm, stating it is part and parcel of the democratic process.⁵ Before her, Johan Huizinga noted in *Homo Ludens* that human knowledge production is polemical and agonistic by nature, and that the validity of propositions is tested through controversy and competition.⁶ Both Mouffe and Huizinga – coming from very different disciplines – also state that a certain assigned space is needed to have these agonistics play out. It is one more reason why the CIAM organization is a fertile test bed to architecture researchers: again, not as a unified body of thought, but as the dynamic of propositions and interactions, through which architectural knowledge and values were produced, and eventually operationalized.

Such an understanding of the CIAM as an arena of agonistic knowledge production enables researchers to open up its received histories, and to move beyond

the canonical readings, while bringing out overlooked and suppressed voices. Building on these observations and making new selections, one is able to point out continuities and shifting positions. It allows for new insights in the interconnections and branches of a network of ideas and people, through which and who the development of architectural knowledge can be mapped and held to light. The epistemological issues at stake can be foregrounded, in this case the one of habitat as ecology thinking, including the involved interdisciplinary traffic.

From the Functional City to Habitat

From the history of the post-war CIAM events it becomes clear it was Le Corbusier himself who announced the new focus on habitat. In 1949, at the seventh CIAM congress in Bergamo, Le Corbusier declared that the CIAM should work towards a Charter of Habitat without much further explanation.⁷ Little did he know that the introduction of the topic of habitat heralded the demise of the CIAM, just ten years later at its last congregation in Otterlo in 1959.

Clearly, Le Corbusier viewed such a Charter of Habitat as an elaboration of the famous Charter of Athens, which he himself had helped to formulate in the summer of 1933. Then already Le Corbusier had likened urban planning to a 'biology of the world'.⁸ The Athens Charter summed up the CIAM's ambitions for modern architecture and city planning. It was delivered during one of those myth-making moments in the history of modern architecture: the cruise on board of the *SS Patris II* between Marseilles and Athens, which had accommodated the fourth CIAM congress.⁹

5 Chantal Mouffe, *Agonistics: Thinking the World Politically* (London: Verso, 2013); Ernesto Laclau and Chantal Mouffe, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (London: Verso, 1985).

6 Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (London/Boston/Henley: Routledge/Kegan Paul, 1949, 1980), 133 and 156, originally published in Dutch as: *Homo Ludens: Proeve eener bepaling van het spel-element der cultuur* (Haarlem, 1938). For a discussion of the relevance of *Homo Ludens* to the Team 10 discourse, see: Dirk van den Heuvel, 'Team 10 Riddles: A Few Notes on Mythopoiesis, Discourse and Epistemology', in: Max Risselada, Dirk van den Heuvel and Gijs de Waal (eds.), *Team 10: Keeping the Language of Modern Architecture Alive* (Delft: TU Delft, 2006), 89-108.

7 Mumford, *The CIAM Discourse on Urbanism*, op. cit. (note 3), 187.

8 Ibid., 79.

9 Evelien van Es et al. (eds.), *Atlas of the Functional City: CIAM 4 and Comparative Urban Analysis* (Bussum: Thoth, 2014).

10 Mumford, *The CIAM Discourse on Urbanism*, op. cit. (note 3), 192.

11 See the essay by Leonardo Zuccaro Marchi, 'Between *Habiter* and Habitat: CIAM and the Sigtuna Meeting 1952', on pages 26-33 of this publication.

12 These projects have been intensely studied and still figure prominently in post-colonial studies in architecture. Jean-Louis Cohen, Monique Eleb and Zeynep Çelik's groundbreaking work should be mentioned here, just as the writings of Tom Avermaete, Marion von Osten and Maristella Casciato.

13 Annie Pedret, in: 'CIAM IX: Discussing the Charter of Habitat', in: Max Risselada and Dirk van den Heuvel (eds.), *Team 10: In Search of a Utopia of the Present* (Rotterdam: NAI Publishers, 2005), 21.

14 Mumford, *The CIAM Discourse on Urbanism*, op. cit. (note 3), 248.

15 For the history of Team 10, see: Risselada and Van den Heuvel, *Team 10*, op. cit. (note 13); Annie Pedret, *Team 10: An Archival History* (London/New York: Routledge, 2013).

16 The Manifesto was the outcome of an unofficial meeting signed by the Team 10 members Jaap Bakema, Aldo van Eyck, Daniel van Ginkel, Hans Hovens Greve Peter Smithson and John Voelcker.

17 Bakema's films are in the National Collection for Dutch Architecture and Urban Planning at Het Nieuwe Instituut, Rotterdam.

18 The congress report was published by Jürgen Joedicke for Karl Krämer Verlag: Oscar Newman (ed.), *CIAM '59 in Otterlo* (Stuttgart: Karl Krämer Verlag, 1961).

The Athens Charter enshrined the concept of the Functional City as one of the CIAM's main tenets, along with the minimum dwelling and rational land subdivision. Central dogma of the Functional City idea was the separation of urban functions by zoning, with the four categories of dwelling, work, recreation and transport as the four main functions. At the Bergamo conference, most energy was dedicated to furthering the ambitions of the Athens Charter, with meetings devoted to 'Putting the Athens Charter into Practice', and a plenary session on 'Applications of the Athens Charter'.¹⁰

So perhaps unsurprisingly, after its first mention by Le Corbusier, habitat didn't immediately take centre-stage in the CIAM discourse. The next CIAM congress in Hoddesdon in 1951 was devoted to the theme of 'The Heart of the City' and the issues of modern monumentality, civic values and public space. But at the following intermediate CIAM meeting in Sigtuna in 1952, the topic of habitat returned with a vengeance. A dispute ensued over its exact definition and scope, most stingingly between two of Le Corbusier's protégés, André Wogenscky and Georges Candilis. Broadly speaking, the debates moved between the poles of habitat as limited to the question of housing, and habitat as a holistic, socioecological approach to urbanism.¹¹

Yet, more importantly with regard to the future of the CIAM, the notion of habitat was deployed against the doctrine of the Functional City and its rationalist, analytic approach to architecture and city building. For the critics of Functionalism, habitat seemed to offer the possibility to redeem the CIAM and modern architecture, to save it from technocracy and to move beyond the Functional City of zoning and separation. Instead of offering the possibility of synthesis and common purpose for the CIAM, habitat became a subject of contestation and internal critique with regard to the future direction of modern architecture.

