THE FOURTH TYPOLOGY

Dominant Type and the Idea of the City

Christopher C.M Lee

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The Fourth Typology

Dominant Type and the Idea of the City

Proefschrift

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Christopher Chee Meng LEE

Diploma in Architecture (Honours), Architectural Association School of Architecture, London

Bachelor of Arts (Architectural Studies), Dean's List, National University of Singapore

geboren te Taiping, Malaysia

Dit proefschrift is goedgekeurd door de promotor:

Prof.ir. S.U. Barbieri, promoter

Dr. P.V. Aureli, copromotor

Samenstelling promotiecommissie:

Rector Magnificus,	voorzitter
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Propositions

1.

Type is the idea and deep structure that forges a commonality in plurality.

2.

The concept of type is most progressive when it is used as a heuristic tool to seek out what is typical, that is to say, what is most common to all.

3.

The concept of type is most regressive when it is used to ascribe rationality to idiosyncratic formal procedures.

4.

The city is the site on which architecture can stake its claim for sociality as it is through the idea of the city that the idea of what is common can be discursively formed.

5.

The typological project of the late 1980s regressed when it was used as a formal procedure to recreate an image of the past as a means to justify architecture's continuity with history and context.

6.

To work typologically is to work in series, harnessing the ideas and deep structures of precedent types, and to project them into new architectural solutions, whilst maintaining its typicalities. In this, lies the possibility of an architecture that turns the most typical into a common artifact or framework.

7.

Both 'post-critical' architecture and the recent 'post-pragmatic' architecture make the same mistakes in opposite directions. The former writes off the intellection of design, the latter illustrates intellection with design.

8.

Peter Carl once remarked that theory places an unnecessary burden on the wit and imagination required of design, and that theory does not lead happily to design. This would place this dissertation as a critical reflection of, rather than a blueprint for practice.

9.

An architecture of resistance ceases to be so when built, if resistance is defined as a struggle against a dominant power. As such, the ambition and outcome for the project of resistance is self-cancelling. In Chinese thought however, transforming the inherent tendency of things is seen as being more efficacious than resistance.

These propositions are regarded as opposable and defendable, and have been approved as such by the supervisor:
Prof.ir. S.U. Barbieri

Summary

The purpose of this dissertation is to renew the understanding of type and its relation to the idea of the city. In doing so, it attempts to revalidate the theory of type and its instrumentality for architectural production in today's globalised cities. The analysis of the history and theory of type alongside the inquiry into the developmental city, frames the research of this dissertation. The developmental city is one that is conceived and constructed through its dominant types and used primarily as a developmental tool, instigated primarily by speculative capital. This sets the inquiry apart from the three discourses of typologies as outlined by Anthony Vidler at the turn of the nineteenth century, early twentieth century and 1970s. In these three instances, architects and theorists turned to the question of type to justify architecture's social and political role; and the heuristic value of type became invaluable in these instances, as to raise the question of type is to raise the question of what is typical, and as such it is a search for what is common, not only to architecture itself but to the wider milieu in which it is produced.

This investigation relies on the close examination of the writings on the theory of type and typology, in particular those that relate to the idea of city. It is not an exhaustive inquiry into the entire history of type – this has already been carried out by Leandro Madrazo in 1995. This inquiry begins with Antoine Chrysostôme Quatremère de Quincy and the didactic theories of Jean-Nicolas-Louis Durand; the former is credited for being the first to formally introduce the concept of type into architectural theory and the latter for offering a didactic theory in the dissemination of architectural knowledge through a rational and scientific method. Crucially, the focus is to investigate the instrumental role of type as a heuristic and didactic device in renewing the discipline of architecture.

Type's relation to the idea of the city is the extension of this concern to search for a commonality in which architecture could invest itself with sociality. This necessitates the discussion of the idea of the city, from Aristotle's definition of the city or polis as a space of coexistence to Chantal Mouffe's concept of agonistic pluralism. The rereading and reinterpretation of the writings and projects on the city of Aldo Rossi and Rem Koolhaas are viewed through the lens of type and the idea of the city as a space of agonistic pluralism. Although it is not customary to draw the relation between the two, it is precisely the intention of this dissertation to show that the instrumentality of type as a tool for renewal is in its ability to locate the idea of what is common through the city.

The final part of the dissertation on Singapore involved archival research of unpublished material in Singapore Housing and Development Board Library and the Urban Development Authority Resource Centre Singapore. The city of Singapore is used as a case study to exemplify the utilization of the dominant type to figure forth the idea of the developmental city state. It is a contingent idea that evolves with the regimes of power and is therefore an evolving political project - a manifestation of political forces. An understanding of the dominant type in this context will centre on the discussion of the generic nature of type – the propensity of the typical for transformation - as a shared disciplinary knowledge and social contract. Unlike the 'urban artifacts' associated with the historical city, the dominant types here arose from the conditions of tabula rasa. As one of the earliest examples of the developmental city in Asia, Singapore will be understood through two dominant types – the high-rise, high-density tower and slab block of Singapore's public housing project and the podium block. The 'success' of this developmental city state in utilizing the city and its architecture as a political project has also evolved a condition where the city can

be seen as a laboratory for a peculiar archetypal developmental Asian urbanism that is now being exported to other cities in East Asia, in particular to China.

The result of this dissertation is the possibility of conceiving a fourth typology, distinct enough to set itself apart from the three typologies that precede it, in the history and theory of architecture. This redefinition centres on the conception of the dominant type as a common framework – firstly as an architecture that enables and embodies the idea of the city as a space of agonistic pluralism; and secondly as a common knowledge for comprehension and cooperation.

The theory of type can therefore be this device for reasoning and experimentation that enables the re-engagement of architecture with the city in a critical and inventive manner. This entails the renewed understanding of type and the repositioning of the dominant type as a primary element in understanding and envisioning the city; a medium that allows one to draw on its pliability as a constituent part of the city and its effectiveness as a medium for channelling architecture's disciplinary knowledge. Both of these issues hinge on the ability of type to act as a flexible instrument of control and its potential to derive and propose ideas from and for the city, as a discursive idea that can be commonly held by all.

Samenvatting

Het doel van deze dissertatie is het vernieuwen van het begrip van het type en haar relatie tot het idee van de stad. Hiermee wordt gepoogd om de theorie van het type en haar instrumentaliteit voor architectonische productie in de hedendaagse globaliserende stad te revalideren. De analyse van de geschiedenis en theorie van het type, samen met het onderzoek naar de ontwikkelingsstad, vormt het onderzoek-kader van deze dissertatie. De ontwikkelingsstad wordt gevormd en geconstrueerd door haar dominante typen en wordt bovenal gebruikt als ontwikkelings-'tool,' voornamelijk aangezet door speculatief kapitaal. Dit plaatst het onderzoek buiten de drie discoursen van typologieën zoals omschreven door Anthony Vidler: het begin van de negentiende eeuw, de vroege twintigste eeuw en de zeventiger jaren. In deze drie momenten wendden architecten en theoretici zich tot de vraag van het type om de sociale en politieke rol van architectuur te rechtvaardigen. De heuristische waarde van het type werd in deze momenten van onschatbare waarde, de vraag van het type is immers gelijk aan de vraag van wat is typisch, en zo is het een zoektocht naar het gemeenschappelijke, niet alleen voor architectuur zelf, maar ook voor het bredere milieu waarin architectuur geproduceerd wordt.

Dit onderzoek is afhankelijk van een grondige bestudering van geschriften van de theorie van type en typologie, met name de teksten die relateren aan het idee van de stad. Het is geen uitputtend onderzoek naar de gehele geschiedenis van het type – dit is al gedaan door Leandro Madrazo in 1995. Dit onderzoek begint met Antoine Chrysostôme Quatremère de Quincy en de didactische theorieën van of Jean-Nicolas-Louis Durand. Quatremère de Quincy wordt gecrediteerd voor de eerste formele introductie van het concept van het type in de architectuur theorie. Durand bood een didactische theorie voor de verspreiding van architectonische kennis volgens een

rationale en wetenschappelijke methode. De cruciale focus van deze dissertatie is om de instrumentale rol van het type als een heuristisch en didactisch instrument voor de vernieuwing van de architectonische discipline te onderzoeken.

De relatie tussen het type en het idee van de stad is de uitbreiding van de bezorgdheid om te zoeken naar een communiteit waarmee architectuur zichzelf zou kunnen verrijken met socialiteit. Dit vereist een discussie over het idee van de stad die reikt van Artisotle's definitie van de stad, of polis, als een ruimte van co-existentie tot Chantal Mouffe's concept van agonistisch pluralisme. De herlezing en herinterpretatie van de geschriften en de projecten van Rem Koolhaas en Aldo Rossi worden bekeken door de lens van het type en het idee van de stad als een ruimte van agonistisch pluralisme. Hoewel het ongebruikelijk is om de relatie tussen de twee te maken, is het juist de intentie van deze dissertatie om de vernieuwende instrumentaliteit van het type te tonen dat ligt in haar vermogen om het idee van wat gemeenschappelijk is door de stad te lokaliseren.

Het laatste deel van de dissertatie over Singapore betrekt archief onderzoek van ongepubliceerd materiaal van de Singapore Housing and Development Board Bibliotheek en het Urban Development Authority Centre Singapore. De stad Singapore wordt gebruikt als casestudy om het gebruik van het dominante type als voortstuwend middel van het idee van de ontwikkelingsstad staat te illustreren. Het is een voorwaardelijk idee dat evolueert met machtsregimes en is daarom een evoluerend politiek project – een manifestatie van politieke krachten. Een begrip van het dominante type in deze context zal centraal staan in de discussie van de generieke aard van het type – de neiging van het typische voor transformatie – als een gedeelde vakkennis en sociaal contract. In tegenstelling tot de stedelijke artefacten die zijn geassocieerd met de historische stad, verrezen de dominante types vanuit de conditie van tabula

rasa. Als een van de eerste voorbeelden van de ontwikkelingsstad in Azië, zal Singapore worden begrepen door twee dominante typen – de hoogbouw, hoge dichtheid torens en flatblokken van het Singaporese sociale woningbouw project en het podium blok. Het 'succes' van de ontwikkelings-stad-staat in het gebruik van de stad en haar architectuur als een politiek project heeft een omstandigheid voortgebracht waarin de stad gezien kan worden als een laboratorium van een eigenaardig Aziatische archetypisch ontwikkelings-urbanisme welke nu wordt geëxporteerd naar andere steden in Oost Azië en voornamelijk naar China.

Deze dissertatie resulteert in de mogelijkheid om een vierde typologie te vormen, verschillend genoeg om zichzelf te onderscheiden van de drie voorafgaande typologieën in de geschiedenis en theorie van architectuur. Deze herdefiniëring stelt de conceptie van het dominante type als een gemeenschappelijk kader – ten eerste als een architectuur die de het idee van de stad als een ruimte van agonistisch pluralisme aanzet en belichaamt; ten tweede als een gemeenschappelijke kennis voor begrip en samenwerking.

De theorie van het type kan een apparaat worden voor redenering en experimentatie welke in een kritische en inventieve manier aanzet tot een her-betrokkenheid van architectuur met de stad. Dit houdt in dat het hernieuwde begrip van het type en de herpositionering van het dominante type als een primair element geldt in het begrijpen en voorstellen van de stad; een medium dat ons in staat stelt om in te winnen op de plooibaarheid als een constituerend bestandsdeel van de stad en de effectiviteit als een medium om architectonische vakkennis van te kanaliseren. Beide zaken hangen af van het vermogen van het type om als een flexibel controle instrument te fungeren en haar potentieel om ideeën van en voor de stad te laten ontstaan en naar voren te brengen, als een discursief idee dat gemeenschappelijk gedragen kan worden door iedereen.

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This thesis is dedicated to Bolam Lee and my parents.

Contents

Introduction 1

1 THE IDEA OF TYPE

1. Introduction 13
2. Quatremère de Quincy and the *Dictionnaire Historique d'Architecture* 15
3. Quatremère's Definition of Type 18
4. Origins 20
5. Imitation 34
6. Type and Model 42
7. Idea, Ideal 47
8. Rule 54
9. Character 58
10. Language 64
11. Argan: Precedents and Contingents 73
12. Rossi: The Structure of Permanence 84
13. Conclusion 97

2 THE DEEP STRUCTURE OF TYPE

1. Introduction 103
2. Durand's *Recueil* and *Précis* 106
3. The Discipline of Architecture 110
4. *The Recueil*: from the Ideal to General Principles 115
   - 4.1 The Comparative Method 116
   - 4.2 Classification and Simplification 127
   - 4.3 Type as Precedents in the Recueil 130
5. *Précis:* General Principles and Procedural Differentiation 131
   - 5.1 The Instrumentality of Graphic Representation 132

5.2 The General Principles of Architecture 133
5.3 The Elements of Building or Architecture 139
5.4 Composition of Elements 143
5.5 Parts of Building 147
5.6 'Ensemble d' Edifices' and Type 148
5.7 Composition, Theory and Method 156
5.8 Method as Theory and Typology 162
6. Idea, Model and Seriality 164
7. Rationality and Grammar 175
8. Conclusion 179

3 DOMINANT TYPES AND THE IDEAS OF THE CITY

1. Introduction 185
2. Typical and Typicalities 187
3. The Idea of the City 193
4. The Political and Agonistic Pluralism 201
5. Aldo Rossi's Collective Memory 205
5.1 City as History 206
5.2 Primary Elements 207
5.3 Urban Artifact 209
5.4 Locus and Collective Memory 212
5.5 Permanence 214
5.6 Type 215
5.7 Choice 216
6. The Borders of Containment and the Common in Rossi's Four Projects 218
7. Koolhaas' Metropolis of Dispositifs 235
8. Conclusion 255

4 DOMINANT TYPE AND THE DEVELOPMENTAL CITY STATE

1. Introduction 261
2. Generic or the Typical 264
3. The Developmental City State 274
4. High-rise Tower and Slab Block: Housing a Nation 281
5. Total Design through the Dominant Type 299
6. The Next Lap 318
7. The Spectacle of Public Housing 327
8. Podium Block: Framing Flexible Accumulation 337
9. Shopping and City Rooms 359
10. One North 368
11. Conclusion: The Fourth Typology 374

Reference List 381

About the Author 395

Curriculum Vitae 399

Introduction

This dissertation proposes to renew the understanding of type and its relation to the idea of the city. Through this, it proposes the possibility of conceiving a fourth typology, distinct enough to set itself apart from the three typologies that precede it in the history and theory of architecture. This redefinition centres on the conception of the dominant type as a common framework – firstly as an architecture that enables and embodies the idea of the city as a space of agonistic pluralism; and secondly as a common knowledge for comprehension and cooperation.

