EMBRACING AMBIGUITY IN THE TEACHING PRACTICES OF PETER EISENMAN AND COLIN ROWE

MICHAEL JASPER
UNIVERSITY OF CANBERRA
MICHAEL.JASPER@CANBERRA.EDU.AU

ABSTRACT

A central mode of thinking for designers generally and architects in particular is that based on part to whole relationships, the idea that fractional relationships necessarily characterise coherent objects and building ensembles and in turn nature as the basis for beauty. The part-whole relationship can be taken as one index of an anthropocentric mode of thinking and practice. This paper investigates alternate modes of architectural thought which challenge the perceived limits of part-whole logics through select case studies from the work of architects Peter Eisenman (1932) and Colin Rowe (1920-1999). While there is evidence of this sensibility in their practice, the paper focuses on Eisenman and Rowe's teaching at the scale of the city. Through a comparative analysis of their university studio teaching the paper seeks to reveal instances of teaching practices which promote other models of thinking, different problematics, and various composition strategies and devices which embrace ambiguity, complexity and diversity and thus contribute to addressing a key provocation of the *Design Ecologies* conference.

INTRODUCTION

Manifesting complexity in design practice, especially at the scale of the city, has in recent years been a thematic ambition for an increasing number of disciplines. For design education, the response in certain cases has preceded practice, with research investigations undertaken in the university studio on problems of diversity, plurality and difference revealing possible mechanisms and operations appropriate to specific fields and to collaborative practices.

As a preliminary approach to this condition, and with a focus on the university architecture studio, this paper aims to extract critical lessons from past approaches to the university architecture studio. It explores the potential of teaching to form alternatives to what has been characterised as traditional models of design in thinking the relation between architecture and larger systems whether natural or artificial. While the field of inquiry is at the scale of urban form and the specific realm investigated in the case study studios that of the city, findings could be extended to individual buildings and architecture's relation to natural systems more generally.

A series of questions frame an initial engagement with this topic. By what means can the university studio be the site not just for training in design processes but for knowledge production as well? How might the studio function so that it contributes to inflecting discipline biases, limits and reserves at the level of problematics? In other words, in what manner might the university studio transform that which it is possible to think/design and in particular adopt an approach that more closely allows for and works with complexity and plurality?

Within the university studio, how best to respond to the dual challenge of transmitting discipline-specific traditions while at the same time remaining open to new contexts, institutions, and ways of building and fabrication? And can these in turn be taken as models for a more supple, sustainable style of design for other

domains whether working at the scale of the object or the city?

Peter Eisenman has investigated architectural notions that emphatically seek to operate differently or away from the limits perceived in anthropocentrism, accepting for the purposes of this paper that the part to whole bias is one sign of the latter. For Eisenman, such concepts as partial figuration, excavation, overlay, and scaling are aspects of this effort.

In a talk of 2007, Eisenman's description of the approach to site planning for the City of Culture, Galicia, provides an emphatic alternative in terms of project following Eisenman's own statements. (Eisenman 2007). (Figure 1) He claims for example that the design blurs conventional part to whole logics as evidenced in the project's desire to evade pure figure/ground conditions.

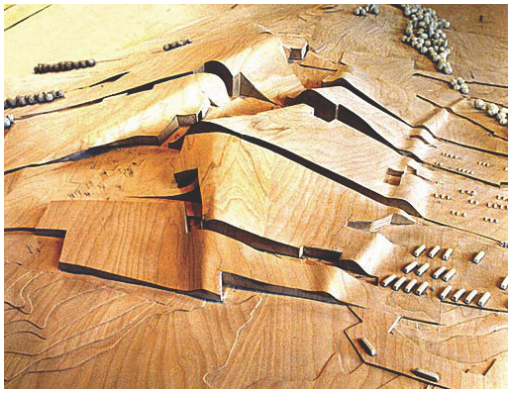

Figure 1: Eisenman, P. Model Photograph, City of Culture, Galicia

For Colin Rowe, context, collage and collision can be taken as architectural-urban operations characterising a manner of thinking and design. Collision is given priority in the following as it has been less examined compared to the too easily abused notion of context. All three are indices of an approach that does not rely on a singular or totalising whole nor generative part at the level of the project.

When one examines Rowe's practice, as illustrated for example in the entry to the Roma Interotta competition, one sees evidence of this thinking. Non-compositional strategies, blurred hierarchies, and such devices as incomplete cross-axial planning are at work but never in a full or single state. (Figure 2)

While there is evidence of this sensibility in their practice as alluded to above, I will focus in the below on Eisenman and Rowe's teaching and seek to demonstrate that a close reading of their university studio teaching provides instances of alternative modes of thought. This leads to a preliminary and necessary cursory consideration of the questions raised above.