The Emergence of Team 10

Enthusiasm for habitat peaked at the CIAM congress in Aix-en-Provence in 1953. This was largely due to the presentations of the groups from Morocco and Algeria: GAMMA (Groupe d'architectes modernes Marocains) and CIAM-Alger. Building on French colonial planning practices, these presentations brought a new perspective on local dwelling practices through their focus on the *bidonvilles* of Casablanca and Algiers, the poor, informal settlements of rural workers who had migrated to the city.¹² Also, the project for Alexanderpolder, a new town east of Rotterdam by the Dutch CIAM group Opbouw received much acclaim

for its attempt to arrive at a project of integration of functions, rather than separation.¹³ Yet despite the success of the congress, an overwhelming attendance of close to 3,000 architects, and a festive party on the roof terrace of Le Corbusier's recently finished Unité d'Habitation apartment building, the congress ended indecisively.

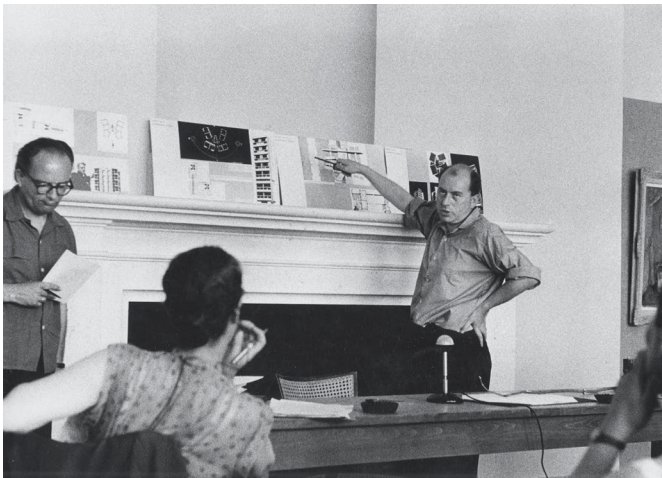
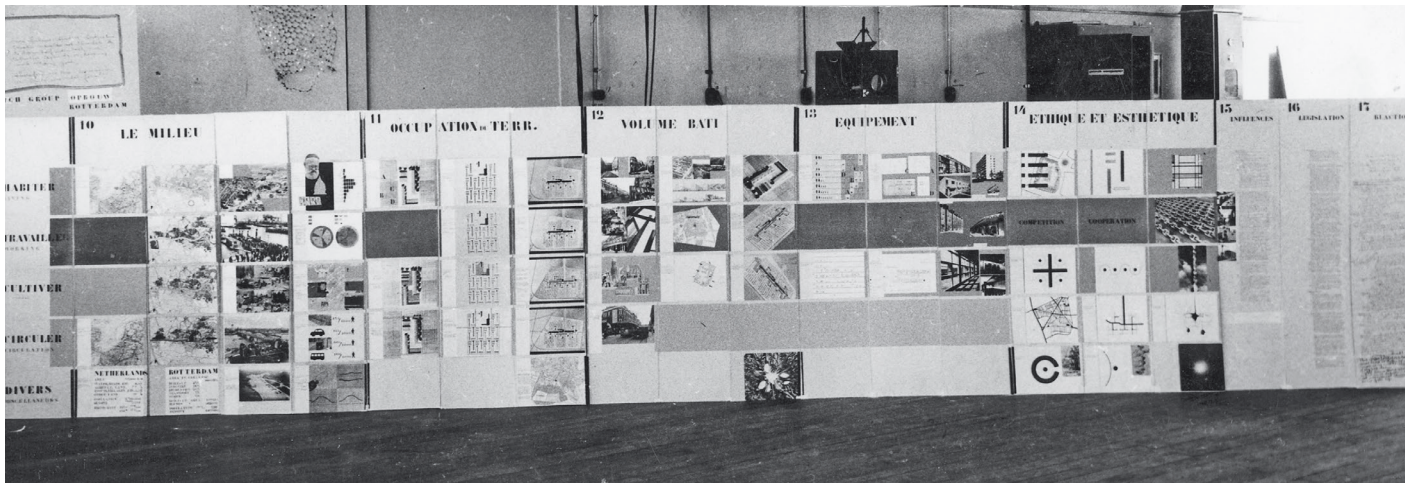
Conventionally, the post-war CIAM congresses and their unfolding have been portrayed as a generation conflict. For the first time, the congress of 1953 saw the official participation of so-called younger members, who had joined the various national delegations. The protagonists themselves, too, often used it as an explanation for the course of events. Le Corbusier set the tone, once again, when he declared it was time for the 'generation of 1928' to make room for a new generation, the 'First-CIAM' had to pass on the baton to the 'Second-CIAM'.¹⁴

Some of the most engaged younger members organized themselves in Team 10, a group of a shifting composition with a couple of core members as leading voices, in particular Jaap Bakema, Georges Candilis, Aldo van Eyck, Alison and Peter Smithson, and Shadrach Woods, later joined by Giancarlo de Carlo.¹⁵ Ahead of the formation of Team 10, some of them produced the Statement on Habitat of 1954, also known as the Doorn Manifesto.¹⁶ In hindsight it is often seen as one of the founding documents of Team 10. The same year Team 10 was made responsible for another attempt to arrive at a Charter of Habitat, and was assigned with the preparations for the tenth CIAM congress. It was initially planned for Algiers in 1955, but partly due to the start of the Algerian war of independence it was eventually convened in Dubrovnik in 1956.

Bakema brought his 16mm film camera along. The images convey an atmosphere of summery bliss.¹⁷ Shots of swimming in the Adriatic Sea and socializing on terraces are mixed with impressions of the working meetings at the Museum of Modern Art just outside the fortifications of the old town. But such paradisiacal context was to no avail. The CIAM's resolution to deliver a Charter of Habitat was not fulfilled. It was decided that the national CIAM delegations would abolish themselves for a more flexible organization of kindred spirits. Three years later, at the Otterlo congress organized by Bakema, the whole organization of the CIAM was disbanded.¹⁸ Team 10 continued to meet until 1981 and the notion of habitat would haunt its exchanges.