Any attempt to define type is an attempt to define what is typical; and what is most typical is common to all. As such, type lends itself as an effective heuristic device to locate commonalities. This search for what is common in architecture is not to locate formal or tectonic similitude, nor is it used to usher in a universal style. It is a search for what is the idea that can be commonly held so as to invest architecture with a social and political role. It is for this reason that the question of type arises when architecture is perceived to be in crisis; when its relevance to the wider milieu in which it is produced is in question. In *'The Third Typology'*[1], Anthony Vidler outlined three critical moments in the history and theory of architecture when the question of type was raised to revalidate and renew the discipline of architecture: in the late eighteenth and early nineteenth centuries, the legitimization was found in nature to sustain the doctrine of imitation; in the early twentieth century, it was in the processes of industrial production; and in the 1970s the historical city - both as a concept and artifact - became the site for its revalidation and renewal. The present offers itself as the fourth moment.

For more than a decade, architectural production has

1 Vidler, Anthony, 'The Third Typology', *Oppositions*, 7 (1976), pp. 1-4

been instigated primarily by speculative capital in a neo-liberal market economy. The context for this production is the city, in particular in developing and new cities in East Asia, which I will term 'developmental cities'. Here, the utilization of architecture for speculation is so total that the city itself is seen as a developmental tool and a 'branded' product - its concern and goal is profit. Architecture responded to this demand for product differentiation in the market economy with formal differentiation - the proliferation of novelty in the form of 'iconic' buildings. The result is the reduction of architecture's role to a singular cause – the facilitation of speculative capital – that flattened architectural culture and discourse in its wake.

The viability and sustainability of this developmental model in recent years has been put to serious question and with it, the architecture that accompanied it. If architecture is required to offer an alternative, it must return to the question of the city. For the city, in its most fundamental definition and condition, is the space of plurality and coexistence; and for this reason it requires architecture to rearticulate its role beyond the concerns of the market alone, and instead address the concerns of the collective by formulating an idea that can be held in common. If architecture must return to the idea of the city for revalidation and projection, it is not in opposing novel forms with formal uniformity or blandness. The task lies instead in fostering the conditions that counter this flattening tendency, by offering a framework that cultivates alternatives and enables meaningful difference to exist. This meaningful difference, the plurality of the city, can come about from architecture's ability to capture, frame and accommodate, and should not be confused with the diversity of differentiated tectonics or convoluted forms. In other words, it is the possibility of architecture to act as a common framework.

This common framework inheres in the dominant type and

I define the dominant type as the typical element that constitutes both the idea of the city and the structure of the city. For a type to be dominant, it has to prevail and be of influence; and what is the most prevailing is also the most typical and common to all. If the city is understood in its most fundamental sense, as a space of coexistence, following Aristotle's definition of the *polis*, then the city itself is a common space par excellence. Thus it is through the constitution of the idea of the city with the dominant type that my proposition for its efficacy as a common framework is positioned.

Such an understanding must first be preceded by the close examination of the theories of Antoine Chrysostôme Quatremère de Quincy and the didactic theories of Jean-Nicolas-Louis Durand. The former is credited for being the first to formally introduce the concept of type into architectural theory and define type as *'the idea that must serve as the rule to the model'*, whereas the latter offered a didactic theory in the dissemination of architectural knowledge through a rational and scientific method. Two important criteria framed this reading, the first concerns itself with locating the concept of type in their respective writings and teachings and was conducted through the dialectics of type as idea and model. The second concerns the instrumentality of type in renewing architecture's role and its episteme during the crisis of architecture in the late eighteenth and early nineteenth centuries in France, when architecture as a discipline and its knowledge, assumed through the authority of the ancients, were challenge by the rise of the new discipline of science and the new revolutionary society. Most crucially, through this dialectics of idea and model, I argue that both Quatremère and Durand ascribed a societal role to architecture, through their treatment of the 'idea of type' and the 'deep structure of type' respectively.

In the case of Quatremère, the heuristic nature of type

was instrumental in his revalidation of the supremacy of Greek architecture, when its claim as the origin of architecture was threatened by the archaeological discovery of Egyptian civilization that predated it. Quatremère offered an epigenetic account of this problem of origin by introducing his three primitive dwelling types - the cave, the hut and the tent. Of the three, he maintained that the hut was more superior, as the transposition from the hut to the Greek temple required abstraction and rationality. It is an abstract beauty derived from the principles that governs nature and a transposition of rational timber construction to stone. In doing so, Quatremère was able to maintain the claim of Greek architecture as the architecture for the society of his time. Through this, he validates the use of classicism as an architectural language of rationality and abstraction, an allegory for the revolutionary society defined by the ideals of Enlightenment. Quatremère thus defined the idea that can be commonly held, as the eternal idea or ideal derived from nature, that involves the intellect for reasoning and abstraction, a value that he finds befitting to his milieu. Following this reading, I argue that Aldo Rossi's meta-critical project mirrors that of Quatremère for they both conflate architecture with sociality; and they do so through the heuristics of type. The former finds the allegory of a rational, abstract and beautiful architecture befitting the society of his time, the latter constructs the notion of the collective out of the idea of the city that acts as the permanent principle for architecture.

As for Durand, I argue that the deep structure of type is fundamental to his construction of a logic of type; and I define the deep structure as the irreducible structure that holds the potential to organize. It is my argument that Durand's theoretical construct is firmly based on the idea of type although he did not use the word type himself; it is not constructed out of the theories of imitation, as Quatremère did, but out of his attempt

to systematize architectural knowledge. The ideas that serve as a rule to his deep structures of type are *'solidity, salubrity and economy'*; and although Durand utilizes typology in a pragmatic manner, his larger ambition was to arrive at a general principle of architecture that is understandable and accessible to all. Thus, what is common in the case of Durand is architectural knowledge itself. It can be argued that for Durand, science and rationality are seen as a means of emancipation for the revolutionary society, and he ascribed this to a method. Therefore, this method, as the logic of type, despite its pragmatic leanings is in fact political. For Durand, architecture should not be the preserve of monarchical and aristocratic patronage; it is universally accessible when it is teachable to all.

This relation between the idea of type and the deep structure of type informs my conception of the dominant type and its relation to the idea of the city. My argument to conceive of the idea of the city as a space of agonistic pluralism, to counter the tendency for novel difference that blunts our ability to forge a commonality, is informed by Chantal Mouffe's critique of liberalism. Her argument against liberalism is that in liberalism's defence of diversity and individual liberty, it neglects the importance of forging a commonality that is required for the political. For Mouffe, the political is the dimension of antagonism that is constitutive of human societies[2]; but she proposes to turn this antagonism to an agonism that accommodates the plurality of coexistence. This agonistic pluralism focuses on the construction of a commonality that binds differences rather than on the elimination of the enemy in an antagonistic understanding of the political.

Expanding from Mouffe's argument, I propose that the city can be a common space par excellence when it is conceived

2 Mouffe, Chantal, On the Political (Abingdon & New York: Routledge, 2005), pp.9-21

as a space of agonistic pluralism; and this is analogous to the dominant type as a common framework that acts as borders of containments. This is not the postmodernist's version of fragmented heterogeneous spaces of relativism, nor a Deleuzian 'smooth space'[3]. It is always demarcated and structured by the deep structure of the dominant type. It acts as a framework of recognition that displays typicalities to constitute a commonality. This however cannot be universal as in an agonistic pluralism, there can only be a contingent idea of what is common. Thus, this commonality is discursive and this unresolved but productive tension manifests itself and is reified as the dominant type of the city at a given point in time.

The city as an idea of agonistic pluralism is one that strives for heterogeneous containments and makes possible the articulation of meaningful difference. Through this, I propose to reinterpret the writings and the projects on the city by Aldo Rossi and Rem Koolhaas. It is not customary to discuss the works of Koolhaas alongside Rossi or through the lens of type, but I maintain that in both cases, the dominant type features prominently in their efforts to redefine the idea of the city that can no longer be sustained as a homogeneous whole and a uniform totality. They did so by first redefining the idea of the city: the collective memory and permanence of the historical city for Rossi and the dispositif of heterogeneous containments of the metropolis for Koolhaas. Following which, they abstracted and transposed the deep structures of their respective dominant types into new architectural projections. In these two examples, the recourse to the idea of the city as a project revalidates the works of architecture through the reconstitution of a commonality that

3 Architecture's response to the problem of pluralism is often manifested in the production of formal difference that is then appropriated by capital as commodities of novelty. These architectures of 'competition' are different to the spaces or architectures of agonistic pluralism. See Mouffe, Chantal, 'Artistic Activism and Agonistic Spaces' in *Art & Research: A Journal of Ideas, Contexts and Methods*. Volume 1 No. 2 Summer 2007.

architecture must again respond to.

In the final chapter, the city of Singapore is used as a paradigmatic example of a 'developmental city state' to further the discussion of the dominant type and the idea of the city. This choice posits that the discussion of the fourth typology does not reside in the historical European city but in the fast developing cities of East Asia, from tabula rasa. Secondly, the developmental city offers a different and distinct understanding of type through the development of its dominant types, and thirdly it furthers the understanding of a common framework as a shared architectural knowledge and social contract.

A state can be termed as a developmental city state when it establishes, as its principle of political legitimacy, its ability to promote, administer and sustain economic growth through the use of the city as a developmental apparatus. This developmental city state can be understood through two dominant types: the first is the high-rise, high-density tower and slab block that make up Singapore's public housing project and houses 85 percent of the nation's population. The second is the podium block, a Metabolist invention unique to Asia, with shopping as its primary programmatic instigator. Through the analysis of these dominant types I further articulate the characteristics of this fourth typology as such: it is generic, that is, typical with the potential for transformation. It generally requires a tabula rasa as a precondition for existence and differs from the third typology which fundamentally depended on the historical city for its definition and constitution. The pliability of its deep structure accounts for its operativity. It is shaped by a political ideology that emphasizes the efficacy of pragmatism, on the one hand, and the nature of multi-stake holders' developments that favour flexible accumulation and aggregation as growth strategies, on the other. The fourth typology is pervasive, prevalent and inheres

in the dominant type. Its role as a developmental apparatus can be found in cities across China, India and South East Asia. It is more pronounced in China, with its single party rule under a communist party that is currently overseeing the expansion of a neoliberal economy; and like Singapore, its political legitimacy rests on its developmental ability.

The fourth typology is political but it cannot be understood from the opposing categories of politics and economy, city and suburbs, civic monuments and private housing and its analogous manifestations in the delineation of a legible, definable core in contraposition to an expansive territory. It acquires a political agency if it is understood as a common framework that enables an inclusive process of change and transformation. Here, the model of agonism is again useful to conceive of the relation between the sovereign and the subject, as one that maintains its bipolarity but does not seek to confront and displace the other; it seeks instead to achieve an equilibrium and balance, albeit in constant transformation and alternation. Thus, for this common framework to function, it must be a shared knowledge that is based on rationality, as informed by the example of Durand. The deep structure of the dominant type, as much as it can be appropriated by the state, can also be appropriated by its other. It is a medium, a recognizable framework for negotiation and cooperation – a social contract. The awareness of this form of efficacious pragmatism is not solely to enable the operativity of praxis; as a matter of fact, I argue that the ability to detect, describe, analyze and theorize the dominant type is the first step in surpassing it, which involves a choice and decision upon the closure of analysis.

Thus, to understand the deep structure of the dominant types, is a response to a totality of architecture tied to its role in the discursive idea of the city. It centres on the conception of

the dominant type as a common framework - an architecture that enables and embodies the idea of the city as a space of agonistic pluralism; and as a common knowledge for comprehension and cooperation; as the fourth typology.

1 THE IDEA OF TYPE

1. Introduction

The idea of *type* is most instrumental to theorists and architects when it is used as a heuristic device to uncover the very essence of architecture and its role in the wider context in which it is produced. This discussion as to definition and treatment of the idea of *type* will begin in the eighteenth century with Antoine Chrysostôme Quatremère de Quincy (1755-1849), who explicitly and formally introduced the idea of *type* into architectural theory, in a context where speculations on the origins of architecture were commonplace. I will then proceed to cover writings by architects and theorist who have raised or recuperated the idea of *type* explicitly and in the manner consistent with Quatremère[1]. The choice is again focused on the instrumentality of *type* as a heuristic device, but this time with the focus on the city as exemplified by Aldo Rossi's 'structure of permanence' and Giulio Carlo Argan's 'precedents and continuity' in design. The goal of this chapter is to show how *type* can be seen as a heuristic device that allowed each generation of architects and theorists to revalidate the role of architecture within society by searching and defining what is the idea of *type*, that is, what is the ideal that is common to all that will act as the principles for which architecture is produced. This task was well suited for the discursive nature of *type*, for it is at once vague and precise; vague in that it alludes to perfection and the ideal in the metaphysical realm of ideas and precise in its application to the expressive qualities or character of different comparable building types.

To locate and uncover the concepts associated with *type*,

1 Hence this will not include works that touch upon issues associated with typology indirectly, those that conflate the idea of type with function, formal variation and morphology, i.e., Nikolaus Pevsner, Rob and Leon Krier, Saverio Muratori, Colin Rowe and Mathias Ungers. Le Corbusier's coupling of the ideal perfection of classicism and standardization of industrial production will be discussed in Chapter 3 for it does not explicitly refer to the word type, although it is related to Quatremère's conception of architecture as embodying the ideal and having to respond to societal needs.

this chapter will delve into the definition of the words, followed by the concepts and theories tied to Quatremère's entry in the *Dictionnaire historique d'architecture* (1784-85). This includes Type, Idea, Rule, Character and his theory of Imitation and Origins. Besides the *Dictionnaire historique d'architecture,* Quatremère's theoretical output can be approached from his essays. The three most important essays are *'An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts'* (1837), his prize winning essay on Egyptian Architecture which was sponsored by the *Académie Royale des Inscriptions et Belles-Lettres* and referred to as the *Prix Caylus* essay of 1785. This second essay was eventually updated and revised to form the *De l'architecture égyptienne* essay of 1803.