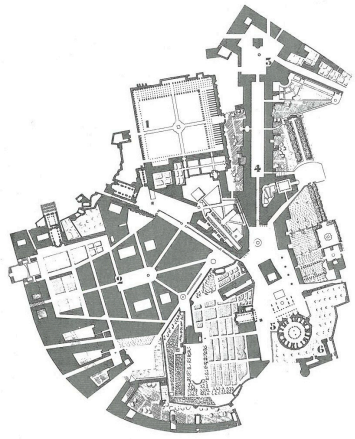

Figure 2: Rowe, C. 1979. Roma Interotta, proposed Celio plate.

As case studies I consider Eisenman's cycle of experimental studios undertaken at Harvard University's Graduate School of Design (hereafter GSD) (1983-1985), and select material from Rowe's Cornell University Urban Design Studio (1963-1988). A review of aspects of the Eisenman and Rowe studios reveals two highly charged and differentiated models of architectural alternatives investigated in the university studio. Adopting a comparative methodology, studio structure and elements of alignment and divergence within and between studios are considered. Student work is used to illustrate studio character, project type, and research problem. Observations on the general workings and reach of the architecture studio are proposed and suggestions for further lines of inquiry provided as a form of conclusion.

The Eisenman and Rowe studios provide a particularly apt beginning to a larger examination of the architecture studio as site of critical experimentation and research on the limits and potential of university teaching to serve as catalysts of alternate form and design strategies.

This is due not only to the depth of studio data and quantity of student work available over multi-year periods, but also because the two represent a range of emphasis, problem, project type, and process. An intentional effort is made in each on how to think architecture as a form of open-ended research. In each, the life of the studio project is a contained, finite phase in a larger, continuous pursuit with findings and outcomes to be generalized as a provisional outcome awaiting further refinement. Student work is key to this effort serving as the vehicle for research to occur and be refined. In this regard, the studio process itself could be taken as another manifestation of that different style of thinking which this paper seeks to reveal. (Figures 3, 4)

Figure 3: Use model: farm. Anne Mock, Eisenman Ohio studio, 1985.

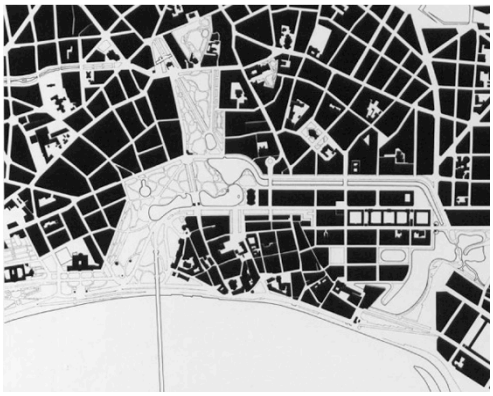

Figure 4: Mapping and analysis study of Dusseldorf, figure/ground plan. Wayne Cooper, Rowe urban design studio, 1967.

CONFERENCE THEMES

This paper addresses aspects of two *Design Ecologies* conference tracks: Design and Approaches for Sustainability, Design and its Educations. For the first, the paper critically surveys approaches to an architectural thinking and practice that allows for continuity, embraces complex contingencies, and it is claimed contributes to establishing conditions of possibility within discipline limits for the continuously new to appear at the scale of the city. The paper also analyses examples of university design studios that investigate strategies or modes of thinking designed to transmit conceptual skills both critical and creative as aligned with the second track.

ANALYSIS

EXPERIMENTING WITH FORMS AND IDEAS (EISENMAN STUDIOS)

> .. I believe there's a need [in architecture] to return to figuration, not icon but figuration. But not full blown figuration but partial figures. Figures that can be understood as aspects of ground or aspects of other figures but that do not in fact lead to necessary whole objects.
>
> (Eisenman 2007, 10:50-11:20 mn)

In a multi-year studio, Eisenman's GSD studios were organized around a series of specific problems and conditions that proposed to engage ideas, compositional operations and architectural-urbanistic forms in the broadest and most ambitious sense. Select materials from the Eisenman GSD studios were the object of a May 1986 exhibition and catalogue (Marvel 1986). In each year's studio, the city was taken as object of study. A close reading of studio materials suggests three elements structure each year's efforts:

- an exemplary architectural-urban situation to be interrogated
- a concept, idea, or theoretical condition
- a limited set of transformative operations, their generative possibilities to be trialled on architectural forms and ideas

In certain years, use was introduced as a fourth term. Together, these elements informed drawing and modelling techniques and together suggest a critical reappraisal of how architectural-urban form is generated. The following interrogates studio problems by year.