Knowledge Transfers

The CIAM itself was very much aware of the importance of knowledge production, its documentation and



Opbouw, Rotterdam, presentation grid of Pendrecht district, for CIAM 7 in Bergamo, 1949

Jaap Bakema and Peter Smithson, CIAM 10 in Dubrovnik 1956

19 Alison Smithson (ed.), *Team 10 Meetings 1953-1984* (New York: Rizzoli, 1991), 14, see also note 31 on the same page.

20 The newsletters (18 in total) are kept at Het Nieuwe Instituut (BAKE.1_10301019).

21 Annie Pedret extensively studied the debates on the CIAM grid in her 2001 dissertation; see also Annie Pedret, 'Dismantling the CIAM Grid: New Values for Modern Architecture', in: Risselada and Van den Heuvel, *Team 10*, op. cit. (note 13), 252-257; Pedret, *Team 10*, op. cit. (note 15), 58-61 and 94-96.

22 'Preparation for CIAM X', dated December 1955, Bakema archive, Het Nieuwe Instituut (BAKE_0155).

23 Catherine Blain (ed.), *L'Atelier de Montrouge: La modernité à l'oeuvre 1958-1981* (Paris: Actes Sud, Cité de l'Architecture et du Patrimoine, 2008).

24 Monika Platzer published the contributions by the Austrian CIAM: *Cold War and Architecture: The Competing Forces that Reshaped Austria after 1945* (Zurich: Park Books, 2020), 264-271. Marcela Hanáčková is preparing a dissertation on the Czechoslovakian contribution: Marcela Hanáčková, 'Team 10 and Czechoslovakia: Secondary Networks', in: Lukasz Stanek (ed.), *Team 10 East: Revisionist Architecture in Real Existing Modernism* (Warsaw: Museum of Modern Art, 2014), 73-99.

25 Both are included in this book, on pages 36 and 78-81.

dissemination, albeit not in terms of agonistics or a polyphonic association. Team 10 would be much more conscious about creating such an arena for debate. Alison Smithson described her reports of the Team 10 meetings as allowing the different voices to speak for themselves, to 'start different trains of thought in different readers'.¹⁹ Yet, her account has also been fiercely criticized for being biased, or at least too selective, by both other Team 10 members and historians. After the last CIAM congress in Otterlo, Jaap Bakema opened up a 'Post Box for the Development of Habitat', a newsletter that was compiled by himself from the many letters and submissions he received, and circulated around the world to friends and colleagues through his office.²⁰ While personally curated, the newsletter was also a polyphonic organ with contributions by notable authors, including Fumihiko Maki, Oskar Hansen and Yona Friedman. Rather than synthesizing habitat thinking, it allowed for further expansion.

Such self-awareness was partially the reason for the development of the so-called CIAM grid, to present the research design projects. The Grille CIAM d'Urbanisme was developed by the French CIAM group ASCORAL (Assemblée de constructeurs pour une Rénovation architecturale). Basically, the grid was nothing but a set of presentation panels with all the information organized according to graphic rules, and the specifics of defined categories, among which the four basic functions of the Functional City concept. The purpose was to objectify the various projects of the CIAM members, to be able to compare them and to isolate and synthesize key concepts and design tools. The CIAM grid as a cognitive instrument became a target of contestation too, however, quite like the Charter of Habitat.²¹

The ASCORAL grid was criticized for encouraging further separation and isolation of the many elements that constitute a modern city and collective life without offering effective synthesis. Moreover, at the CIAM congress in Aix, the many grids on display were incredibly lengthy. Therefore, for the tenth congress in Dubrovnik, Team 10 proposed to limit presentations to four panels. These had to contain a problem statement, a general and detailed design solution, and a statement of principles.²² The energy should be aimed at creating coherence to address 'the whole problem of environment', as the Smithsons put it.

Both grids were in fact excellent research exchange facilitators, not only for the congress debates, but also to disseminate copies. For the Dubrovnik congress, participants were urged to hand in two formats: one large with colour for the congress presentations, and one small in black-and-white for future publications. Today, many but certainly not all,

survive in the archives as testimony to the CIAM and Team 10 exchanges.

Holes in the Archives

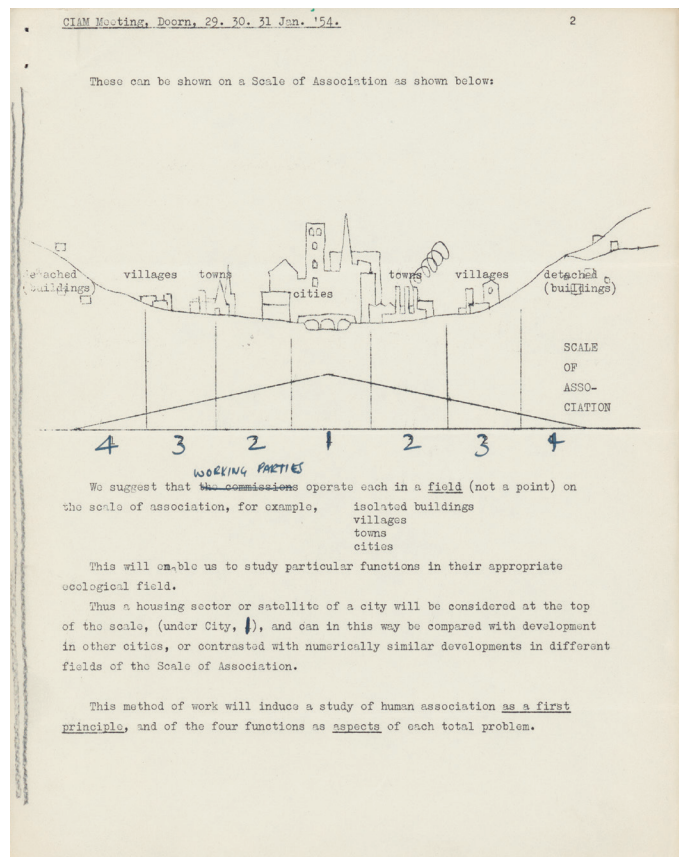
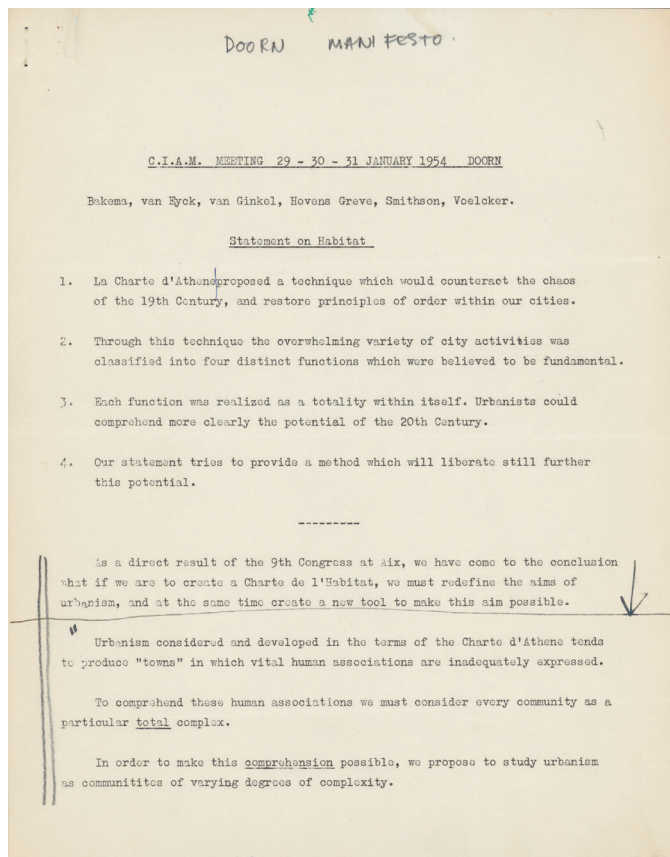
When broadening the historiographical scope beyond the received canon of the CIAM and Team 10, one of the immediate effects is the appearance of all sorts of holes and gaps in the various archival holdings. To focus on Dubrovnik 1956, the 'not for publication' proceedings mentions 35 contributions in total, many of which are missing from the archives.