Quatremère's *Dictionnaire for the Encyclopédie Méthodique* was commissioned by Charles J. Panckoucke and remains one of the most thorough works to date in the French language to frame the widest theoretical scope for architecture and fine arts. It offers a Platonic discourse on the idea of type while Durand's *Parallèle* offers an operative understanding of typology[2]. Unlike any contemporary dictionary, these dictionaries were veritable encyclopaedias, where each entry is an essay on the etymology of the word, and is of theoretical, historical and practical concern. Unlike the treatise, its main ambition is to lay the etymological foundations whilst engaging in current debate. The arguments are not arranged systematically but alphabetically. It is a format that is very accessible but suffers from a systematic sequence of argument. As such, Quatremère's overall theoretical ambitions and goals, situated within the debate current in his time, are not immediately obvious if his work is approached from the entries in the encyclopedia as, unlike his essays, they do not hold a coherent and uninterrupted argument. To overcome this, I will begin with Quatremère's definition of *type* to outline the related words and

2 Younés, S., *The Historical Dictionary of Architecture of Quatremère de Quincy* (London: Andreas Papadakis Publisher, 1999), p.10

concepts embedded in his classic definition. From this, his theory of Origins and Imitation will be discussed to underpin his entire theoretical project. Following which, a detailed analysis of the concepts, tied to the various words, and tied to the idea of type outlined above will be carried out. Through this, Quatremère's ambition and goals, pursued through his idea of *type* will be discussed, centred on his efforts in verifying and revalidating the supremacy of Greek architecture. An important consequence of this effort contributed to Quatremère's formulation of architecture as language[3] and its manifestation in classicism. It is a formulation that required an architecture that was conceived through abstraction, required the workings of a rational mind, and exquisite taste and balance. Such an architecture, for Quatremère, was to find its deserving counterpart in the enlightened society of the Revolution - architecture as an allegory that speaks of a higher intellect.

2. Quatremère de Quincy and the *Dictionnaire historique d'architecture*

Antoine Chrysostôme Quatremère de Quincy was born in 1755 to a family of Parisian merchants. He first studied law in honour of his father's wishes but soon developed an interest in arts, particularly in classical antiquity. He spent years in Italy, sought the acquaintance of Piranesi, and returned to Paris in 1784, having

3 This was Sylvia Lavin's main thesis in *'Quatremère de Quincy and the invention of a modern language of architecture.'* (1992). Lavin's thesis was a detailed elaboration of the framework and propositions already outlined by Anthony Vidler in his 'From the Hut to the Temple: Quatremère de Quincy and the Idea of Type' in Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), pp. 147-64. Quatremère's conception of architecture as language has also been proposed earlier by Peter Collins in *Changing Ideals in Modern Architecture 1750-1950* (London: Faber and Faber, 1965), pp.174. All three authors cited Quatremère's *Prix Caylus* essay of 1785 as the essay that contained this proposition.

given up his dreams of becoming an artist. Above all, Quatremère was an academician. He was the Permanent Secretary of the *Académie des Beaux-Arts* from 1816-1839. Depending on which period of his professional life is emphasized, Quatremère still appears as he did to his contemporaries: a wild-eyed reformer in the early 1790s, a reactionary member of the old guard in the 1830s (Fig. 1.1 and Fig. 1.2).[4]

The *Dictionnaire historique d'architecture* can be seen as the theoretical culmination of Quatremère's reflection on nature in the process of artistic creation, both in art and architecture; on the relationship between the principles which are the source of nature's rules; and the possibility of invention through imitation within the tradition of art and architecture. Because of this, the *Dictionnaire* is the source from which thinkers stake out their position. Quatremère's artistic theory can be broken down into three principal categories; the first questions the nature of invention and genius and is argued through his theory of imitation; the second touches upon the artist's intellectual freedom and the autonomy of different arts; and the third concerns itself with the role and instrumentality of history in the process of renewal within a tradition. Quatremère affirmed his view of art based, for two decades, from 1780–1840, on Platonic metaphysics. According to this view, the relationship between the idea and image, or what is thought and seen can be understood in three categories: that there are things that are seen and thought, things that are seen but not thought, and things that are thought but not seen. The third category is also known as Platonic Forms - that is, a paradigm that sensible objects imitate, although they do so imperfectly and incompletely.[5] For Quatremère, the Form of

4 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.6.

5 For example, to see if an act is just, one looks to the 'form' of justice, or to acquire knowledge, one looks to the 'form' of education. Plato also refers to this as the realm of truth, the apprehension of intelligible forms which can only be achieved through reason. See *Republic*

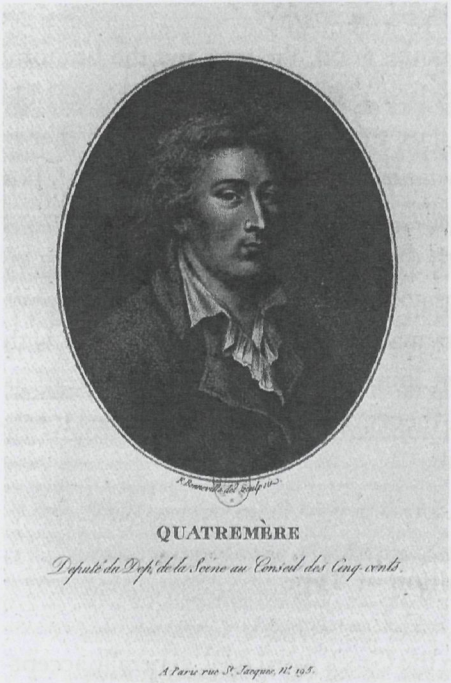

Fig. 1.1 Portrait of Quatremère de Quincy (1797)



Fig. 1.2 J. Boilly, portrait of Quatremere de Quincy (1820)

Forms, or what constitutes the good, the true and the beautiful is nature, considered in her laws and existing both in the sensible and non-sensible realms. For this reason, Quatremère's theory can be understood as a metaphysical theory of architecture[6]. For every entry in the *Dictionnaire historique d'architecture,* Quatremère will customarily begin with the definition and the etymology of a word, from this he forms concepts and from there on a theory. As a whole it sets out a framework for an aesthetic system, with architecture as the highest imitative art and should be read as a treatise on architectural theory, more for the principles it sets forth than its factual details.

3. Quatremère's Definition of Type

The word *type* derives from the Greek word *typos*, generally accepted to mean 'model, matrix, impression, mould, figure in relief or in bas-relief'. He makes a distinction between this etymology of the word in Greek to its meaning more as varying projections in the act of sculpting or molding, and the more metaphorical and less technical meaning in French. And he defines type as such:

> *'The word type presents less the image of a thing to copy or imitate completely, than the idea of an element which must itself serve as a rule for the model.'[7] (emphasis mine).*

476b.

6 Quatremère's theory can be characterized as being both a polemic and a system. It is a polemic as it opposes or corroborates with other doctrines, notably Quatremère sought to steer architecture away from the scientific and Cartesian preoccupations of Durand and the poly-technicians, first instituted by Claude Perrault. It is a system because it mainly concerns the realm of ideas which the very source of rules and principles that governs conventions and practice. And it is also a system as it aims at providing a broad conception of fine arts and architecture with relation to aesthetics. See, Younés, S., *The Historical Dictionary of Architecture of Quatremère de Quincy* (London: Andreas Papadakis Publisher, 1999), p.11.

7 Quatremère de Quincy's 'Type' in *The Historical Dictionary of Architecture* (London: Papadakis Publisher, 2000), p.254.

To fully appreciate this definition of *type*, an understanding of other key concepts associated with the words that Quatremère has used in this sentence will be crucial. The highlighted words and phrases above draw on three further concepts and theories. 'Copy or imitate' points to Quatremère's most important theory - the theory of Imitation. 'Image' and 'Idea of an element' refers to Quatremère's Platonic concept of Idea/Ideal in the design arts. 'Rule' for Quatremère refers to the necessary guides in the design arts that result from principles. These will be discussed in detail below. Having stressed that *type* is an element that carries an idea for imitation, he draws the distinction between type and model:

> *'Thus, one will not say – or at least it would be wrong to say – that a statue, a composition of a finished painting, has served as a type for the copy that was made of it; but rather one fragment, one esquisse, one thought of a master, one more or less vague description, gave birth to a work of art within an artist's imagination, whose type was supplied by such and such idea, such and such motif, or such and such intention. The model, understood in the sense of practical execution, is an object that should be repeated as it is; contrariwise, the type is an object after which each artist can conceive works that bear no resemblance to each other. All is precise and given when it comes to the model, while all is more or less vague when it comes to the type. Concomitantly, we see that there is nothing in the imitation of types that sensibility and the mind cannot recognize, and nothing that cannot be contested by prejudice and ignorance. This is what happened for example in architecture*[8]*. (emphasis mine)*

This distinction between type and model and Quatremère's promulgation of the former is crucial not only in conformity to

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8 Quatremère de Quincy's 'Type' in *The Historical Dictionary of Architecture* (London: Papadakis Publisher, 2000), p.255

his theory of Imitation but also draws on one of his concept of 'Character'. Together, his theory of Imitation and Character were instrumental in his efforts to introduce an epigenetic version of the origins of architecture and at the same time revalidate the supremacy and thereby the relevance of classicism for his time. This I will also discuss in detail below in 'Origin', 'Type and Model' and 'Character'.

4. Origins

Vidler, in introducing Quatremère's notion of Type in his article *'The Idea of Type: The Transformation of the Academic Ideal: 1750-1830', Oppositions, 8* (1977) drew a parallel between the efforts in architecture and that in other disciples in their search for first principles during the Age of Enlightenment.[9] This search centred on the primitive hut as the first type of inhabitation as well as something that embodied the first principles of architecture. The definition of type is central to this formulation of the response to determine the origins of architecture. It is a logical combination of Laugier's idea of origins and the notion of characteristic forms, with reference to both classical traditions and the newly adopted terminology in the natural sciences.[10] Following this, type had the omnibus meaning of concept, essential form, and building type. It is an idea that was both vague and precise at the same time - vague in its allusion to the natural beauty that resides in the metaphysical realm of ideas, and precise in its application to the expressive qualities or character of different building types.

9 'The search for the origins of architecture was for the Enlightenment architect tantamount to the discovery of the true principles of his art. Like Newton in science, like Locke in philosophy, like Rousseau in anthropology, the architect-*philosophe* looked at the beginnings of shelter as the first mark of type of inhabitation, the root and thereby the simple natural principle of all architecture.'

10 Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.147

Before Quatremère's entry in the *Dictionnaire historique d'architecture* (1784-85), the word type retained the overtones of archaism and religious mysticism which was inherited from its usage in the bible. Type is also often used by antiquarians, historians and biblical scholars to describe religious symbolism. Neoplatonism contributed the notion of type to aesthetic beauty in their revived interest in antiquity, exemplified by Winckelmann's use of this word in *'... a type of beauty in the female figure.'* in his *'Reflections on the Imitation of the Greeks in Painting and Sculpture'* (1755). Thus, Quatremère as a student of sculpture in the 1780s should have been familiar with these usages, which found a way into his own definition and conception of the idea of type.[11]

The genesis of the idea of type was tied to the problem of the models of origin or the first cause for architecture. Thus, the idea of type entered architectural theory both as symbolic figure and aesthetic ideal. This search can be exemplified for instance with Ribart de Chamoust's position on the design and development of a French order, a task that fuelled an earlier debate involving, among others, François Blondel, Claude Perrault and Antoine Desgodets.[12] The conventional theory of imitation that Ribart followed, stipulated the selection of a type as a composite of nature's ideal beauties - a standard perfection rather than a particular example. The imitation of this *la belle* nature was to ensure perfection in art. Thus, it is nature that provides this type. Crucially, Ribart's type is not nature itself but one step away from it.

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11 For a more detailed account of the genesis of the word type pre-Quatremère, refer to Vidler, Anthony, 'The Aesthetic of History: Winckelmann and the Greek Ideal' and 'From the Hut to the Temple: Quatremère de Quincy and the Idea of Type', in *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), pp. 125-164 and Vidler, Anthony, 'The Idea of Type: The Transformation of the Academic Ideal: 1750-1830', *Oppositions*, 8 (1977), p.93-115

12 Vidler, Anthony, 'From the Hut to the Temple: Quatremère de Quincy and the Idea of Type', in *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.149

Quatremère's attempt in this search can be traced to the theories of Marc-Antoine Laugier. He attributed to the *cabane*, or primitive hut, the character of a fundamental principle of architecture. The *cabane* can be considered an antecedent to Quatremère's *type*. Quatremère in fact acknowledged the importance of Laugier by inserting an entry '*cabane*' in the first of his three volumes of *Encyclopédie Méthodique*, published between 1788 and 1825. Laugier's idea of the primitive hut was expounded in his *'Essay on Architecture'* in 1755, an essay in reaction to the excesses of Baroque and Rococo.[13] It was also written as an attempt to return to the origins of architecture, and to rediscover the fundamental principles of architecture in the primitive hut. Like other classicist theorists, Laugier thought that architecture like art is an imitation of nature and sought a path back to natural origins.