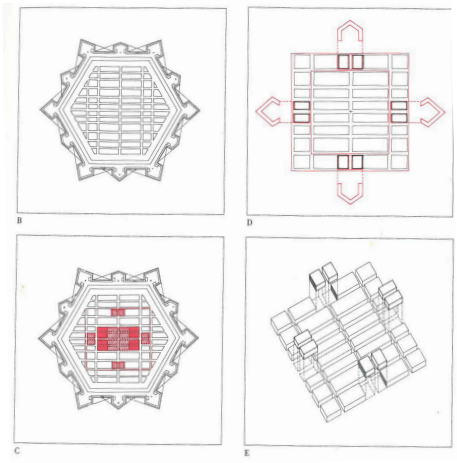

Figure 5: Analytic mappings and operations on Sabbioneta's ideal city. Ben Ledbetter, Eisenman Sabbioneta studio, 1983.

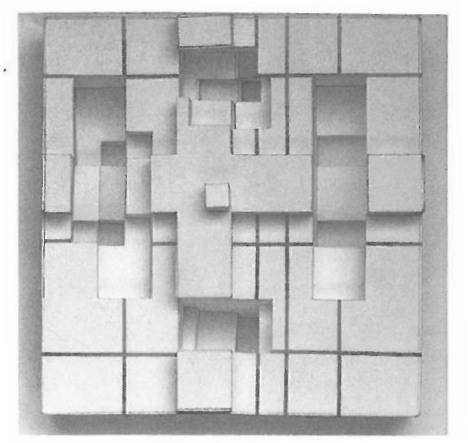

Figure 6: Deconstructed city block resulting from operations on Cataneo's ideal city plan. Andrew Barneu, Eisenman Sabbioneta studio, 1983.

Sabbionneta, Ideal City. The first studio took the ideas of ideal, non-ideal, and double occupancy as opening concepts or conditions to be interrogated. Their nature and potential to inform contemporary design processes was to be integrated through work on two 16th c ideal city plans, that of Vespasiano Gonzaga's Sabbioneta and Cataneo's ideal city from *I Primi Quattro Libri di Architettura.* According to studio assistant Andrea Brown, 'participants worked through a series of three-dimensional operations and procedural explorations on and in the town plans' (Brown 1986, 14). These operations created more studio material, which was then re-interrogated in the development of final submissions. Operations in three dimensions included 'helical progression, serial movement, displacement, extrusion, and stacking'. Other composition devices trialed were 'techniques of trace, erasure, graft, layering, scaffolding, marking, and delay' (Brown 1986, 15). (Figures 5, 6)

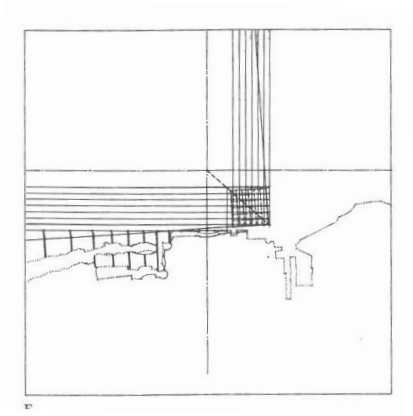

Figure 7: Invasion and trace modifications of grafts from a structural analysis of Burnham's Plan for Chicago. David Parker, Eisenman Chicago studio, 1984.

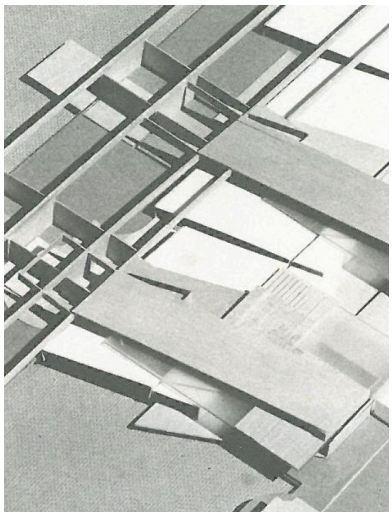

Figure 8: Three-dimensional reading of Burnham's Plan for Chicago. Antonio Sanmartin, Eisenman Chicago studio, 1984.

Chicago Worlds Fair. The exemplary urban situation and base material in Eisenman's second studio was Daniel Burnham's plan for the Chicago Worlds Fair, the idea that of text, and the primary operation, grafting. There was, according to studio assistant Marc Macker, a three-tiered ambition: to make architecture as text, to find a new topos of invention, and to find the means to record or express the new topos of invention (Hacker 1986, 27). As recorded in a contemporary essay and in partial transcripts of studio talks, perhaps Eisenman's overarching ambition at the time was to release the conditions of possibility for what he called a non classical architecture, code within Eisenman's rhetoric for a search for a non anthropocentric mode of design (Hacker 1986, 32; Eisenman 1984). Student work, resulting from two different phases of studio interrogation, are seen in Figures 7, 8.