The sizeable French contribution has been lost for instance, not only the one by the ASCORAL group, but also by the Groupe Cité from Paris, with Roger Aujame and the future members of the Atelier de Montrouge, Pierre Riboulet, Gérard Thurnauer and Jean-Louis Véret, contemporaries of Team 10 who worked in a similar spirit.²³ Also, the presentation grid of the Berlin Hansaviertel by Hubert Hoffman remains unknown, just like the one of the famous case of the Vällingby new town in Sweden. Presentations by The Planning Workshop from New York, or two housing projects from Israel remain an enigma.

Some grids were brought to light recently, such as the urban renewal project for the inner city of Vienna by Wilhelm Schütte, and the presentations from Czechoslovakia, which followed the architectural doctrine of Socialist Realism.²⁴ In the archives in Rotterdam the presentation from Philadelphia and one of the two Finnish presentations are kept. Both involved future Team 10 members, Blanche Lemco in the case of Philadelphia, and Reima Pietilä in the latter.²⁵

Surprisingly, there was no contribution by Georges Candilis and Shadrach Woods, even when the two of them were present in Dubrovnik, and actively participated in the committee meetings. At the CIAM congress in Aix, their projects in Casablanca were one of the eye-catchers as part of the celebrated GAMMA presentation. Perhaps this omission was due to the fact they had just relocated from Morocco to Paris, and were not active in the French CIAM groups. Still, this is only speculation.

Sometimes one gets a glimpse, though. One of the rare photos of the Dubrovnik event shows Peter Smithson talking to the room. We see Jaqueline Tyrwhitt from behind, next to her a microphone for recording the conversations. Jaap Bakema looks at a note in his right hand. The project that Smithson is explaining is not his own though, it is the project for the famous Cluster Block apartment tower in Bethnal Green, London, designed by Denys Lasdun with Lindsay Drake and realized in 1957. The four panels on the mantelpiece have gone missing, and it



'Statement on Habitat' by Jaap Bakema, Aldo van Eyck, Daniel van Ginkel, Hans Hovens Greve, Peter Smithson, and John Voelcker, version Jaap Bakema, distributed 1 March 1954

26 The townhouses presentation can be found in this publication on page 43, and one of Voelcker's presentations is included on page 42. The proceedings also mention presentations by John Bicknell, Peter Ahrends and students from the AA school, but they seem to have gone missing.

27 The presentation is kept at the CCA; the rivalry between Stirling and the Smithsons has been noted by various authors. Stirling attended the Team 10 meeting at Royaumont in 1962, after which he was not invited anymore.

28 Kenneth Frampton, 'Souvenirs du Sous-développement', *l'Architecture d'Aujourd'hui* 344 (January-February 2003), 88-95.

29 Hadas Steiner, 'Life at the Threshold', *October* 136, New Brutalism (spring 2011), 133-155; Dean Hawkes, *Architecture and Climate: An Environmental History of British Architecture 1600-2000* (London/New York: Routledge, 2012).

30 Volker M. Welter, 'In-between Space and Society: On some British Roots of Team 10's Urban Thought in the 1950s', in: Risselada and Van den Heuvel, *Team 10*, op. cit. (note 13), 258-263. Geddes was a well-known reference in the British CIAM discourse, Jaqueline Tyrwhitt was most instrumental here, editing Geddes's writings and using his work in educational programmes she supervised, cf. Ellen Shoshkes, *Jaqueline Tyrwhitt: A Transnational Life in Urban Planning and Design* (London/New York: Routledge, 2016; Ashgate, 2013).

31 Letter from CIAM Nederland '8 + Opbouw', with the 'result of the intermediate meeting ...at Doorn in Holland', Smithson papers, Het Nieuwe Instituut (TTEN_8).

32 Smithson, *Team 10 Meetings*, op. cit. (note 19), 68-69.

33 The Smithsons used various images from Gutkind's publications for their own, see Dirk van den Heuvel, *Alison and Peter Smithson: A Brutalist Story* (Delft: TU Delft, 2013), 199.

34 Jean-Louis Cohen, 'The Moroccan Group and the Theme of Habitat', *Rassegna* (December 1992), 58-67; Monique Eleb, 'An Alternative to Functionalism: Universalism: Écochard, Candilis, and ATBAT-Afrique', in: Sarah Williams Goldhagen and Réjean Legault (eds.), *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Montréal/ Cambridge MA: CCA/MIT Press, 2000), 55-73.

is only through this one photo that we see how Peter Smithson presented the various British presentations of the MARS group to the attendants. Among those contributions we also find the townhouses by Bill and Gillian Howell, John Killick and John Partridge, and two by John Voelcker.²⁶ Also interestingly, James Stirling had initially prepared a MARS contribution for a village extension, probably made for the pre-presentations in 1955 and eventually not presented in Dubrovnik.²⁷