The primitive hut for Laugier carries the character of a fundamental principle of architecture, founded in nature. It is a *'rough sketch that nature offers us'* and he accounts for its origin as follows:

> *'It is the same in architecture as in all other arts; its principles are founded on simple nature, and nature's process clearly indicates its rules. Let us look at man in his primitive state without any aid or guidance other than his natural instincts. He is in need of a place to rest. On the banks of a quietly flowing brook he notices a stretch of grass; its fresh greenness is pleasing to his eyes, its tender down invites him; he is drawn there and, stretched out at leisure on this*

13 *'Many monuments around us (in France) are witness to the fact that our forefathers eagerly and successfully completed. We have had our Bramantes, our Michelangelos, our Vignolas. The last century produced masterpieces in architecture worthy of the best ages because at that time nature almost spent itself by lavishing upon us a gift of talent. But at the very moment when we were approaching perfection, as if barbarism had not lost all its claim on us, we fall back into a low and faulty taste. Everything now seems to threaten us with a complete decadence.'* Laugier, Marc-Antoine, *An Essay on Architecture*, trans. by Wolfgang and Anni Herrmann (LosAngeles: Hennessey & Ingalls, 1977), p.9

sparkling carpet, he thinks of nothing else but enjoying the gift of nature; he lacks nothing, he does not wish for anything. But soon the scorching heat of the sun forces him to look for shelter. A nearby forest draws him to its cooling shade; he runs to find a refuge in its depth, and there he is content. But suddenly mists are rising, swirling round and growing denser, until thick clouds cover the skies; soon, torrential rain pours down on this delightful forest. The savage, in his leafy shelter, does not know how to protect himself from the uncomfortable damp that penetrates everywhere; he creeps into a nearby cave and, finding it dry, he praises himself for his discovery. But soon the darkness and foul air surrounding him make his stay unbearable again. He leaves and is resolved to make good by his ingenuity the careless neglect of nature. He wants to make himself a dwelling that protects but does not bury him. Some fallen branches in the forest are the right material for his purpose; he chooses four of the strongest, raises them upright and arranges them in a square; across their top he lays four other branches; on these he hoists from two sides yet another row of branches which, inclining towards each other, meet at their highest point. He then covers this kind of roof with leaves so closely packed that neither sun nor rain can penetrate. Thus, man is housed.[14]

From this description, it is clear that both the thick forest and the cave as found, without the 'ingenuity' of man are insufficient as a model for architecture. It is the combination of both the natural principles of nature and the mind of man that produced the first model for architecture (Fig. 1.3). For Laugier,

'Such is the course of simple nature, by imitating the natural process, art was born. All the splendors of architecture ever conceived have been modeled on the little hut I have just described. It

14 Laugier, Marc-Antoine, *An Essay on Architecture*, trans. by Wolfgang and Anni Herrmann (LosAngeles: Hennessey & Ingalls, 1977), p.11-12.



Fig. 1.3 Frontispiece of Marc-Antoine Laugier: Essai sur l'architecture 2nd ed. 1755 by Charles Eisen (1720-1778)

is by approaching the simplicity of the first model that fundamental mistakes are avoided and true perfection is achieved.[15]

Not only architecture imitates nature but the very fundamental element of architecture is provided by nature. Laugier adds,

The pieces of wood set upright have given us the idea of the column, the pieces placed horizontally on top of them the idea of the entablature, the inclining pieces forming the roof the idea of the pediment. That is what all masters of art have recognized.[16]

Besides offering the elements of architecture, this simple rustic hut of Laugier acts as an ethical marker against the decadence of architecture as he sees it.

Let us never lose sight of our little rustic hut. I can only see columns, a ceiling or entablature and a pointed roof forming at both ends what is called a pediment. So far there is no vault, still less an arch, no pedestals, no attic, not even a door or a window. I therefore come to this conclusion: in an architectural Order on the column, the entablature and the pediment may form an essential part of its composition. If each of these parts is suitably placed and suitably formed, nothing else need be added to make the work perfect.[17]

As pointed out by Leandro Madrazo, various scholars have read Laugier's hut differently, Peter Collins takes the primitive huts as rational constructions[18], and Tom Heath even attributes Laugier

15 Laugier, Marc-Antoine, *An Essay on Architecture*, trans. by Wolfgang and Anni Herrmann (LosAngeles: Hennessey & Ingalls, 1977), p.12

16 Ibid., p.12

17 Ibid., p.12-13

18 Collins, Peter, *Changing Ideals in Modern Architecture* 1750-1950 (London: Faber and Faber, 1965), p.29

as the father of 'structural rationalism', considering construction as a rational act[19]. Wolfgang Herrmann takes the primitive hut as embodying both a concrete example and an idea; whilst John Summerson understands it as a 'symbolic diagram', and Joseph Rykwert, a *'notionally primitive (...) demonstration of a priori reasoning ...'*, that is to say an idea.[20] A more balanced reading of Laugier's primitive hut that relates more closely to Quatremère's type is to take it as a unity between the physical and conceptual structure of a building. That the primitive hut demonstrates that sensible form should conform to the idea of conceptual form, and this conceptual form is the primitive hut. This reading can be supported by Laugier invoking the act of imitation in describing the genesis of the primitive hut. What is crucial to the debate of origin is that Laugier puts forth a monogenesis account that explains the Greek temple as the original architecture bestowed on man by nature, a product of beauty that resides both in nature and in the mind.

Quatremère's account for the origins of architecture can be found in his entry for *'Architecture'* in the *Encyclopédie Méthodique d'architecture* (1788) and *Dictionnaire historique d'architecture* (1784-85). However, this account rose out of an earlier essay on Egyptian architecture, known as the *Prix Caylus* essay. Sponsored by the *Académie Royale des Inscriptions et Belles-Lettres*, Quatremère's prize-winning essay was written when he was thirty years old, in 1785. It formed the basis of his later essay *De l'architecture égyptienne* of 1803.[21] The prize was set up in 1754 by Comte de Caylus, a yearly prize in support of the study of antiquities. The topic of that year was to account for an empirical knowledge of Egypt, in a climate

19 Heath, Tom, *Method in Architecture* (London: John Wiley & Sons Ltd., 1984), p.29

20 Madrazo, Leandro. 'The Concept of Type in Architecture: An Inquiry into the Nature of Architectural Form' (unpublished PhD thesis, Eidgenössische Technische Hochschule Zürich, 1995), p.175

21 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.6.

where the study of Egypt was becoming increasingly empirical and less mythical with a growing realization that the Egyptian civilization was more ancient than that of the Jews[22]. The essay was titled *'What was the state of architecture among the Egyptians and what does it appear the Greeks borrowed from them'*. To ask the question about Egypt then was to ultimately ask a question about the origins and nature of man. This interest in Egypt was taking over the staple interest in Greece, to the point at which they were asking what did the Greeks borrowed from the Egyptians. And to ask this is to fundamentally challenge not only the hegemony of Greek architecture but the foundations of its civilization.

The issue of the primitive hut became a major theme in Quatremère's thought, and was centred on the doctrine of art as imitation of nature. He begins by making a distinction between the art of building and the art of architecture, the former is independent of time, place and people, whilst the latter is only attained by few and is a product of civilizations:

> *'If the art of building is considered with respect to the science of architecture, it is nothing other than construction... If one considers it with respect to need, it belongs to all time and to all countries; but the art of architecture, that is to say the art par excellence, according to the etymology of the Greek word far from being common to all time and all people is, on the contrary, reserved for some privileged periods and countries; one must define it as we have as the art of building following the proportions and rules determined and fixed by nature and taste. The art of building is found even among the savage people; the art of architecture, on the contrary, can only be the fruit of societies that have been most perfected by civilization, by all moral causes and with the collaboration of all the other arts.* [23]

22 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.12

23 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.27

With the increasing archaeological evidence of Egyptian civilization and empirical evidence of it predating the Greeks[24], architecture's monogenesis became increasingly difficult to sustain. Quatremère's distinct contribution to this conundrum was that he managed to sustain the theory of origins by replacing its monogenetic account with an epigenetic one. He achieved this by proposing three primitive models, in place of Laugier's single primitive hut. The first models according to Quatremère always arose out of the place, or the '*distinct states that nature seems to have given to man*', which includes climate, production of the country, lifestyles of inhabitants and through necessity:

> *'We lack, without doubt, the actual means to carry out similar research with exactitude, especially among people separated from us by the immense interval of centuries and the distance of places. It would be necessary to understand in a much more positive way than we presently can the different kinds of climate, their diverse productions, the precise location of the first societies that established nations, their origin, their number, their life style, their physical position, their first social institutions, and an infinity of other causes would allow us to understand why the art of building took on in each case one form rather than another. We can nevertheless refer the general differences that one apprehends in the architecture of different peoples of the earth, to the three very distinct states that nature seems to have given to man; at least it is certain that these states must have necessarily exerted some influence on the first dwellings of natural life, which, in all countries, have served as models for architecture.* [25]

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24 For a more detailed account on Architectural Egyptology in the eighteenth century, see Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.32-41.

25 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.27

Quatremère's three primitive models are the cave, tent and hut, arising out of the above conditions and tied intimately to ways in which people sustained themselves through hunting, shepherding and agriculture: '... *according to their different positions, hunters, shepherds, or farmers. The first dwellings that were associated with these three kinds of occupation could but reflect their requirements and bear very different characteristics.* [26] He elaborates that the hunting people, including fishermen, had no initial need to build houses and found it sufficient to hollow out dwellings in the rocks that nature offered. The shepherds, due to their nomadic nature and itinerant lives, resorted to tents; but for those who farmed, led both a sedentary and active life that required them to build firmer and more solid buildings.[27] Thus, the three types, cave, hut and tent, owed their origins not to divine causes but to the essential nature of primitive societies, a shift from Laugier's account of the primitive hut. It depended on primarily environmental conditions such as climate, availability of natural materials and the profile of local terrain.

The criteria that made the hut superior to the cave and tent is the rationality and abstraction offered by carpentry in the transposition from the hut to the temple, and from wood to stone construction; in other words, from primitive dwelling to architecture. Quatremère's arguments were as follows:

> *'Carpentry served as a model to Greek architecture; and one must admit that of the three models that nature can present to the art, carpentry is without doubt the most perfect and finest of all (...)*

26 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.28

27 *'The hunting peoples (which includes the fish eaters) for a long time would not have needed to build houses. They found it more convenient to hollow out dwellings in the rocks or they profited from those dwellings nature offered them in her caverns. (...) The shepherd people, wandered ceaselessly in order to change pastures, thus leading an itinerant life. Hence the use of tents. (...) Agriculture, requires a life at once active and sedentary, it must induce men to build firmer and more solid buildings.'* - Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.28

underground constructions present to the art such an imposing and accomplished model that imitation dare not or cannot undertake anything further. There is too much to imitate for the tents. [28]

The cave offered nothing to imitate and the second model - the tent - is unsound and puerile. Carpentry on the other hand is both solid and light and it provided the arts with the greatest number of mouldings, modifications and ornaments, Quatremère would add, *'One could therefore assert, that without carpentry there would never have been in architecture a reasoned art.* [29] Quatremère reasoned that the transposition from timber to stone architecture, not only conserved the form of the former but allowed further richness to be added. The cave on the other hand offered nothing more to the architecture of the Egyptians as nothing can be imitated from imitating itself (stone construction imitating stone). Thus, Greek architecture is superior to the other two because it started with a superior model, the primitive hut - the cave is inferior to the hut for it lacks abstraction, the tent has too few elements to imitate. Here, Quatremère agreed with Vitruvius and Laugier that the only material for the primitive hut is wood, a material available in Greece. The determinant factor for the form of the primitive hut was carpentry – a rational system of construction for timber frame construction contained the principle of architecture - it produces forms, like nature, out of necessity, i.e., abacus to protect the column from humidity and as a base for beams, end of girders corresponds to the triglyph, and the stylobate to also protect the column from humidity. The material for the primitive hut thus cannot be stone as it is formless. Besides construction, proportion also played an important part in shaping the primitive hut. At some point the primitive hut reached a certain level of

28 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *911, 7* (1985), p.28

29 Ibid., p.29

perfection in proportion that could be used as a model to imitate. Therefore, the path from primitive hut to Greek Doric temple is the path from construction to architecture, requiring rationality and abstraction.

Quatremère's epigenetic account removed the problem of Egyptian civilization predating the Greeks and still maintained the theory of origins. He did this by attributing Greek architecture with rationality and abstraction that gives it superiority over Egyptian architecture. Quatremère's next task was to draw the relation between nature, society and architecture and to again assert the supremacy of the Greeks.

> *'Nature, without doubt, has not made the cabin, but Nature has directed man in his formation, and man, guided by an instinct, coarse if one wishes, but sure, and by a sentiment which in early times could not mislead, has transmitted to it the true impressions of Nature. The art cannot, and must not abandon this original imprint, considered as a mere trifle, since one believe oneself perfected by society, and yet so rare to recover in all respects (...). Yes, without doubt, it is the principles contained in the rustic hut which independently of all proofs of its existence, render it unshakeable, and make it triumph against any attack.*[30], *and 'If then architecture is an art of imitation, it is not by having conserved, in embellishing them, the grotesque forms that necessity imprinted on the dwellings of the first men; but it is because it imitates Nature in the laws (...). From that are derived the laws of proportion, always constant in their principles, always variable in their application, according to the nature of the buildings, of the point of view, of the character, of the purpose, of the customs, of the climates, of the needs of the people.*[31]

30 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.31-32.