Ohio, City of the Future. A seemingly rigid three-phase sequence of experiments characterise the third and final GSD studio. The founding proposition was to take on what Eisenman characterised as classical architecture's centrism (Kipnis 1986, 43). This was to be done through the concepts of origin and presence. Scaling and overlap were primary studio operations, and the project located in the environs of Chillicothe, Ohio. An early phase analysis drawing and final phase response to the overlay of specific uses are seen in Figures 9, 10.

Figure 9: First phase site drawing, three scalings based on the superposition of a nine square and foursquare grid. Steve Dayton, Eisenman Ohio studio, 1985.

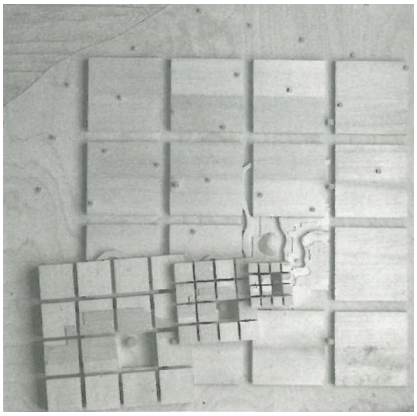

Figure 10: Third phase site/use model. Fabio Nonis, Eisenman Ohio studio, 1985.

An attempt to draw principles or conclusions with further application, to generalize lessons out of Eisenman's GSD studios, meets resistance. And that is perhaps the first sign of an intentional ambiguity at work, one which embraces the contingent and the plural, constantly open to elisions and – to take Eisenman at his word – standing as a practice which resists single readings (Eisenman 2007).

That said, an accounting of certain ambitions, if not hypotheses, can be tried. The three term structure – an idea or concept (origin, presence, text), a precedent architectural site or condition (Cataneo, Burnham), transformative operations (scaling, grafting, extrusion) - , are proposed to prompt studio members to try via formal means to locate possible architectural capacities in the space between these terms with an overarching ambition of interrogating form || idea relations that challenge classical models (Eisenman 1983, Eisenman 1984).

In the Eisenman studio, to formulate it differently, a confrontation of forms and ideas generates different and unknown relations which allow the new to appear amid a confluence across historic periods, places, and practices. This is one way to describe the research hypotheses then tested in studio projects by students: not so much a 'what is' the space between the three terms, but how might one formulate the architectural question such that something new, some further potential or architectural possibility, is revealed.

SPECULATIONS ON THE CITY (ROWE STUDIOS)

> … that collision of palaces, *piazza* and villas.. that inextricable fusion of imposition and accommodation, that highly successful and resilient traffic jam of intentions… And Imperial Rome is, of course, far the more dramatic statement… with its more abrupt collisions, more acute disjunctions, its more expansive set pieces, its more radically discriminated matrix and general lack of 'sensitive' inhibition… [it] illustrates something of the 'bricolage' mentality at its most lavish…
>
> (Rowe and Koetter 1978, 106)

The concept of collision is announced in the middle of what can only usefully be read as a triptych of chapters in *Collage City* dealing with two conceptual and aesthetic operations: disappearance of the object to be replaced by texture, and the deployment of collision and collage to allow a coupling of the traditional and the modern city. Written with Fred Koetter and published in 1978, *Collage City* should be seen in part as a divulgation of the proceeding fourteen years of studio work on the topics and architectural-urban problems which find their expression in prose unique to Rowe and an iconographic apparatus which continues to resonate today.

Under Rowe, the postgraduate Urban Design Studio at Cornell University took urban scale elements as the site of invention and of intervention as he sought to explore alternatives to single-minded thinking in favour of the messy, the contingent, the plural.

Key publications on Rowe's studio work include Cooper (1982), Hurtt (1982), Middleton (1980), and Rowe and Middleton (1996). The formal development of the city was its field of investigation. A founding hypothesis informed at a basic level all of the studio work, that of the integration – dynamic, antagonistic, dialectical - of the traditional city and the modern city, the city of solids and that of voids. Rowe's studio was distinguished by a series of relevant problems and an attitude which has been 'loosely defined as contextualism' (Middleton 1980, 47).

While contextualism was and continues to be embraced as a catch-all for Rowe's contribution, other concepts

and operational devices were at work in the studios and deserve highlighting. The notions and operations of collage and collision in particular (Hurtt 1986) are relevant to an inquiry into more complex modes of design process generally. It is the operation of collision that I wish to foreground in the below as emphatically promulgating a desire to begin to find alternatives to classical-modernist models of part-whole thinking.