Team 10 and Ecology

In architecture, Team 10 is not immediately associated with ecology thinking, especially not since today ecological concepts are coupled with those of sustainability issues and climate change, which were non-existing topics at the time. Usually, the interrelations between social configurations and architecture are foregrounded in the various histories of Team 10. But the term is there, in the earliest drafts of the Statement on Habitat, just as it is in the writings of the Smithsons in particular. Kenneth Frampton is one of the few who has characterized the work of the Smithsons as 'proto-ecological'.²⁸ Hadas Steiner too, has discussed the ecological concepts present in the work of the Smithsons in relation to the topic of habitat, while others have pointed out the overlaps between their Brutalist work and a climate-responsive architecture.²⁹

The Statement on Habitat of 1954 invited architects to think of their work as an intervention in an 'ecological field'. To explain such ecological fields, the document introduced Scottish biologist Patrick Geddes's Valley Section. As a diagram, the original Valley Section depicts a progression of human civilization from rural habitation to the modern metropolis.³⁰ For Team 10, it offered a tool to start understanding differences in context, density and complexity that called for different, particular architectural solutions rather than generic, rationalist formulas. Spanning an arc from isolate dwellings to hamlets and villages, to towns and cities, the Valley Section was translated into a 'scale of association'.³¹ This interconnected scale of associations was to replace the doctrinaire separation of the four functions. The aspiration was to do justice to the specific context of local cultural identity, while also accommodating modernization.

Multiple Origins and Parallels

Habitat was to become a much used term in architecture and planning, and has been appropriated

and promoted by various actors, from the Habitat policies for human settlements run by the UN since the 1970s, to the famous housing complex in Montréal of 1967, designed by Moshe Safdie. An early example comes from Lina Bo Bardi and her husband Pietro Bardi, who established the journal *Habitat* in 1950 shortly after having migrated to Brazil, to promote art and architecture in a combination of modernism with the vernacular and indigenous. Therefore, in terms of historiographical analysis, it is crucial to note that a genealogy of habitat in architecture consists of multiple origins and parallels.

When trying to map the many branches of habitat within the architecture discourse, one of the things to observe is that habitat was not only disruptive to architecture, it also resulted in expanding the discipline of architecture far beyond assumed certainties. Through the interdisciplinary traffic of concepts, mostly related to new principles of ordering, architecture was taken up in a most challenging exchange – between new theories of information and aesthetics, systems theory, biology and anthropology, the rise of computer science, but also linguistics. Thus, habitat as a disruptive term has also been transformative and transitional to architecture. Even from a relatively clearly demarcated domain as the circles of the CIAM and Team 10, a range of references springs up. One lucid instance from the Team 10 discourse remains the contribution by Christopher Alexander, who brought his research of an Indian village to the Team 10 meeting in Royaumont in 1962. From his survey he would translate the social and spatial relations into mathematical equations, the basis for his 1964 publication *Notes on the Synthesis of Form*.³²

When contextualizing the ideas of the Smithsons, it is not only Patrick Geddes that comes to the fore. German architect and climate designer Otto Koenigsberger started teaching at the London AA school as the head of the Tropical Department in 1953, when Peter Smithson was a unit master there. Koenigsberger would also act as a climate design consultant to the Smithsons for their projects in Kuwait and Brazil. Another German influence comes from the writings of émigré architect Erwin Gutkind; both Gutkind and Koenigsberger had to flee from their home country due to the Nazi regime. In Britain Gutkind joined the MARS group, and gained fame with a series of essays on vernacular architecture for *Architectural Design* and a couple of books, in which he theorized the notion of environment, including *Community and Environment: A Discourse on Social Ecology* and *The Expanding Environment*, both published in 1953.³³

French ethnology and geography and its relations to colonial survey have been quite extensively studied as an obvious source, especially in relation to the work of Candilis Josic Woods and the firm's indebtedness



**Van den Broek and Bakema,
Urban scheme for
Kennemerland region, 1959**

35 Jeanne Haffner, *The View from Above: The Science of Social Space*, (Cambridge, MA: MIT Press, 2013); a recent contribution to this field comes from Elisa Dainese, 'From the Charter of Athens to the "Habitat": CIAM 9 and the African Grids', *The Journal of Architecture* 3 (2019), 301-324.

36 Francis Strauven, *Aldo van Eyck: The Shape of Relativity* (Amsterdam: Architectura & Natura, 1998), 84-85.

37 *Ibid.*, 243 and 352.

38 Alison and Peter Smithson, *Dubrovnik Scroll*, or *Habitat 1956* manuscript, included in this publication on pages 22-25.

39 See Dirk van den Heuvel, 'Jaap Bakema en l'Exemple de Leeuwarden: Un Paysage Artificiel dans l'Infinité de l'Espace', in: Bruno Fayolle Lussac and Rémi Papillault (eds.), *Le Team X et le Logement Collectif à Grande Echelle en Europe: Un Retour Critique des Pratiques vers la Théorie* (Pessac: MSHA, 2008), 119-144.

40 For Aldo van Eyck's ideas on 'interiorization', see Chapter 11 in *Aldo van Eyck: Writings*, volume 'Collected Articles and Other Writings 1947-1998' (Amsterdam: SUN Publishers, 2008).

41 The term was originally coined by Liane Lefaivre and Alexander Tzonis, while regionalism as such was already discussed within the circles of modern architecture directly after the Second World War by, among others, Ludwig Hilberseimer and Sigfried Giedion.

to such formative figures as Michel Écochard, with whom Candilis and Woods had worked when in Morocco.³⁴ The impact of aerial photography – the view from above – is hard to underestimate here, a perfect tool for military control, it was soon appropriated by geographers for the survey of human settlements.³⁵ Gutkind too, used aerial photography to communicate the particularities of local traditions around the world.