31 Ibid., p.33

Thus it is man's rationality and capacity for abstraction that allowed nature's principles to be transposed into architecture. This stands in contrast to the idyllic account of nature as described by Laugier, who was ambivalent in the treatment of copying the material appearance of nature and the abstractions of its workings. Furthermore, Quatremère attributed the capacity for such endeavours to the social and political climate that men find themselves in, beyond the climates provided by nature:

> *'It is without doubt, only up to the Greeks to discern the degree of liberty which was agreeable to architecture, and gave to it this happy constitution, equally far from the license of Asia and the despotism of Egypt. But this judicious temperament must be the fruit of the fortunate coming together of the best moral and physical causes; and the perfection of this art must depend on the perfection of people who invented it.'*[32]

Here, Quatremère stressed the distinction between primitive building and the art of architecture made on the basis of social structure rather than on technical means and aesthetics. By looking at the architecture of ancient Egypt, Quatremère was able not only to reestablish the primacy of Greek architecture but to introduce rationality, freedom and liberty to account for its excellence and its validity for his time. Through this, Quatremère was voicing an opinion, common among his contemporaries, on the need to sever the ties between the arts and monarchy, and to free the artist from the patronage of monarchs. Egypt thus was used as a negative example in both the *Prix Caylus* essay and in his entry 'Architecture' to highlight the social and political structures that ossified alongside its arts and architecture; a cradle of civilization that remained monolithic and where the lack of progress in its

32 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.32

arts was attributed to the controls of kings and priests. Greece on the other hand owed its artistic achievements to its system of government that guaranteed the freedom of its citizens. Thus according to Tanis Hinchcliffe,

> *'This meant that the basis of their (Greek) art no longer depended only upon socially accepted custom, but upon a reality beyond society, which was incorruptible because it was ideal. To transcend the stronghold that the French social system had over its artists and architects, a similar imitation was needed so that the 'rules' of art would no longer be determined by a small coterie, but would be open to anyone with the wit and intelligence to perceive the rules of nature.* [33]

Sylvia Lavin on the other hand attributes the importance of Quatremère's *Prix Caylus* essay to the way in which it enabled Quatremère to conceive of architecture as a language, underpinned by the virtue of abstraction in his theory of imitation. In so doing, Quatremère was to reestablish the primacy and validity of classicism as the language of architecture for the Enlightenment. This I will discuss further under the heading of 'Language'.

Returning to the idea of type, towards the end of his entry 'Architecture', Quatremère concludes, *'The rules architecture gives itself, are posed on a double base: that of the positive imitation of the types, and that of the imitation of Nature's ideal.*[34] It is clear that the formulation of type as the three 'original dwellings' or 'primitive models' and its embodiment of an 'ideal', with his theory of Imitation as foundation, allowed Quatremère to address the problem of origin, current in his time and to hold an implicit political and societal agenda.

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33 Quatremère de Quincy, Antoine Chrysôthome, in Tanis Hinchcliffe, 'Extracts from the Encyclopédie méthodique d'architecture', *9H, 7* (1985), p.26

34 Ibid., p.33

5. Imitation

The theory of imitation is central to Quatremère's formulation of the idea of type to stress the role of man, rather than the divine, in the creation of architecture. It also emphasized the rationality and ability of the mind for abstraction. In his entry for 'Imitation' in *Dictionnaire historique d'architecture*, Quatremère begins by positing nature as the source for all arts of imitation:

> *'Each art has in nature a general model common to all the arts, and a model that is particular to it. To consider nature in the universality of her laws suggests that their imitation belongs to all the arts. Consequently, there are rules for imitation to which each art is subject, if not in the same manner, then at least to the same degree. Similarly, there is a universal grammar common to all languages, and a grammar which is particular to every dialect.* [35]

However Quatremère immediately points out that nature understood here, is not one that is confined solely to its appearance: '... *when nature is said to be the model for all the fine arts, one must be guarded from restricting the idea of nature to that which is evident and material.* [36] Instead, imitation involves the adoption of the rules that govern nature. This is clearest when Quatremère elaborates that to imitate is not to make the image of, or to produce the resemblance of a thing, a body or a given work; it is not to imitate the work but to imitate the artificer. Thus one imitates nature by making as she makes, that is, '... *not by repeating her work properly speaking, but by appropriating the principles that served as a rule for this work, in other words, her spirit, her intentions and her laws.* [37] The artist, therefore,

35 Quatremère de Quincy, Antoine Chrysôthome, entry 'Imitation' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.175

36 Ibid., p.175

37 Ibid., p.176

distils nature into a system, through close observation of nature's causes, organizing systems, general traits and relations. And the laws of nature for Quatremère constitute the ideal. This will be elaborated in the section of 'Idea and Ideal' below.

In the context where Quatremère formulated his theory of imitation, architecture was not conventionally included in the imitative arts, for architecture had no direct model to imitate from in nature. For instance, a statue draws its resemblance from the study of a human body. Architecture could not imitate any object of nature. Quatremère proposed two manners of imitation in architecture that grant it the right to be included in the arts of imitation. The first is the sort of imitation that every art of building makes from elements of primitive construction. But once this process is perfected, the artist forfeits his own authorship. For instance, the artist who composed the monuments in Greek architecture from the construction system of the primitive hut and transposed it into stone is the original imitator. But subsequent imitation of this model is no longer deemed an act proper to the arts of imitation. Thus Quatremère makes clear that the first transposition from the primitive hut to the temple was an act of imitation proper but from there on, the stone temple cannot be further imitated. In comparison, Laugier argued for the replacement of imitation of ancient styles with the imitation of the primitive hut. For Laugier, the hut was the vehicle for the return to nature, it was a model of natural simplicity. In contrast, Quatremère refutes that the primitive hut was a natural model and contends that however real or fictitious it may be, the primitive hut was itself already a work of art. The primitive hut for Quatremère was irreproducible whilst for Laugier it was.

Now that the first manner has ceased to be instrumental, Quatremère gives attention to the second manner of imitation that stresses the importance of abstraction, especially in architecture, and of imitating the principles rather than the resemblance by

stating,

> *'But the imitation that is truly proper to architecture – which like the other arts rests on nature – being less direct, is no less real, only its principle is more abstract. Because it is through the imitation of causes that art imitates the effect of nature, and reproduces her impressions. The architect imitates nature when, in the creation that are dependent on his art, he follows and render sensible to our eyes and minds, the system of harmony, of the whole, of reason and truth, which nature reveals as a model in all her works.* [38]

So how does architecture imitate nature? Quatremère answers this by distinguishing two ways of considering nature, its details and the whole. At the level of details, an artist can only produce parts of the ideal - that is representing a man instead of man, and building instead of architecture. This would mean that imitation should involve the weeding out of the contingent from the essential. This is particularly pertinent in the context that Quatremère was working in, where with the rise of relativism, the contingent was given more priority than the essential. Thus the reemphasis of the essential, reminds one of what ought to be, rather than what is. In other words, the call to reach for the ideal. With regard to considering the whole, Quatremère maintained that imitation does not necessarily depend on the physical tangibility of that model to become real (as the empiricists contend). As stated, architecture, unlike other arts has no direct model to imitate in nature that can be concretely taken as origin. Origin is not the same as beginning, or precedent, and for Quatremère, the primitive hut is a beginning and not the origin of architecture. The primitive hut is fictive because a certain distance has to be

38 Quatremère de Quincy, Antoine Chrysôthome, entry 'Imitation' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.176

traversed between the fictive primitive hut and architecture, and it must be understood as a metaphor and not as a material object. If Laugier's primitive hut is to be taken as a literal structural and material model, it would have been reproduced endlessly and the columns would remain tress. Therefore in Quatremère's theory of imitation, architecture imitates nature's laws and not its appearance. To support this, Quatremère gave an account of the way the Greeks perfected this theory of imitation through the development of its statues for commemoration. He states that the Greeks started, like the Egyptians, with the veneration of divine images and idolatry figures. This was then replaced by a practice that included mortals in the statues. This practice of raising statues to victorious athletes found its natural model in the stadium and gymnasium, where the representation of the human body could be effectively studied. Since this act of imitation was no longer constrained by religious consecrated forms, the task of imitating nature and rivaling it became more pronounced. Finally, this process of imitation was further perfected when gods were depicted in the likeness of man but with the perfection that eludes man. This is how Quatremère accounts for the way in which the imitation of nature in the arts of design among the Greeks was formed, expanded and perfected.

From this development of the theory of imitation in the arts, Quatremère proceeds to include architecture by first explaining architecture's proximity to the arts of design and subsequently describing architecture's imitation of nature in its orders. However, Quatremère's account of the orders differs from that of Vitruvius. In the first, Quatremère states that, *'As soon as the charm of imitation, founded on the causes of nature was felt in some parts, the need for this pleasure was communicated to other parts. And architecture, being so closely linked to the arts of design, could not remain a stranger to such an influence.*[89] Next, to distinguish between the copy of a model in

39 Quatremère de Quincy, Antoine Chrysôthome, entry 'Imitation' in *The True, the Fictive and*

its most material manifestation and imitation as an abstraction of the principles of nature, Quatremère states that his brief history of imitation bestowed Greek architecture with the principle of reason, of truth and harmony that had a *'powerful analogy which adopted a system of proportions that was no longer based on arbitrary and variable elements, but rather on the assimilations of the systems that nature applies in the organization of living beings'*[40]. Furthermore, this system of proportions which was clearly realized as an imitation of the human body, like the practice of imitation in statues, allowed Quatremère to rank architecture among the fine arts. However, Quatremère points out that there is a difference between claiming the existence of a rigorous relationship between the orders of architecture and the human body, as Vitruvius does, and his explanation of the ability of the eye to discern the variety of characters and differences in form, qualities like *'strength, lightness, power, etc.'* that allows an analogical correspondence between the orders and nature. Thus for Quatremère, what art and architecture imitate does not reside in the material model but in the realm of the ideal.[41]

Quatremère also draws an important distinction between the word imitation and copy. For him, to copy is to *'reproduce an object without adding anything to it, but also when he servilely reproduces another's manner of doing and composing'*[42]. Imitation is clearly understood as the opposite of copy. This distinction is made clearer in his 'An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts' (1837). He clarifies this by drawing upon the word

the Real: The Historical Dictionary of Architecture of Quatremère De Quincy, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.177

40 Ibid., p.177

41 'The aim of this article (Imitation) has been to demonstrate the many different levels existing within the realm of imitation in the fine arts, and to prove that it is erroneous to give the name of art of imitation to that which only has a positive and material model in physical nature.' Quatremère de Quincy, Antoine Chrysôthome, *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.178

42 Ibid., p.178

resemblance. For him, resemblance is a necessary condition of imitation but it is an error to confound resemblance by means of an image in the fine arts and similarity by means of identity in the mechanical arts.[43] Exact resemblance can never exist. In nature there are no two leaves that are exactly alike. Even in the mechanical arts, there are small differences. So there can only ever be an approximate resemblance, and the resemblance that is created by imitation is one that '*... does not repeat the object in reality, but only by an image.*'[44] This image, since it is not the representation of reality is for Quatremère the idea. This is how he arrived at making the words image and idea synonymous,

> '*... an image is nothing more nor less than an appearance of the object represented. There is, between the object and its appearance, all the difference that separates that which truly is from that which only appears to be: and the same may also be applied to resemblance, since that which belongs to the image is nothing else than an appearance of resemblance.*'[45]

For Quatremère, imitation is not identical repetition as it does not reproduce real resemblance of the object. The image as a product of imitation furnishes only an incomplete resemblance of the object imitated. Thus imitative resemblance compels us to see one object in another. The merit of such a resemblance is that it appeals not only to our senses but to our minds, as knowledge is required to discern between one object and another and one object in another. Therefore, architecture's imitation is analogical, as exemplified by the transformation from wood to stone construction. According to Quatremère, wood construction preceded stone and earth. He based this on the fact that

43 Quatremère de Quincy, Antoine Chrysôthome, *An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts*, trans. by J. C. Kent (London: Smith, Elder and Co., 1837), p.17

44 Ibid., p.18

45 Ibid., p.19

stone projections, cornices, dentils could only have received their forms from the imitation of another material, that is wood. He also raises carpentry to a rational construction system and claims that the success of the hut and therefore carpentry lies in the metaphorical transformation from wood to stone. Thus stone, the way it is used, carved and milled and stacked, is not inherent in its material property and it is thus fictive. In this acceptance of the fictive model, as stated by Younés, Quatremère appropriates Aristotelian artistic truth, in contradistinction to the factual and cognitive truth of historical genealogy. Thus architecture's imitation is analogical and not similitudinal and here Quatremère differs from Plato's understanding of truth. For Quatremère, there was the necessary step to transpose wood construction into stone, a distance that has to be travelled from the primitive hut to the Greek temple. Mimetic architecture was therefore not a natural phenomenon but an artificial invention. Abstraction was thus for Quatremère '... *the physical manifestation of reason and the metaphysical manifestation of man.*'[46]

The theory of imitation is also important to the way in which Quatremère conceives of architecture as language as argued by Lavin.[47] For Quatremère, '...*Greek architecture was parallel to nature not because it was naturalistic but because it was rational.*'[48] Architecture was imitative in that it was analogous to the processes of nature rather than due to looking like natural elements. Quatremère saw in the artificiality of Greek architecture not only a language of reason but a language of convention. Language was dependent on three forms of abstraction: its rational model, its artificial formal expression, and the conventional relationship between

46 Quatremère de Quincy, Antoine Chrysôthome, entry 'Imitation' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.113

47 Lavin, Sylvia, Quatremère de Quincy and the Invention of a Modern Language of Architecture (Cambridge, MA: MIT Press, 1992), p.102-113

48 Ibid., p.105

them. In social terms, the interaction of the three has two meanings, firstly, a social agreement that enabled communication that forms social bonds. Secondly, it gives a semantic dimension to language, an ability to carry abstract conceptions necessary for civilised societies. For Quatremère, Egyptian was a natural language and Greek was an artificial language because of the use of the hieroglyph for the former and the alphabet for the latter. As such, the Greek language is one that speaks of an idea of progress whilst the language of the hieroglyph is no longer alive. He reasoned that because artificial language was the product of reason rather than of instinct, its development reflected an advance in man's capacity for formulating ideas.[49] Following this, Quatremère drew this parallel,

> *The conventional and abstractly mimetic forms of ancient Greek architecture, on the other hand, could be structurally identified with artificial language – they could be deliberately written and they would be precisely read – and could thus enable architecture to fulfill its social function. The conventionality of Greek architecture gave it the moral content and social purpose of all intellectual and intelligible languages.* [50]

Quatremère's attempt to make classicism the architecture of the modern world did not rest on the authority of the ancients but in its ability to act as a universal language of architecture because of its superior moral and intellectual social development. It is not due to its efficacy as a communicative tool but because of its universal nature and the values it shares with that of the of the Enlightenment. At the heart of this is Quatremère's conception of type: that it must ultimately rest on the process of imitation -

49 Lavin, Sylvia, Quatremère de Quincy and the Invention of a Modern Language of Architecture (Cambridge, MA: MIT Press, 1992), p.122

50 Ibid., p.123

an artificer's act of abstraction.