A survey of student work reveals a limited range of project types including waterfront sites, impacted grid collisions, field/edge ambivalences. These produced architectural-urbanistic responses that included linear buildings, towers, and perimeter blocks. Open space, shaped or otherwise given figure, became a response in certain studios. Three recurrent kinds of projects can be identified:

- grid and fragment studies explored at the scale of the street and block plan
- infill, connection, or completion problems at the scale of the group plan or composite building
- overall city-wide projects

A selection of projects follow from each type, recognizing that the Rowe studio blurred the boundaries of these artificial categories.

Grid collisions, field extensions. In the Rowe studios, the figure/ground plan - a reduction of the complexities of the physical city to black and white drawings delineating mass and space -, summarize a base ideal (the city as formal gestalt), an analytic tool, and a representation device. It is a constant resource and beginning point over the decades. Hurtt notes that the figure/ground can be taken as a sign for studio efforts to reconcile the traditional, predominantly solid city and the modern city of continuous, open spaces with object buildings dispersed (Hurtt 1982, 56). (Figure 11)

Figure 11: Mapping and analysis study of Bordeaux. Figure/ground plan. Wayne Cooper, Rowe urban design studio, 1967.

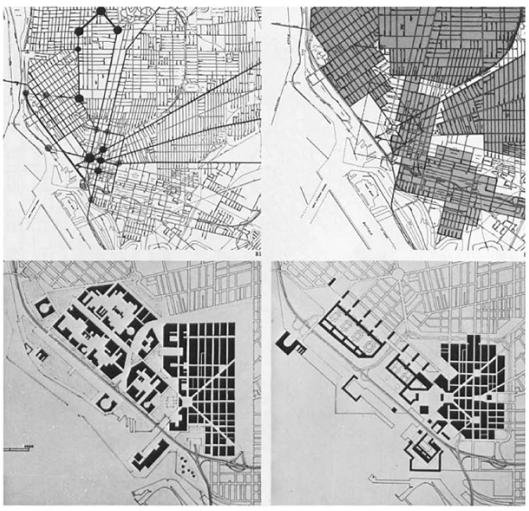

Figure 12: Grid collisions, extensions for the Buffalo Waterfront. Group project. R Baiter, R Cardwell, D Chan, W Cooper, H N Forusz, A H Koetter, M Miki, E F Olympio, F R G Oswald, Rowe Buffalo Waterfront studio, 1965-1966.

The Buffalo Waterfront studio deploys the figure/ground plan in an exemplary manner to postulate a future Buffalo, extended and completed. (Figure 12) According to Rowe, Buffalo 'appears to be the best, the most extensive, the most conclusive' of the studio projects (Rowe and Middleton 1996, 11). A close reading of drawings reveal the following elements: areas of grid collision to be exploited; a strategy of restoration and correction of unresolved and incomplete conditions; a latent park system, overlain with two formal models (the naturalistic and the rectilinear); the idea of city texture; and the idea and use of urban *poché* (Rowe and Koetter 1978, 78-79).

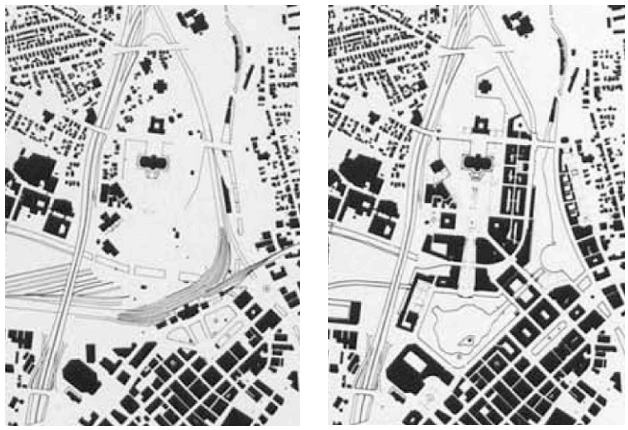

Figure 13: Infill and completion, the composite building, open space as figure and ground. Existing plan and proposed plan. Blake Middleton, Rowe Providence Capital District studio, 1980.

Composite buildings. Infill, hinge or connection conditions were favourite studio problems. In these, Rowe and his students developed over time a move from linear buildings – dominant in early studios - to what he called composite buildings (Rowe and Koetter

1978, 168-171). These function to define edges, enclose space, and simultaneously work as objects of focus. In a certain light, Rowe's composite building functions as Eisenman's partial figure.