Two other central figures that should be mentioned here – as examples of the transdisciplinary traffic going on – are Marcel Griaule and Martin Buber, who both profoundly impacted architectural thinking in the circles of the CIAM and Team 10, especially Aldo van Eyck. Griaule, a French anthropologist and a fighter pilot in the First and Second World Wars, would provide Van Eyck's first introduction to the myths of the Dogon through a publication in Surrealist magazine *Minotaure*.³⁶ Buber, an Austrian-Jewish philosopher, incidentally wrote an introduction to Gutkind's book *Community and Environment*, and is best known for his philosophy of dialogue, which inspired both the older and the younger generations in the CIAM and Team 10. Buber's idea of a 'Gestalt gewordenes Zwischen' would inspire Rolf Gutmann and Theo Manz and incentivize Van Eyck to further his idea for the 'space between' in architecture.³⁷

Landscape

One of the more intriguing aspects of the inclusion of the Valley Section in the Statement on Habitat is the implicit assumption regarding landscape as a precondition for urban design and architecture. In the many debates and documents, landscape as an explicit term is hardly present, however. Terms that were used to try and define habitat include territory, terrain, land, soil and environment. Other words are system, structure, cluster, association or pattern. Ecology is mentioned, just as ecological field and ecological setting. Alison and Peter Smithson briefly aim to theorize landscape in relation to habitat and ecology. It is a vignette-like diagram that is part of their 'Dubrovnik scroll', a document that summarized a series of their most pointed ideas under the header of 'Habitat 1956'. The particular diagram aims to explain the sliding scale between country and city. It speaks of 'country' as 'habitat in landscape', and 'city' as 'habitat is landscape'. The latter defines an anthropocene-like condition, in which the 'world' is impacted by planning and adjusted to make it fit for 'man'.³⁸

Although the topic of landscape was neither recognized nor addressed explicitly at the Dubrovnik congress, it did appear in many of the presentations, not only in the Smithsons' contribution. The CIAM Porto

group showed a refined response to the hardships of rural life, while the grids of PAGON from Norway and PTAH from Finland demonstrated projects in dialogue with the landscape of their settings.

Also, among the Dutch contributions one can trace landscape concepts as part of the notion of habitat. Bakema's engagement with the Dutch landscape begins and ends with his reference to the vast, expansive polderscapes of Holland, and how the horizon and the trees are an orientational instrument for how to inhabit the landscape: under, above or between the trees. His monumental project for the urbanization of the Kennemerland region, presented in Otterlo at the last CIAM congress, forms the apotheosis. The various collages of the new modern landscape demonstrate an aesthetic sensibility that is firmly grounded in Dutch visual traditions, combining the drama of Dutch skies in Jacob van Ruisdael's landscape paintings with the elementary spatial concepts of *De Stijl*, most notably Piet Mondrian.³⁹

Van Eyck's conceptualization of the interrelation between landscape, built environment and people is poetically captivated by his presentation of the design of the polder village of Nagele. On the first panel made for the Dubrovnik congress, a couple is depicted with their body contours formed by a montage of two photos of Dutch rural settlements. The images of church spires, birds, cows and waterscape were left unexplained, but seem to communicate Van Eyck's ideas on 'interiorization', a psychological process of identification by which the outside world is internalized by its inhabitants.⁴⁰

It was the unknown architect and member of the Dutch CIAM group 'de 8 en Opbouw', Romke Romke de Vries, who engaged most explicitly with the characteristics of the Dutch landscape as ecology, at least in terms of its concrete material manifestations. Similar to the Valley Section, he presented a cross section of the Dutch delta landscape to demonstrate its nuanced differences due to the varying conditions of soil quality and water levels: from the dune landscapes along the coast, to the polders, dykes and canals, to the natural lakes, sandy areas and their forests, and the hills. The architecture fit for this landscape was one of a light touch, and lucid clarity. He used the work of Gerrit Rietveld, his son Jan, and his own to illustrate his point.

Habitat as 'Othering'

In the history of modern architecture, the polarity of centre and periphery remains a dominant concept. One response is the development of 'other' outsider positions, to both pluralize and criticize the established

canon. Kenneth Frampton's proposition for a Critical Regionalism was one such attempt that was aimed against the rise of postmodernism in architecture, while focusing on overlooked modernist positions.⁴¹ In more than one way, habitat belongs to such a practice of othering. The history of habitat as a specialist concept comes with all sorts of colonial overtones of so-called discovery and survey, which in fact are often the beginnings of subjugation, appropriation and exploitation. What happens when such concepts are brought to the centre? Or as Peter Smithson has suggested: 'From the rain-forest into the streets.'⁴²

In architecture, the term habitat was initially associated with the vernacular, the rural, the unlearned, the primitive and assumedly unconscious culture. Lina Bo Bardi's magazine *Habitat* might be considered a case in point, but also Aldo van Eyck's fascination for the Dogon culture and people. To use habitat to reconceptualize Western, Eurocentric urban design and the field of housing might thus be considered an act of provocation. Because conventionally, Architecture with a capital A is considered a part of the domains of culture, self-consciousness and enlightenment. Although it was surely intended to expand and transform the discipline, despite being motivated as a gesture of appreciation and acknowledgement, or even as a project of emancipation, can habitat as an architectural term move beyond those aspects of exoticization?

Dutch Regionalism?

In the history of Team 10, the contributions from Portugal, Scandinavia and Central and Eastern Europe have indeed often been framed as peripheral.⁴³ Is some form of reversal possible here? What would happen if we were to use Frampton's idea of 'regionalization' to reposition Portuguese and Scandinavian architecture, but also English architecture, to speculate on the Dutch contributions to Team 10 and the Dubrovnik congress?

This question formed the incentive for a closer look at the holdings in the National Collection and to search for critical continuities of the Team 10 discourse in terms of habitat and ecology thinking. The selected projects and designers originate from the milieu of the Faculty of Architecture of Delft University of Technology, and its circle of modern architecture professors: Johannes van den Broek and Cornelis van Eesteren, the chairman of the CIAM (1930-1947), who were appointed in the late 1940s, and Jaap Bakema and Aldo van Eyck in the mid-1960s. Pjotr Gonggrijp is presented as an unknown yet key figure, who was an assistant to both Van Eesteren and Van Eyck. He made