6. Type and Model

Quatremère first used the word type in his *Prix Caylus* essay of 1785 on Egyptian architecture, where it was used almost synonymously with *model*.[51] Laugier and other materialist writers used the word 'models'. In 1825, Quatremère finally published his article on *type* for the third volume of the *Encyclopédie Méthodique*. From here on, type was synonymous with idea, as alluded to earlier by Winckelmann in his *'Reflections on the Imitation of the Greeks in Painting and Sculpture'* (1755), and the word *model* implies 'literal copy'. In the context that Quatremère writes, it refers to the endless primitive huts built according to Laugier's model in the landscape gardens of France, England and Germany. As pointed out by Vidler, *'Quatremère was no doubt attracted to the distinction between type and model following his preference for Greek over Latin etymologies, for "intellectual" rather than "common" usage.*[52] The etymology of the word type in Greek is, 'imprint of a blow, mark, character of writing'; and in Latin 'measure, manner, method, rule'; and in Italian *modello* is synonymous with the object of imitation. Quatremère draws this distinction to argue against the primitivist models, that is, columns must continue to look like trees and capitals like branches of trees. The difference between *type* and *model* is used to point out the folly of rejecting imitation, as to do so is to deny a metaphysical ideal in favour of materialism:

'They confuse the idea of type (the originating reason of a thing),

51 Vidler, Anthony, 'From the Hut to the Temple: Quatremère de Quincy and the Idea of Type', in *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.150

52 Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.152

which cannot command nor furnish the motif of the means of an exact similitude, with the idea of model (the complete thing), which compels formal resemblance. Since the type is not susceptible to that precision which is demonstrable by measures, they reject it as chimerical speculations. Thus, in abandoning architecture, without a regulating guide, to the vagueness of all the fantasies to which her forms and lines are susceptible, they reduce her to a game whose conditions are dictated by every individual. This resulted in the complete anarchy in the ensemble and the details of all compositions. [53]

Those who insist *'columns must continue to look like trees, and capitals like the branches of a tree.* [54] are for Quatremère, confusing *type* and *model.* He goes further to point out that this confusion not only leads to a creative vacuum but can also be simultaneously servile:

'Thus, in confounding the idea of type, the imaginative model, which will deprive the type of all its value, two adversaries, by opposing routes, agree on distorting the whole of architecture; the first by emptying it absolutely of any imitative system and freeing it from any rule, from any constraint; the other by chaining and repressing this art within the bonds of an imitative servility that would destroy both the feeling and the spirit if imitation. [55]

Quatremère also warned that confusing the model and type is equivalent to confusing imitation and copy as discussed above in his theory of Imitation. Obviously, copying produces the exact thing and cannot be considered as an artistic invention and worse, copying the model unguided by the rules and principles of type, will lead to complete anarchy. Thus type is a Platonic Form im-

53 Quatremère de Quincy's 'Type' in *The Historical Dictionary of Architecture* (London: Papadakis Publisher, 2000), p.256.

54 Ibid., p.256

55 Ibid., p.256

bued with limitless potentials from which different buildings can be derived. This is opposite to the model, as precise and fixed object, from which only exact copies can be made. Thus type resides in the realm of the True and model resides in the realm of the Real. As a matter of imitation, the process that inheres in type involves the intellect, whilst the model involves the senses:

> *'The model, understood in the sense of practical execution, is an object that should be repeated as it is; contrariwise, the type is an object after which each artist can conceive works that bear no resemblance to each other. All is precise and given when it comes to the model, while all is more or less vague when it comes to the type (...). Concomitantly, we see that there is nothing in the imitation of types that sensibility and the mind cannot recognize, and nothing that cannot be contested by prejudice and ignorance. This is what happened for example in architecture.* [56]

An example of the difference between what constitutes the real and the true can be explained by using Canaletto's capriccio of Venice depicting the Basilica and Palazzo Chiericati of Vicenza and a proposal for Ponte Rialto in Venice. Although the painting appears real, depicting the buildings of Palladio in their natural setting, it is not true. The point is not that the capriccio sets out to deceive, but that the true in this instance is the ideal or an ideal in which the process of creativity strives for (Fig. 1.4). Thus for Quatremère, type which relies on imitation, is figurative and illusory compared to the model which is the literal copy of what is real or material. As such, type is vague in the process of imitation, thereby allowing abstraction and transposition, whereas the model offers nothing but a precise, fixed result. Thus type,

56 Quatremère de Quincy, Antoine Chrysôthome, *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.255



Fig. 1.4 Canaletto, Capriccio Palladiano (1742)

	Type	Model
Artistic production	Imitation	Copy
	Figurative, illusory	Literal, real
	Vague	Fixed and precise
Knowledge	True	Real
Metaphysics	Platonic Form: for derivations	Sensible Form
	Involves the intellect	Involves the sense

Fig. 1.5 Type versus Model (by author)

following the platonic tradition, resides in the realm of platonic form or ideas and requires the intellect for its intellection. And model appeals more to the senses for it resides in the realm of sensible form (Fig. 1.5).

The gap between type and model is very important for Quatremère. When the two are collapsed, there is no difference between imitation and copy. An example could be the syllogism that since nature does not produce regular geometries, and since art attempts to imitate nature, then an irregular garden could be considered an imitation of nature, while a geometric one could not. This is false for Quatremère as he sees in nature the existence of order and symmetry.

7. Idea, Ideal

For Quatremère, type is also synonymous with *idea* as he has defined in his entry 'Type' in the *Encyclopédie Méthodique* of 1825. Its antecedent can be found in Winckelmann's remark on ideal beauty in 'Reflections on the Imitation of Greek Works in Painting and Sculpture' of 1755:

> *'In the masterpieces of Greek art, connoisseurs and imitators find not only nature at its most beautiful but also something beyond nature, namely certain ideal forms of its beauty, which, an ancient interpreter of Plato teaches us, comes from images created by the mind alone.* [57]

In his entry *'Idea, Ideal'* in the *Dictionnaire historique d'architecture*

57 Winckelmann, Johann Joachim, 'Reflections on the Imitation of Greek Works in Painting and Sculpture.' trans. Mallgrave, Harry Francis, in *Architectural Theory Volume 1: An Anthology from Vitruvius to 1870*, edit. Mallgrave, Harry Francis (London: Blackwell Publishing, 2006), p.160

(1784-85), Quatremère begins with the accepted theoretical definition and described how, according to its Greek derivation, the word *idea* '*... signifies the kind of image left in our mind by the impression of objects. Thus metaphysically speaking, idea and image are two synonyms.*' [58] For Plato however, the words *idea* and *image* are not synonymous although the division that the pairing suggests, of what is abstract and what is sensible, concurs with Quatremère.

Quatremère concedes that most metaphysicians would take *idea* to signify the representation of all that pertains to the moral domain and the word *image* to the representation of all material objects in the realm of the senses. The word *idea* is used in architecture to designate the impressions left in the mind by the objects that belong to the art of building. That is, those having the *idea* of a monument or conserving the *idea* of its plan. In the process of artistic creation, Quatremère contends that an artist invents and imagines only by making a new whole out of various parts he holds in his mind. Thus the product of this invention is a composite effect, a new image formed by the amalgamations of many partial ones that is then made material. To achieve this, the artist must first and foremost form this image in his mind. This is what Quatremère means by forming the *idea* of a composition for instance. For him, the distinctiveness of the *idea* depends on the force of impression of an observed object, which in turn depends on the nature of the individual's mind, its capacity for memory and extent of study. Thus for Quatremère, the clarity of *idea* is directly proportional to the truth of its representation.

The word *idea* in the arts of design and architecture, according to Quatremère, is synonymous with the word *esquisse* or *croquis* – a rough sketch – an object's condensed or reduced image that is nevertheless sufficient to fix the general notions of the whole.

58 Quatremère de Quincy, Antoine Chrysôthome, entry 'Idea, Ideal' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.172

Another use of the word can be understood as being synonymous with memory. When one talks of proceeding from an image, i.e., drawing or making from an *idea* of, say, a monument, one is producing the appearance of the monument not from reality but from the image lodged in memory. As a result of the above – of our mind's capacity to compensate for the *idea* that is lodged in our memory - the act of artistic creation poses the question as to the ends of imitation. This end for Quatremère is the *ideal*, '*... a kind of type which stands as its exemplary ideal; and this is at once the principle and the explanation of what theory calls the ideal in every genre of imitation.*'[59] The *ideal* has two meanings, the first, understood in a negative sense is synonymous with the imaginary, fantastic and fictitious. Its product, a disordered imagination, is mistaken with its own dreams for the inspiration of genius. The second understanding of the word *ideal*, especially in its application in the arts of imitation is,

> '*...the characteristic type, the generic principle of such and such a subject of imitation, which is deduced from a nature considered in her intentions and in her general laws of her works, rather than her individual productions*'.[60]

As such, the *ideal* is opposed to the word natural, as the natural to Quatremère is restricted to the exact copy of the model taken individually, while the '*... ideal imitative manner, is one which represents from a general point of view, in other words, as they can be, or as they should be.*'[61] To achieve this, intelligence is required in assembling the many disparate perfections. This quest for the *ideal* in is most important in architecture, rather than in any imitation arts, as

59 Quatremère de Quincy, Antoine Chrysôthome, entry 'Idea, Ideal' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.173

60 Ibid., p.174

61 Ibid., p.174

architecture does not have a direct model in nature and requires an abstract system of selection and combination,

> *'The imitative theory seems of little application in architecture, which does not operate on the basis of a real and material model. However, when one thinks that the system upon which this art is founded, and the principles upon which it is based, are necessarily the result of intelligence; and when one recognizes that every system that derives from the general laws of nature belongs to the ideal order of things, then perhaps one is permitted to propose that no art more than architecture rests on the principle known as the ideal.* [62]

In his *'An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts'*, (1837) Quatremère was more explicit than in his entries in *Dictionnaire historique d'architecture,* with his reference to the philosophers of antiquity, namely, Plato and Cicero, in his formulation of the notion of *ideal.* He begins by quoting Cicero's account of an orator that has never existed - a perfect orator –

> *'I lay it down as a principle, that there is nothing of whatever kind so beautiful, but that there is something more beautiful above and beyond it, which may be imitated as an original, inaccessible to our senses and which mind and thought alone can embrace.* [63]

For Quatremère, there is always over and above every beautiful object, a type of intellectual beauty that can only be discovered through the workings of the mind. This is to Quatremère what constitutes the *ideal.* He further cites Cicero's account of Phidias forming the statue of Jupiter or of Minerva by not studying any individual in order to draw a resemblance from it, but by using as his guide a type of superior beauty that existed in his mind.

62 Ibid., p.174

63 Cicero, Orat. ad Marc. Brutum, 2.7

But this does not literally mean that Phidias has not studied the particulars of the human body in reality. This serves to point out that this type of beauty and perfection cannot be found in any one particular model but in the *idea* alone. Quatremère offers a simple verification of this doctrine of the *ideal* by stating:

> *'... if so many artists be set to copy the same model, the respective copies will present as many dissimilarities as there are copyist. In accounting for this fact, it is the custom to say that this arises from each one having his own manner in seeing it. Which is as much to say, that each sees only as he sees, by virtue of some cause that determines him so to see.* [64]

In other words, the ideal must exist to account for the dissimilarities in all copies, where dissimilarities are seen as the imperfection of the copy. For Plato, according to Cicero, these primordial types do not reside in use and spring up when conjured, but reside eternally in the realm of reason and understanding. The *ideal* form is employed by Plato as an object of comparison, to make intelligible his republic, for he insists that his republic is portrayed as an idea, to serve as a sensible type to confront his system of justice and virtue. Thus this *ideal* form is perfect and beyond the reach of human power. So Quatremère draws on Cicero's and Plato's *ideal*, in the form of the perfect orator for the former and perfect government for the latter, in fomenting the laws of nature as the goal for his theory of imitation. The ideal is never attainable, but acts as a comparison and goal in the process of imitation to seek the truth, '... *that the ideal may be considered as the only nature, and the only truth, in as much as in it alone do we discover nature comprehended at large, and viewed from high.* [65]

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64 Quatremère de Quincy, Antoine Chrysôthome, *An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts*, trans. by J. C. Kent (London: Smith, Elder and Co., 1837), p.278

65 Quatremère de Quincy, Antoine Chrysôthome, *An Essay on the Nature, the End, and the*

To be precise, Quatremère's *type* is in fact Plato's *eidōs*. For Plato, *idea* is not synonymous with *image*, in fact it is its opposite. But Quatremère *idea*, following his definition of type, is synonymous with *image*. Thus Quatremère's set-up of type vs. model, is in the end equivalent to *idea* vs. *image* for Plato. This is because Quatremère traces the word *idée* back to the Greek *eidolon* (image) and the common use of the word image in the arts. Therefore Quatremère sets up the type-model opposition to distinguish from idée-image and express his two contrasting objects of imitation that his artistic theory called for. Thus type-model is the same as Plato's eidōs-eidolon but the only difference is that Quatremère included architecture among the imitative arts, while Plato had given architecture the status of non-imitative or original in his *'Theory of Art'* in *The Republic*. The distinction between *type-model* is also similar to Plato's two objects of imitation – sensible and abstract: abstract form (eikastikē) and sensible appearance (phantastikē). However, as mentioned above, there is no difference to the metaphysical construct between Plato and Quatremère that divides the abstract and the sensible and the real and the true (Fig. 1.6).