In projects for the Providence Capital District, one sees a range of urban scale problems including absence of spatial definition and foreground/background ambiguities. Middleton's response reveals key studio elements: shaped enclosure of a figural building (the Capital), use of open space – here a body of water and a circus-shaped formal garden – to organise city form, a composite building which define and simultaneously punctuates. (Figure 13) Fong's solution to the Marlybone studio is another example of the composite building strategy, here in a low rise urban fabric. One also sees evidence of an emerging reliance on the garden as model for urban open space. (Figure 14)

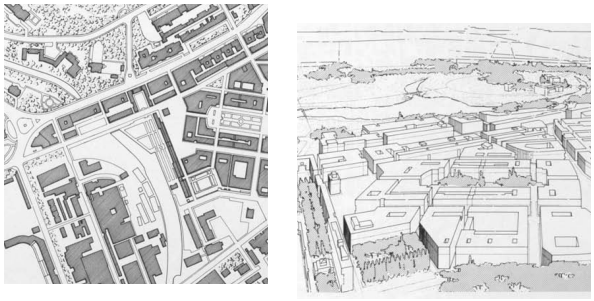

Figure 14: Composite building generated from field and edge conditions. Figure/ground proposed plan and perspective. Steven Fong, Rowe Regent's Park London studio, 1979.

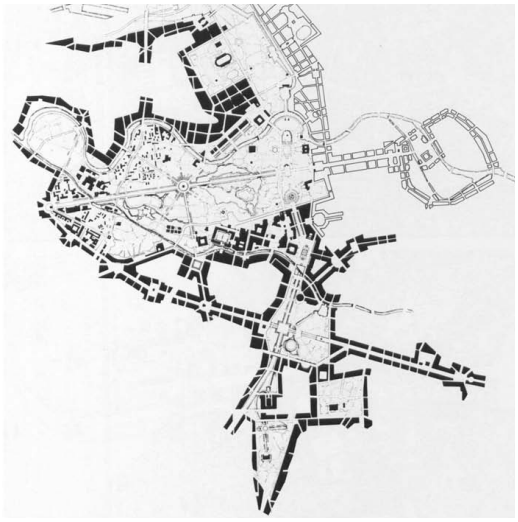

Figure 15: Field/edge research. Proposed infill plan, Group project: R Carvalho, D Frederick, E Sennyey, Rowe Berlin Tiergarten studio, 1981.

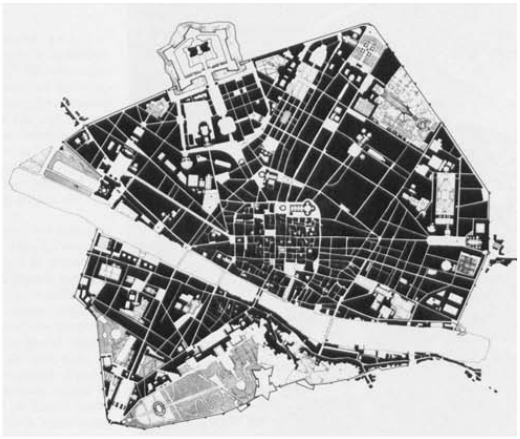

Figure 16: Completion and extension of an existing traditional city: Proposed extension plan. Bruce Lonnman, Rowe Florence studio, 1980.

City-wide propositions. The larger field, whether the city or open space more generally, occupies the Rowe studio in later years. *Collage City*, and Rowe's Cubitt Lecture of 1979, evidence this shift of emphasis and scale of investigation (Rowe 1979). Baltimore, Berlin, Florence, London provided material for much of the studio work and the group project was not uncommon. Completion and extension are the most legible terms, and a close reading of Lonman's Florence plan, for example, reveals a confident and complex resolution of urban scale problems. (Figures 15 and 16) A full range of elements is in play: composite buildings, the public terrace, regular voids – what Rowe and Koetter designate as 'stabilizers' in *Collage City* -, the memorable street (Rowe and Koetter 1978, 156-159).

From the above too brief survey, a number of constants can be claimed to distinguish the Rowe studio. These include conceptualizing the city as an always incomplete gestalt, one whose stability is never traceable to a single figure or diagram which in fact is emphatically loose, open to simultaneous overlays, whether formal, spatial, or temporal. A limited range of project types is used but never pure, always hybrid. An engagement with a corpus of architectural-urbanistic precedents is constant but they are precedents in constant transformation. Another constant is the use of collage and collision as primary techniques. This is complimented by a reliance on figure/ground but, again, never in a stable sense. The figure/ground conditions Rowe advocates are always ambiguous, reading as simultaneously figure-figure, or ground-ground thus challenging any single figure/ground dichotomy, a result of his decades long advocacy of collision and collage.

CONCLUSION

Inaugurating a larger study of design education and of the university architecture studio's engagement with alternate modes of thinking that might contribute to more sustainable design practices, two approaches have been briefly surveyed.

What, if anything, do they share? What are the important differences? Which future lines of inquiry should be followed to further test the opening questions and conference propositions?

GENERAL CHARACTERISTICS

At the most basic, the Eisenman and Rowe studios can be read as investigations of specific architectural problems, whether work on contemporary ideas, form precedents, the traditional/modern city dialogue, or the design process and architecture's potential itself and more generally.