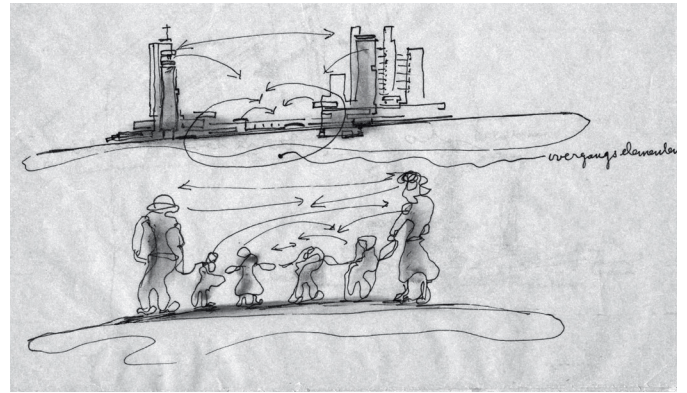
his fame with his thesis project for the analysis and redesigning of the Dutch delta. Joost Váhl was perhaps one of the first activist-ecologists in urban planning who campaigned in favour of biodiversity. As a young Delft graduate he became involved in redeveloping the southern expansion scheme for Delft, Tanthof, which was designed by the Van den Broek and Bakema office. To develop an alternative scheme that respected the existing polder landscape, Váhl joined the Tanthof working group, which also included Frans Hooykaas and Peter Lüthi of Van den Broek and Bakema, and Anneloes van den Berg and Hiwe Groenewolt. Urban designer Frits Palmboom is of a younger generation, as a student he was influenced by Gonggrijp's lectures and landscape analyses, while he himself also acknowledges the impact of Team 10 thinking – Bakema and Van Eyck, but particularly the Smithsons.⁴⁴ In addition, two regional studies from the late 1980s are included, which display a specific environmental awareness: one project by Willem Jan Neutelings, the so-called Patchwork Metropolis, and a scenario for 2050 by Peter Terreehorst for the coast of the Dutch province of Zeeland.⁴⁵

What conclusions might be drawn from the selections? The following propositions could be regarded as central to habitat as ecology thinking.

Habitat as Matter

First of all, habitat not only involves material aspects of the environment, it is literally matter, the land, the mud and the sand, the dikes and the canals, but also the vegetation, the reed, the grass and trees. After all, the Dutch peatlands are nothing but vegetational sedimentation. This is also the proposition of Romke de Vries: to look at habitat from the view of different landscape typologies and soil and water conditions.

Gonggrijp's painstaking drawings document the transformative impact of human occupation on landscape formation. His drawings suggest that the spatial configurations of the patterns of inhabitation cannot be uncoupled from the material qualities of the land. Such awareness of ecological coherence also comes to the fore in Palmboom's interpretation of the landscape around Alphen aan de Rijn. Equally astute is his observation of the occurrence of incoherence and disruption as in the case of the Rotterdam cityscape. Such profoundly material understanding of the environment and habitat can also be perceived in the straightforward proposals of Joost Váhl, which are written like recipes to also locally achieve a biodiverse environment that can be enjoyed by touching, smelling and even eating, by growing food and herbs in public parks and greens.



**Aldo van Eyck, playground
Zaanhof, Amsterdam, 1948**

**RAAAF and Barbara Visser,
The End of Sitting, Amsterdam,
2014**

**Jaap Bakema, diagram of
'transitional elements', 1964**

42 Mark Crinson, 'From the Rainforest to the Streets', in: Tom Avermaete, Serhat Karakayali and Marion von Osten (eds.), *Colonial Modern: Aesthetics of the Past, Rebellions for the Future* (London: Black Dog Publishing, 2010), 99-111.

43 Much of the new research positions itself critically towards this historiographical argument, for instance the conference and publication *Team 10 East* organized by Łukasz Stanek and Aleksandra Kedziorek in 2013-2014, in Warsaw, and the Portuguese-Spanish research network Team Ten Farwest, which organized conferences in

Guimaraes, Barcelona and Porto between 2017 and 2020 (teamtenfarwest.com). To revisit the congress of Dubrovnik 1956 was initiated by, among others, Ivan Rupnik and Renate Margaretic Urlic for their project 'Living CIAM X Dubrovnik 1956-2016', which included a three-day seminar and an exhibition at the Museum of Modern Art in Dubrovnik.

44 For the exhibition project, various conversations took place between the author and these actors. Two public seminars with interviews were organized in early 2019 at Het Nieuwe Instituut, Rotterdam.

45 Terreehorst is the only person not from Delft University of Technology, but from Wageningen University. The larger project in which Terreehorst participated was initiated by planner Dirk Frieling, who was a professor in Delft.

46 See Erik Rietveld and Janno Martens' text in this publication, page 128-135.

47 For an overview, see: Arnulf Lühinger, *Structuralism in Architecture and Urban Planning* (Stuttgart: Karl Krämer Verlag, 1981).

48 In conversation with the author.

Crucially, it also means that habitat as landscape is not to be reduced to an aesthetic experience, it is also a corporeal experience. At least, this is how these designers themselves talk about it: how one moves through the various landscape conditions, to be close to the water, to feel protected or exposed, how weather affects the human body, and also how the view of the open horizon – the typical Dutch expanse of water bodies under clouded skies – is a moment of becoming aware of bodily immersion, an encounter with an almost cosmological endlessness.

Subcultures and Lifestyles

In close connection with such material understanding of habitat one might observe a striking interest in the treatment of surfaces and textures, and how in the words of Erik Rietveld of the RAAAF office these provide so-called affordances that enable specific patterns of use and appropriation.⁴⁶ At the heart of habitat as ecological thinking is the recognition of this interrelationship between 'men and things' as first proposed and theorized by Jaap Bakema in 1951. It is also a performative understanding of habitat, which becomes immediately clear from Aldo van Eyck's designs for urban playgrounds. Such reciprocity between spatial-material configuration and performance is also found in the installations of RAAAF, such as the End of Sitting and Breaking Habits. There seems to be a common understanding that from this dynamic interaction between inhabitants and their habitat, specific subcultures and lifestyles emerge, and how they might amalgamate into new fluid, hybrid identities. Perhaps superfluous to point out, but here, we touch on one of the key concepts behind Structuralism in architecture as it was developed in Team 10 discussions, in dialogue or opposition.⁴⁷

Multiple Systems

One of the more complicated issues to understand is how habitat is not just one ecological system, but how it emerges from and combines multiple systems. Gonggrijp is fully engaged in this, especially so in the case of his peculiar transhistorical maps that combine different periods and time frames into one image. Historical Dutch towns of the seventeenth century are, for instance, combined with the modern infrastructure of the twentieth century while leaving out the intermediate developments.

We see this also in the contributions of Palmboom and Neutelings, albeit in almost opposite ways. This recognition of multiple systems working

together (or not) is not only about difference and diversity, nor is it about tracing the paradoxes that make up the modern cityscape, it also concerns the understanding of the impact of scale and the continuation of hierarchies (the *longue durée* of climate and geology versus the event of human technology, for instance), in space and in time.