Having set out the understanding of the *ideal*, Quatremère then elaborates on the means of attaining the *ideal*. These means involve the act of generalizing and to illuminate this, he contrasts the act of generalizing with the act of particularizing. To generalize, in imitation, is to express a subject and to represent an object in its collective whole, in the character belonging to the genus of the object. Whereas to particularize, is to express and represent its distinguishing character, which causes it to be distinguished from every other. So, when an object is particularized it is dependent on the individual rather than the species and on the species rather than the genus. Quatremère contends that this act of generalizing finds its highest order in poetry. To abridge in poetry according

Means of Imitation in the Fine Arts, trans. by J. C. Kent (London: Smith, Elder and Co., 1837), p.281

Plato	*eidōs* (idea)	*eidolon* (image)
Quatremère	Idea/Image	
	type	*modèle* (model)
Plato	*eikastikē*	*phantastikē*
Quatremère	abstract	Sensible

Fig. 1.6 Quatremère's type and model compared to Plato's eidōs and eidolon

to him is to '... *reduce its intrinsic value within the smallest compass.*'[66] By doing so, they are reduced to their principle, by suppressing their details, their value thus becomes more evident to the mind.

There is however a crucial difference between Quatremère and Plato's *ideal* that resides in the realm of Form. Quatremère's introduction of an epigenetic account of the primitive hut and his insistence on rationality and abstraction inadvertently secularized this Neo-Platonic and Christian tradition and renders type not as a divine revelation but as an inner principle of nature or as a human invention.[67] The ideal, although residing in nature, is understood as principles that are accessible to man through his ingenuity and reason. And architecture arose from this, not from nature or God but from man's intellection.

8. Rule

If type is the idea that must serve as a *rule* to the model, it is crucial to understand how Quatremère understands the way in which the idea acts upon the process of invention. We can turn to his entry of '*Rule*' in the *Dictionnaire historique d'architecture.* He first draws a parallel between language and art in the understanding of the word *rule*,

> *'Rules, therefore, are to the realm of the works and operations of the mind what they are to the domain of the works and operations of the hand; they occupy the same role, which is to direct and shorten operations.*'[68]

66 Quatremère de Quincy, Antoine Chrysôthome, *An Essay on the Nature, the End, and the Means of Imitation in the Fine Arts*, trans. by J. C. Kent (London: Smith, Elder and Co., 1837), p.315

67 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p. 92

68 Quatremère de Quincy, Antoine Chrysôthome, entry 'Rule' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir

He also distinguishes between principle and rule, stating that the former, *'as its etymology indicates, expresses the idea of origin, of source from which consequences derive, and these consequences are the rules.'*[69] Hence, rules are derived from principles. As such, principles are general truths and rules are their particular applications. Principles are universal, immutable and small in numbers. They cannot be compromised nor modified. Rules on the other hand, are numerous and contingent, their variability depends on time, place and circumstances. Thus for Quatremère, new insights can emanate from a fundamental truth (principle) that will give rise to some new rule.

For Quatremère, there are four divisions of *rule* in the theory of architecture. The first are *rules* based on principles of reason and the very nature of things. This is the *rule* that forms the practical code of construction and structure. It determines the buildings structural integrity and safety and constructional feasibility. It results from experience which can substitute for precise calculations and is always infallible as the *rule* can always be verified by mathematical calculations.

The second are *rules* that have as a principle the constitution of our mind and the laws of our senses. Quatremère argues that these *rules* guide the ways and the means through which all impressions of the works of art gained from the senses can be judged through a moral faculty. He calls this moral faculty, the moral law of intelligence, which is universal. These *rules* according to Quatremère are the ones that teach how to observe the just relations of symmetry, visual harmony of lines or forms in a manner similar to the *rules* of musical harmony. It also teaches the just appropriation of part to whole relationships in transforming a building into a work of art. For Quatremère, these *rules* cannot be contested as they are *'... the rules of proportion, having their*

(London: Andreas Papadakis Publishers, 2000), p.222

69 Ibid., p.222

principle and their cause in the imitation of the very works of nature.' [70] Quatremère is unequivocal as to the importance and universality of this *rule* and states that the principle of unity of proportion, be it in the composition of the plan, elevation and detail is one that is not invented by man but is laid down by nature. An artist can only recognize these rules through their senses and intellect and transfer them into their works. The second way in which nature governs over this rule is the way in which nature brings together pleasure and utility. In that, every part and detail of nature has a corresponding use and beauty. This of course corresponds with Quatremère's theory of imitation and character. And it is apparent here that for Quatremère, what rules over our senses and intellect is always nature itself.

The third are *rules* that are based only on custom as their sole reason. Quatremère views these with disdain. Whilst the second *rule* is written, in Quatremère's terms, in the book of nature, the third is written in the treatise of architecture. For him, a treatise should be treated as a source for moderate advice on practice and nothing more. As they are mainly technical and methodical in nature, he considers them to have the effect of relegating architecture to a mere trade from its position alongside other imitative arts. Here, Quatremère reveals the main difference between his notion of type as a heuristic device and architecture as a discursive discipline compared to Durand's didactic and methodical approach to architecture.

The fourth and final division, are *rules* derived from habit and even prejudice. This division involves those who adhere to *rules* without the wider knowledge of their causes. Quatremère attributes this to the blind followers of treatises as much as to the copyist of the material appearance of nature or masterpieces.

70 Quatremère de Quincy, Antoine Chrysôthome, entry 'Rule' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.224

Quatremère, having pointed out the four understandings of the word *rule*, outlines the difference between *rule* and grammar,

> *We repeat that under the common name of rules, the developments of great principles that regulate genius are confused with grammatical analyses, which are to the science of architecture what scholastic rudiments are to rhetoric and poetry.* [71]

For Quatremère, *rules* do not produce genius, for if they do, genius would never exist, as masterpieces would be made so easily by following *rules*. But *rules* are useful in guiding the artist in the study of the laws of nature for its impressions of the beautiful and the true. However, no work of genius is outside *rules*, for *rules* are derived from the works of genius. *Rules* spare the artist many trials and gropings, prevent errors and protect from blunders.

Rules are important to Quatremère because he was convinced that the doctrine of imitation is valid for architecture as it was for sculpture and painting. The only difference for architecture being that the object of imitation is an abstract one, while for painting and sculpture it is a sensible one. This is because for Quatremère, architecture has no direct model from nature. Thus it is necessary to transcend mere appearances and to discover rules and principles of nature with the mind's eye. Quatremère departs from Laugier when he transformed the object of imitation of architecture from a concrete model (*cabane*) into a generic principle derived directly from nature. Hence rules are derived from the principles of nature and should govern over the model. They draw on the systematic conception of nature and the thought process. Thus, Quatremère's type is a primitive form or principle that is embedded in the creation of nature as well

71 Quatremère de Quincy, Antoine Chrysôthome, entry 'Rule' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.226

as in the production of man. This concept can be located in the territory between science and art because Quatremère compels the artist to study nature with the same spirit as scientists; and to abstract the principles that govern the action of nature. Imitation of nature thus equates the understanding of nature's processes.

9. Character

Towards the end of Quatremère's entry on 'Type' in the Dictionnaire historique d'architecture, he drew the relation between character and type, by stating, *'The word type is also used in architecture to designate certain general forms which are characteristics of the building that receives them.'*[72] For Quatremère, each piece of furniture and building receives its form and character from a type, within the demands of necessity and within nature,

> *'No one is unaware that a multitude of pieces of furniture, tools, seats, and clothes have their necessary type in their uses and the natural customs for which they are intended. Each of these objects finds its very type – and not its model – within the demands of necessity and within nature. (...) Who does not think that the form of a man's back ought to be the type of a chair's back, or that the rounded form should not be the only reasonable type for a hair arrangement? The same is true of a great number of buildings in architecture. One cannot deny that many owed their constantly characteristic form to the primitive type that gave them birth.'*[73]

This remark on the double notion of a physical impression and

72 Quatremère de Quincy's 'Type' in *The Historical Dictionary of Architecture* (London: Papadakis Publisher, 2000), p.256.

73 Quatremère de Quincy's 'Type' in *The Historical Dictionary of Architecture* (London: Papadakis Publisher, 2000), p.256

a written figurative character coincided well with the idea of architecture that would be a sign of its own nature in its relation to typicality. Vidler, drawing from Foucault's *'The Archaeology of Knowledge'* (1969) has already attributed this parallel between Buffon and Quatremère in accounting for the numerous varieties and exceptions to any overall 'prototypical' character of the species by means of climate, race, place, and accident.[74]

The entry 'Character' was important for Quatremère as it explains the link between architecture and society. This is achieved by understanding three categories or division of character: *Essential, Distinctive* and *Relative.* Following this reasoning, Quatremère was to describe architecture as language to society, and all arts, like poetry, as an extension of language, faithfully recording the physical and moral qualities of nature, people, and individuals. This is substantiated by Quatremère's account that Greece was more suitable climatically to endow the Greek people with the equal mixing of reason and imagination, imprinted as it was with its temperate and mild climate. Quatremère argued that there is *'an intellectual link of ideal forms and the moral character of architecture'.* This is supported by understanding architecture as an imitative art that imitates nature less directly, but does so through analogy. As already made clear in his entry 'Architecture' that gave the account of architecture's origin, hot climates of Asia, with their violent political and social institutions, are represented by arabesques, by caprice, and by fantastic, unregulated and licentious architecture. Egypt's was monolithic and heavy because of its culture of servitude. Greece of course stood in contrast and is a beacon of beauty, taste and intellect that only a free society can foster.

Quatremère begins his entry for 'Character' by defining the etymology of the word, stating that the word is the same

74 Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.155

in French as the Greek word *characteer,* which derives from the verb *charassein* (to engrave, to imprint) and signifies, a mark, the distinctive sign of a particular object.[75] The word character applies to many objects because no object exists without being endowed with a certain distinct variety to a certain degree. It has three principal and different expressions. When used to praise a work of art, that is, when one says that this work *has character*, it means that the works is endowed with quality. The second use of the word, similar to the first but distinguishing it with a special quality and hence endowing it with originality is when we refer to the work as having *a character.* The third refers to the quality that a word possesses that conveys to us its particular nature and purpose when the work is said to have *its character.*

The first, having *'character'* or the *general* and *essential character* of nature is recognizable by its strength or force. It is a result of place and climate, hence the origins of three types of architecture. It applies to every art of building or monument that is meant to impress the mind and the senses by the qualities of its strength and size. Quatremère refers to Egyptian architecture and says that the use of enormous amount of material and composition of colossal masses was to impress and was due to the fact that *'... minds could conceive of only a small number of principal ideas and power means..'* and that *'... in the absence of the methods and calculations of a refined science, that the primitive art of building...'*[76] impresses with this character of strength and energy. Quatremère goes on to say that this character is not only the result of a material cause but of a moral. The moral cause here is derived from the principles and mores of society. He then postulates the development of this character, starting from a state of simplicity, in the state

75 Quatremère de Quincy, Antoine Chrysôthome, entry 'Character' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.103

76 Ibid., p.105

of mind begetting monuments with the qualities of strength and size. When the needs and desires of the society multiply, the combination in small parts of these monuments does not correspond to real needs but to the desire for novelty. He contends that this development only reduces its influence and character, especially through private enterprises. Instead Quatremère states that the character of strength and size is at its most efficacious when it is concentrated in a small number of monuments.

To return all architectural principles to the type, that receives its *essential character* from nature, Quatremère solved the problem of origin by associating it first to climate and geography, and thereafter to society and civilization. This maintained the legitimacy and supremacy of Greek architecture by forfeiting its place as the first architecture of civilization but attributing its achievements to nature. This is evident in Quatremère's account of the second category of character, that of having *'a character'* or having a *distinctive* or *'accidental' character* that accounts for the varieties in each species. This is synonymous with physiognomy, i.e., the lightness of Chinese, heaviness of Egyptian, grace and harmony of Greek, when it comes to their architecture. It is the character that marks the work regardless of function. It owes its existence to peoples and their architectures first and foremost. Quatremère elaborates this to express this quality as *originality*, where the original can be understood as something that is not an exact copy of another, that is not a double. It is difficult to maintain this over the course of years and in the increasing succession of works. Instead, it is easier to develop this originality at the beginning of the works of art, with the 'free feelings from inspiration' developed from nature. The further this development unfolds, the more difficult it is to sustain and more often than not, the ambition to remain original, according to Quatremère, results in caricature. Two errors result from the difficulty of maintaining this originality: one is condemned to repeat and the other to

repudiate the fundamental principles of the real and the true which results in the ridiculous and bizarre. For Quatremère, this can only be overcome by 'genius', which proceeds independently from conventions.

The third, having *'its character'* or a *relative character* is attributed to particular species or individuals and is identified in tangible ways. It refers to the character given by the architect to the monument. The first two do not depend on the architect nor will they have any didactic value. The first, Quatremère argues, belongs to an age that is far more primitive and simplistic in its conception, and such use of strength and size will no longer be repeated. The second requires such a genius that it cannot be learned and has no lessons for the present, for a genius is a student of no one. The third, however, concerns itself with the way in which different buildings are treated with the appropriate character. It is distinctive because we can say that *'this building has its distinctive character'* and hence can be conveyed and *'...its secrets can be taught not only by examples, but also by practical documents.'*[77] This promulgation reveals not only Quatremère's firm preference for Greek architecture but his unwavering belief that its achievements cannot be surpassed. And thus, the role of the architect is to 'characterize' buildings in an appropriate and learned manner. From here, Quatremère proceeds to call this a theory of character and it involves three principle means to manifest the purpose of buildings: *'1.)by the forms of the plan and of the elevation; 2.) by the choice, the measure or the manner of ornament and decoration, 3.) through the massing and the kind of construction and material.'*[78] For the first means, Quatremère highlights the importance of using the appropriate

77 Quatremère de Quincy, Antoine Chrysôthome, entry 'Character' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.107

78 Quatremère de Quincy, Antoine Chrysôthome, entry 'Character' in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy*, trans. by Younés Samir (London: Andreas Papadakis Publishers, 2000), p.107

plan for specific uses and function, that there should be a unity and correspondence between plan and elevation. Intelligence and taste of the architect is also required in characterizing the buildings in plans and elevation, coupled with a wise discernment and a proportionate use of resources that tends towards a gradation and hierarchy that will reveal their purpose with ease. Quatremère cites the ancients for their evident authority in establishing difference between their temples and their basilicas. *'It is only by applying them with much discernment and economy, and in a just proportion, in the moral sense of each building, that she can preserve their property as a language intelligible to all.'* [79] The second means involves decorations, and comprises of paintings for the interiors of monuments and sculptural ornaments for both interior and exterior. The second is governed by two rules: the first is to follow conventions and with restraint, failing which it becomes only an exercise in employing architectural riches. And second, is that it has to be philosophically considered, it has to be in rapport with certain ideas and to communicate. To ignore this rule for Quatremère is to result in the loss of character. Decorations must suit its purpose. Although decorations have an allegorical quality they must not be pushed too far from conventions as to lose their associations. The third means involves the use of material and the construction, seen as an art and as a science in equal measure. By harnessing the diversity of material and colour, within reason, the appropriate character can thus be conveyed.