Looking first at general characteristics, five elements seem to be in common. First, there is an emphasis on precedent, whether of architectural problems (Eisenman) or as formal responses to be collaged onto specific project sites in a spirit of conjecture (Rowe). Second is repetition: studio problems are repeated over several years with subtle variations and refinements. In the case of Eisenman's GSD studios, a framework is adopted and replacement terms - of concept, operation device, and site - introduced. Third, there is an explicit effort to remain open to the new, and to renewal generally. In the case of Eisenman, this is achieved through an engagement with contemporary thought supported by a deep engagement with architecture's history. For Rowe, renewal occurs around the endless refinements that result from manipulating architectural-urbanistic materials in favour of the city. Fourth, reliance on a limited number of composition devices and operations. Fifth, the functional brief and use generally is absent or not emphasized. Rowe downplays function over a privileging of the city as an eclectic and coherent whole. There is another aspect, related to transmission: studio findings are documented and disseminated. For both, documentation of the studio process, exhibitions, and publication ensured registration of the work.

The differences between the two are both evident and subtle. The research problem in Eisenman's GSD studios might be characterized as form research using operative frameworks delimited by ideas used to read projects from the history of the discipline in order to generate new conditions. (Figures 5, 6, 7, 8) A parallel and self-complicating dialectic with multiple contexts (historical, real, theoretical) and internal conditions of any architecture. (Figures 9, 10) For Rowe, the research problem is emphatically that of reconciling traditional city form and modern architecture. Here, form research is at an urban scale and conclusions, however provisional, do result. Think of the linear building (Figures 2, 12), or that of composite buildings (Figure 13), the discovery of the figure/ground drawing as tool to form ambiguous buildings and site conditions which blur any single figure or ground registration. (Figures 11, 12)

The attitude toward context varies, as does the underlying assumption about autonomy. At a different scale and in a different realm – that of the city – Rowe's deployment of figure/field relationships passes through a filter or is indexed against cubistic composition devices not only in plan but spatially. This distinguishes his approach from the devices evident in Eisenman studio projects: scaling, graft, tracing, overlay, inversion. Ford's response to Eisenman's Chicago studio compared with Fong's in Marlybone provide evidence for consideration of the differences and similarities sketched above. (Figures 17, 18)

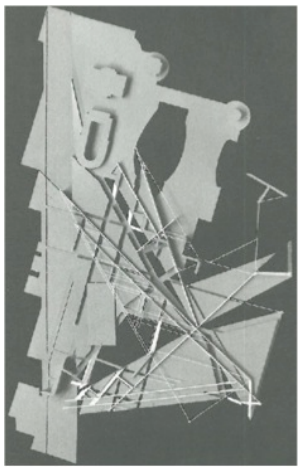

Figure 17. Left: Three-dimensional reading of the graft. Kathy Ford, Eisenman Chicago studio, 1984.

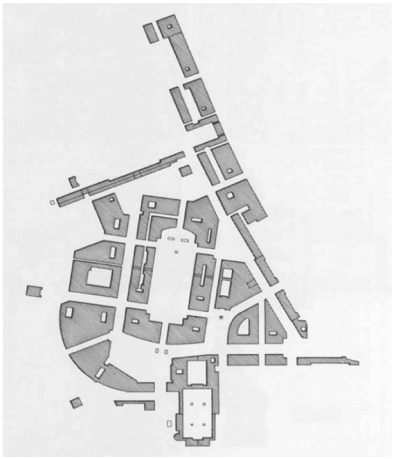

Figure 18: Composite buildings generated from field and edge studies. Steven Fong, Marlybone, Rowe Regent's Park London studio, 1979.

SHARED ASPECTS

Alongside the above characteristics, the analysis of studio work also reveals at least four shared aspects in relation to the specific part to whole problematic, returning to the opening propositions and the larger conference themes.

First, there is sympathy for continuity. This is manifest in efforts to reveal traces of palimpsest sites for Eisenman or for Rowe in the insistence on the continuity of the urban form. Thus the building project is only ever an event in a longer and always already underway continuum composed of many systems.

Both I believe share a commitment to the notion and device of urban stabilizers. This is the case whether a virtual stabilizer of the Cartesian grid and Banham plan in the Chicago studio for Eisenman; or a real stabilizer in Rowe's Regent Park studio. (Rowe and Koetter 1978, 156-159)

A third commonality: both rely on similar operations for the generation of form. Interchangeable I believe are the operations of collision (more resolutely used in the Rowe studios) and overlay (those of Eisenman). Both Rowe and Eisenman, to take a final example, accept the contingent. Both, that is, allow for and in fact embrace impure conditions.