'Playing with Modernity'

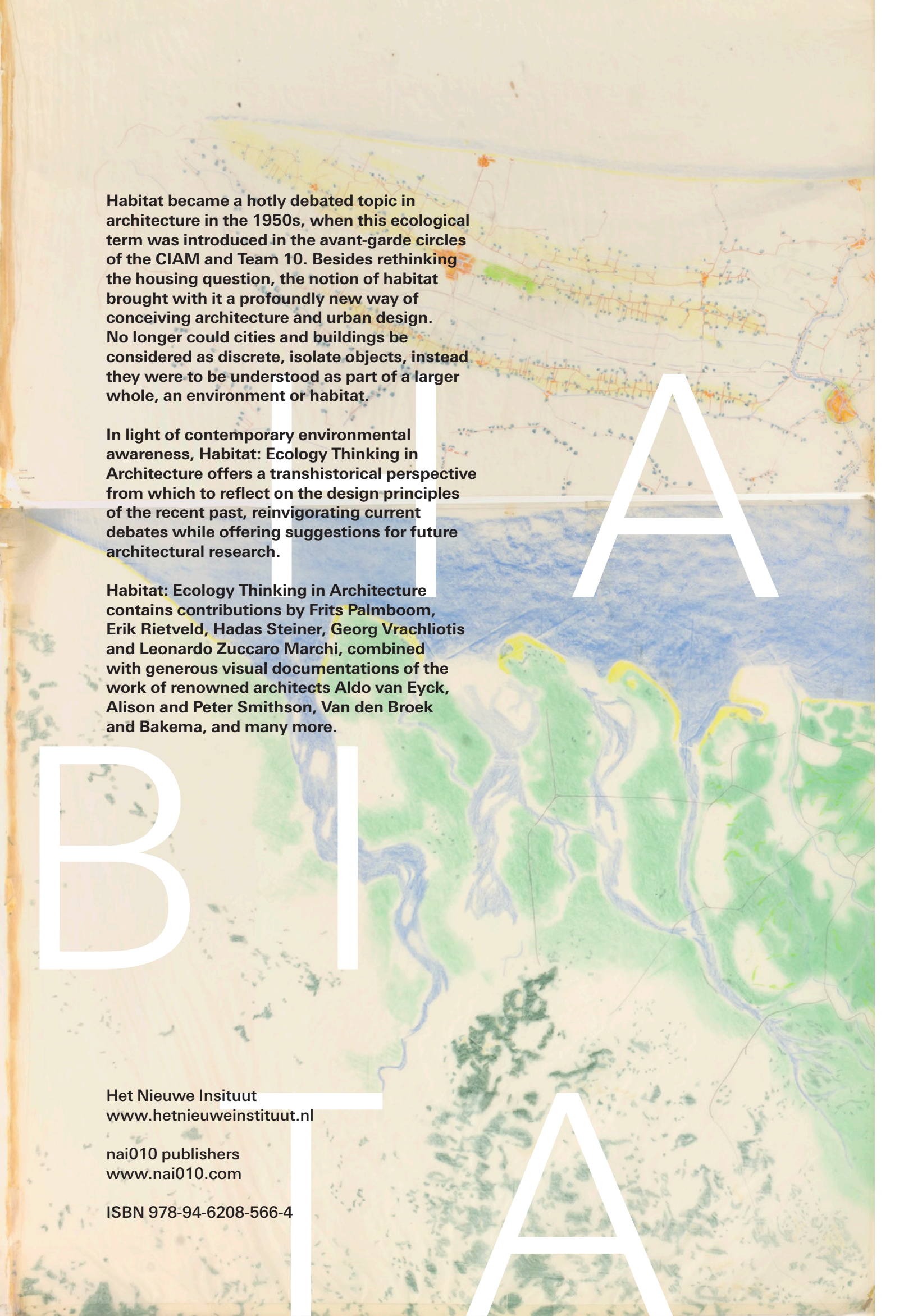
A final observation concerns how habitat is also a thoroughly modern term. Behind the modest and careful approaches there is a not so modest ambition to capture the human habitat in its full extent – as the 'whole problem of environment'. The drawings of Gonggrijp, which meticulously record human patterns, are simultaneously an investigation into the accommodation of new large-scale port facilities for Rotterdam, and equally expansive regional housing clusters. Drawings not only identify the characteristics of the Dutch delta landscape, they also propose its profound transformation. One of the maps has the whole of the North Sea basin as its subject, an aspirational redesign of the area between the urban configurations of London, Paris and Hamburg, with the Dutch Randstad at its centre. Other drawings show studies of migration patterns on the European continent, of people and of birds. Numbers and how to organize groups of numbers to make them live together, is at the core of Gonggrijp's thinking.

In the future scenario for the province of Zeeland, we see a much more practical but still challenging approach. The maps are like examples of a geography lesson from school, blue is for water and the sea, yellow for the blond sand dunes, and dark green for the forests. And yet, these maps present the tremendously transformative capacity of the notion of habitat. In a mere three steps Terreehorst recreates the coast of Zeeland, a full integration of the marine landscape, the dunes and the flood defence system, the new suburban areas, leisure facilities and agri-food industry, fit for the twenty-first century.

To accommodate change is part and parcel of the idea of habitat for Palmboom. He speaks of 'playing with modernity', almost as if it is an innocent game, an unusually light-hearted statement for such a thoroughly serious designer.⁴⁸ The notion of 'playing' betrays a ludic tradition, that might be called Dutch. It certainly resists an essentialist understanding of habitat, and bypasses ideological dogma, while it acknowledges the dynamic reciprocity that is at stake between habitat and inhabitants. Such a dynamic irreversibly instigates transformation, a generative process from which wholly new environments will be created.



Aerial view of Dubrovnik



Habitat became a hotly debated topic in architecture in the 1950s, when this ecological term was introduced in the avant-garde circles of the CIAM and Team 10. Besides rethinking the housing question, the notion of habitat brought with it a profoundly new way of conceiving architecture and urban design. No longer could cities and buildings be considered as discrete, isolate objects, instead they were to be understood as part of a larger whole, an environment or habitat.

In light of contemporary environmental awareness, *Habitat: Ecology Thinking in Architecture* offers a transhistorical perspective from which to reflect on the design principles of the recent past, reinvigorating current debates while offering suggestions for future architectural research.

***Habitat: Ecology Thinking in Architecture* contains contributions by Frits Palmboom, Erik Rietveld, Hadas Steiner, Georg Vrachliotis and Leonardo Zuccaro Marchi, combined with generous visual documentations of the work of renowned architects Aldo van Eyck, Alison and Peter Smithson, Van den Broek and Bakema, and many more.**

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