While there are other terms that would be revealed in a longer study, taken together these four aspects offer one model which embraces and accepts manifestations of complex ambiguity. This model differs from a part to whole dynamic in favour of a part and part (and part) problematic or a ground to ground (as different from a figure to ground) coupling.

Thus the Eisenman and Rowe studios can be interpreted as investigations into approaches which depart from the part to whole problematic and, as claimed at the beginning, can be read to propose an alternative mode to single mode models in favour of more pluralistic ones.

NEXT STAGES OF RESEARCH

In the next phases of research, systematic consideration of the range of architectural-urbanistic problems, their spatial conditions and formal characteristics should be attempted, other university programs examined in architecture and other studio-based disciplines, and additional close reading of studio materials from Eisenman and Rowe undertaken to further expand the opening propositions. In addition, this narrow survey of their studio teaching would be invigorated if considered within the context of Eisenman and Rowe's larger practice and historical-theoretical projects. Such a move would reveal compounding influences between their various activities and provide further evidence of the university studio as site of knowledge production, to return to the conference questions.

The Eisenman and Rowe studios, in conclusion, can be seen as efforts to interrogate architecture and its possibilities through the university studio as a field of constant renewal. In that sense, studio work does not lead to conclusions. Or perhaps it is more accurate to say that conclusions are endlessly deferred except in a provisional sense, the activities of the university studio creating conditions of possibility for new architectural categories, forms, and ideas to emerge and which resist returning to a part to whole bias in favour of an endlessly open and positively ambiguous mode of thought and practice characterised by such notions as partial figuration and the device of collision.

The two thus provide only provisional models and strategies for responding to this paper's opening questions and the ambition of a more nuanced and sustainable mode of design. This inconclusive nature of studio research no matter the discipline can be given a closing word by Harry Cobb, one which suggests the potential for all design disciplines. For the university studio, he notes, 'conclusive results are scarcely to be expected… what emerges is an array of new questions together with new strategies for pursuing them' (Cobb 1986, 5).

ACKNOWLEDGEMENTS

An early draft of this paper benefited from the comments of anonymous readers. Funding to attend the NORDES 2015 conference was provided by the University of Canberra Faculty of Arts and Design Conference Fund 2015 for which I am grateful. I thank Dean Lyndon Anderson, Associate Dean Research Angelina Russo, and Head of Discipline Andrew MacKenzie for their on-going encouragement and support of all modes of research activity. This paper is dedicated to my students.

ILLUSTRATION CREDITS

REFERENCES

Brown, A., 1986. In Caesura. In: J.J. Marvel, ed. *Investigations in Architecture*

Cobb, H.N., 1986. Foreword. In: J.J. Marvel, ed. *Investigations in Architecture*.

Cooper, W., 1982. The Figure/Grounds. *The Cornell Journal of Architecture*, 2, pp. 42-53 and unnumbered plates.

Eisenman, P., 1983. The Futility of Objects: Decomposition and the Processes of Difference. *Harvard Architecture Review*, 3, pp. 65-82.

Eisenman, P., 1984. The End of the Classical: The End of the Beginning, the End of the End. *Perspecta*, 21, pp.154-173.

Eisenman, P, 2007. Urgency Part 2. Lecture, Canadian Centre for Architecture, Montréal, 8 June 2007, accessed

Hacker, M., 1986. With a Certain Laughter and Dance. In: J.J. Marvel, ed. *Investigations in Architecture*.

Hurtt, S., 1982. Conjectures on Urban Form. The Cornell Urban Design Studio 1963-1982. *The Cornell Journal of Architecture*, 2, pp.54-78.

Kipnis, J., 1986. Star Wars III: The Battle at the Center of the Universe. In: J.J. Marvel, ed. *Investigations in Architecture*.

Marvel, J.J. ed., 1986. *Investigations in Architecture: Eisenman Studios at the GSD 1983-85* (Cambridge, Mass.: Harvard University Graduate School of Design.

Middleton, D.B., 1982. The Combining of the Traditional City and the Modern City. *Lotus International*, 27, pp.47-62.

Rowe, C., 1979. The Present Urban Predicament. *The Architectural Association Quarterly*, 12 (4), pp.40-63.

Rowe, C., 1996. Roma Interrotta. In: A Caragonne, ed. *As I was Saying. Recollections and Miscellaneous Essays, Volume Three Urbanistics*. Cambridge, Mass.: The MIT Press, pp. 127-153.

Rowe, C. and Koetter, F., 1978. *Collage City*. Cambridge, Mass.: The MIT Press.

Rowe, C. and Middleton, D.B., 1996. Cornell Studio Projects and Theses. In A. Caragonne, ed. *As I Was Saying Recollections and Miscellaneous Essays. Volume 3 Urbanistics*. ed. Alexander Caragonne. Cambridge, Mass: The MIT Press, pp.5-84.