I would argue that Quatremère's *type* and *model* are ultimately the Greek temple. This is made evident from his deliberation on the three understandings of character and the ways in which he proposes how an architect should 'characterize' buildings. In a close examination of Quatremère's deliberations, there are two moments of transposition through abstraction in architecture. The first is the passage from nature to the first dwellings - the

79 Ibid., p.109

type that was given by nature and that bore its imprints, an *essential character*. The second is the passage from this first dwelling or primitive hut to the Greek temple, one that required the minds for abstraction and the rationality of construction – the transposition of wood to stone. This resulting architecture bore the imprint of the first, and gave it a *distinctive character*. From here onwards, for Quatremère, only *relative character* is possible, despite his exhortation for his theory of imitation. Thus, the Greek temple became both his version of *type* and *model*. Model in the sense that all that is precise and material, the orders, its decorations, are to form the irreducible elements of architecture that he champions for his time. Thus Quatremère violates his own theory of imitation when it comes to the act of characterizing buildings, because of his insistence on reproducing Greek architecture.

10. Language

The most substantial study on Quatremère's conception of architecture as language to my knowledge is Lavin's *'Quatremère de Quincy and the Invention of a Modern Language of Architecture'* (1992). Her study was focused on two essays of Quatremère on Egyptian architecture, the *Prix Caylus* essay of 1785 and the *De l'architecture égyptienne* essay of 1803, the second being an updated version of the former eighteen years later. The structure and hypothesis of Lavin's thesis mirrors that of Vidler's 1987 article on Quatremère. The ubiquity of the language model to Quatremère was accounted for by Vidler as follows,

> *'... the recognition of the figurative transposition of the idea of written marks to the metaphysics of characterization; the generic use of the figure in indentifying the characters of nature; the fundamental definition of character as a sign; the understanding of*

language as the first of all the arts of imitation, model for all the arts, with its deployment of figures and its example of enthusiasm in the "language of the passions", wherein lay the origins of poetry; the theory of language as influenced by climates, drawn from Rousseau; the idea of physiognomy as a language, ...'[80]

Architecture is considered a language because in the tradition of the doctrine of imitation, it could be considered a way of expressing or depicting something and rendering perceptible intellectual ideas. The efficacy of architecture as a language however is approached allegorically. According to Vidler, when he accounts for the use of allegory by Quatremère following Beauzée's critical summary in the *Encyclopédie Méthodique*, that allegory was the presentation *'of a thought under the image of another thought in such a way as to render it more perceptible and striking than if it had been presented directly without any kind of veil.*[81] This use of allegory rather than narrative in considering the theories of Quatremère has also been proposed by James Henry Rubin in his *'Allegory versus Narrative in Quatremère de Quincy'* (1986)[82], which predates Lavin's thesis.

For Quatremère, type ultimately controlled the language of character and therefore the problem returned to that of origin, as discussed earlier. He needed to discredit the architecture of the Egyptians, following increasing archaeological findings that showed its art and architecture to predate the Greeks and that the architecture of the Egyptians bore some resemblance to the Greeks. Quatremère drew parallels between Egyptian architecture and society; stating that it is in excess of solidity, perpetually monotonous and has ossified into a culture of servitude. To free

80 Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.160

81 Ibid., p.161

82 Rubin, James Henry, 'Allegory versus Narrative in Quatremère de Quincy' in *The Journal of Aesthetics and Art Criticism*, Vol. 44, No. 4 (Summer, 1986), pp. 383-392

Greek architecture from any genealogical links to Egyptian, he proposed his theory of an epigenetic origin in the three original dwellings or types: the cave, tent and hut. He showed that the cave offered nothing to imitate; the hut offered everything. He equated abstraction and rationality with societal and artistic progress and demonstrated the transposition from wood to stone construction - from hut to temple - as the achievement of a society endowed with great taste and artistic prowess. Quatremère created this link between nature, architecture and society, through his theory of imitation and origin.

Lavin argues that, *'Quatremère used language to provide architecture with a conventional rather than a natural model, a conceptual transformation that led him to equate architecture's capacity for progressive development with its sociality.*[83] She contends that Quatremère's conception of architecture as language can be supported for the following reasons: that his theory of imitation established connection between architecture, language and society; he was concerned with imitation as a process; believed that mimesis is a potentially progressive instrument and that imitation could lead to abstract and progressive social thought. Lavin also argues that Quatremère's framework does not in itself prescribe architectural forms but I would argue that his entry on 'Character', especially on relative character, and his advice to architects on the act of 'characterizing', is nothing but a prescription based on the language of classicism.

For Quatremère, character in its highest form was parallel to and only expressible by an artificial language of architecture, consisted in a socially coordinated system of conventions and which enabled architects to endow buildings with intelligible meaning. This is an optimistic if not idealistic view of Quatremère and Lavin: that a communicative architecture for all must rest on

83 Lavin, Sylvia, Quatremère de Quincy and the Invention of a Modern Language of Architecture (Cambridge, MA: MIT Press, 1992), p.xi

the assumption that everyone is schooled in the appreciation of the arts of antiquity.

Quatremère's theory of architectural expression is all dependent on allegory. Lavin argues that it is independent of the orders and addresses the articulation of both sensation and utility[84]. Its interest lies in the structure of character as a means of social expression, like alphabets, endlessly combined to create a specific meaning, unlike hieroglyphs. Following this argument, the Greeks formed architectural writing.

> *'The Greek alphabet of architecture was necessary to the contemporary architect not because it was Greek but because it was an alphabet that enabled articulate discourse rather than constituted a system for iconic representation.* [85]

Quatremère's idea about character is the final result of his exploration of the relationship between language and architecture. Lavin argues that for Quatremère,

> *'Both are means of expression that society produces to articulate and solidify its emancipation from a state of nature. (...) Through language, however, Quatremère merged the idea of architectural character with a social theory of architecture, and with this transmutation he hoped to take his vision of classicism out of the ancient and into the modern world.* [86]

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84 There are two categories in which character can be understood in the context of French eighteenth century theories of architecture. One attempts to reconcile the proliferation of building types with the existing number of classical orders at hand, like Boffrand and Blondel. The other tended to emphasize sensationalist expressions. With English tradition and influenced by Hume and Burke. Le Camus for instance insisted upon proportion giving rise to proportion, which in turn produced analogous harmonies in human sensations. Both share the same view that abstraction was required. Quatremère's theory of character brings together these two traditions. See Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.144-147

85 Ibid., p.147

86 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture*

Quatremère maintained that the language of architecture was fundamentally a social phenomenon. For the arts to be intelligible and language to convey meaning, they need to be rationally invented agreements and conventions. *'The same structure or type that establishes liens between a word and its object, between the artist and his public, also establishes the relationship between citizen and state and hence characterizes a political order.*[87] This analogy of language was instrumental for Quatremère in his various political and professional activities[88] and ambitions to revalidate and reinstate the architecture of classicism and Platonic ideals in art. This was exemplified by his efforts in arguing for a public Institution of Art in France and his work at the Pantheon as the *'Commissaire à l'administration et direction générale des travaux de l'édifice ci-devant Sainte-Geneviève'.*

Through abstraction, Quatremère incorporated the experience of the revolution into architecture. It did not translate into a political model, but confirmed that the structure of society is no more informed by nature than by the arts, accessible and transformable through reason rather than pre-ordained. Quatremère coined the phrase *'Republic of the Arts'* after the *'Republic of Letters'*[89] to express his conception of society and art. It was a struggle for political, social and intellectual emancipation, fought by artists, who, in this period of revolution proposed that

(Cambridge, MA: MIT Press, 1992), p.147

87 Ibid., p.148

88 Quatremère actively participated in the French Revolution and he believed in the constitutional monarchy of the English kind. He was a member of and later expelled from *Société des Arts*. He directed the principal architectural project commissioned by the Revolutionary government, but was imprisoned and exiled before its completion. He participated in the counter-revolutionary uprising of *13 Vendémiaire*. He was a member of the royalist *Club de Clichy*, and was committed to social change by supporting constitutionalism. He felt party politics were irrelevant to architecture, as none of his writings proposes any political allegiance, only a link between the two. He even denounced the use of arts as political illustrations or visual aids for propaganda. For the context of Quatremère's political activities see, Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.149-150

89 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.150

the arts were not a servant of the state, but could shape the state. As a transcendent concept, the *Republic of the Arts* became an ideal model for real political action.

In 1791, Quatremère was asked by the Assemblé Nationale to respond to the question *'Does France need to support financially a public school or academy of the arts of design? What would be the most advantageous means of organizing such an institution?'*[90] In response, Quatremère presented a series of three Considérations sur les arts du dessin to the Assemblé Nationale in the same year. In his response he sketched out the main elements of his theory of art, starting with the principle of origins and leading to the relationship between art and society. He succeeded in establishing a school of the arts that was public in its funding and admission and went on to outline its administrative and pedagogical structure, which consisted of free exhibition, impartiality, checks and balances. He was highly critical of the division of schools into technical and artistic and resolved the conflict between

> *'egalitarian principle and hierarchical practice in education by defining any true republic as a moral sphere parallel to and embodied in the concept of the public itself. The conflation of real and ideal political states through a third realm of moral abstraction was, according to Quatremère sanctioned by none other than Plato, who had been the first to evaluate the relationship between art and republicanism.'*[91]

In his role as the *'Commissaire à l'administration et direction générale des travaux de l'édifice ci-devant Sainte-Geneviève'* in the same year of 1791, Quatremère was entrusted with the task to transform the church designed by J.G. Soufflot, dedicated to the patron saint of Paris into a national monument. Little of the work of Quatremère

90 Ibid., p.158
91 Ibid., p.164

survives, except for three lengthy reports. In this period, according to Lavin, Quatremère did not organize a single competition, despite the very public nature that the project assumed, because he considered himself the Guardian-Philosopher like Plato himself. Since he has been appointed by a body of elected officials, he should be held to account in the arena of public opinion. The transformation of the restoration project was guided by three objectives: the first involved the 'dechristianization' of the church, which entailed a change of programme, the suppression of the lantern and the blocking out of the low windows. The combined effect modified the church's character into an austere and severe one. It however retained its ideal character, for it expressed the idea of devotion. The second involved 'dehistorization'; Quatremère did not want a frozen monument that reflected a golden past; instead its revolutionary character was to speak of ahistorical time as abstract and eternal, as the moral sphere of the Republic itself. To this end, he simply applied the timelessness of the classical process of architecture. The third objective was the 'republicanisation' of the monument; for this Quatremère turned to allegory. He connected the ahistorical nature of the social contract with his abstract treatment of the Pantheon as a work of art. In Quatremère's opinion, historical subject cannot function in the context of the Pantheon, whether taken from past or present. So, no statues of antiquities or French revolutionaries were allowed. Only allegory was sufficiently abstract to accommodate this crisis of historical identity. Thus, Lavin argues that *'Quatremère conceived allegory as a formal language derived from history and rationalised over time to such a degree that it transcended history. Through this process of abstraction, allegory had acquired an infinite capacity for expression.'*[92]

Staying true to his theory of imitation and characterization, Quatremère demonstrates the final transposition of classical

92 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.173

architecture to his time by allegory, as the final step of abstraction. A step that began with the original dwellings of the primitive hut to the temple of Greek architecture and finally to the monument of the new republic. As the transposition progressed, so did the level of abstraction and the approximation towards the idea and ideal. Indeed, it is the ideal that all forms of government according to Plato, should measure themselves against. Quatremère would add,

> *'Any complete reading of Plato's Republic demonstrates that instead of being a political work, it is in fact a work on morality, in which metaphorical system of government becomes a point of parallel abstraction for a treatise no less abstract on justice and virtue, both of which are taken to a point far beyond the capacity of man.'*[93]

Vidler's critique of Quatremère is that despite his idea of typicality being tied to that of character, it was inflected with only very slight historicized content; establishing a plural root for architecture but ultimately preferring a single root. As such, Quatremère's efforts were concentrated in propping up the justifications for the superiority of Greek architecture, rather than stripping down architecture to its origin, for a new construction. Vidler adds,

> *'The very insistence of his arguments, together with their neat simplicity, appealed to a generation that looked in uncertain times to the comfort of a pre-established classical canon, a set of readily identifiable objects by which to recognize cultural excellence.'*[94]

Lavin's main thesis is that Quatremère's contribution to modern architectural theory lies in his conception of architecture as lan-

93 Ibid., p.165

94 Vidler, Anthony, *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (New York: Princeton Architectural Press, 1987), p.162

guage. She adds,

> *'Although modernity and historicism are thought of as antithetical, Quatremère's conception of classicism as a product of convention rather than historical necessity, and his association of convention with society, vested the function of architecture in its sociality and thus initiated one of the dominant themes in modern architectural theory.'*[95]

To conceive of architecture as language is to make society its progenitor of meaning. Before Quatremère, it was nature that played this role. He did so by abstraction, in particular, the abstraction of language that acts as an abstraction of architecture. He identified this with social abstraction, the key generating force for modern progress. *'What does the language of architecture look like?'* Lavin asks in her concluding chapter. *'There is no single answer and that is why it is an important contribution to the conceptual development of modern architecture'* she replies[96]. But this answer would be over-stretching the reach of Quatremère's contributions, for the language of architecture for Quatremère, was clearly classicism. Therein lay the short-comings of the language analogy, coloured by Quatremère's insistence on classicism that focuses solely on the ideal that is ultimately tied to it. The architecture that Quatremère promotes and his works on the Pantheon were clearly classical as they appear to the senses, despite the enormous level of abstraction dedicated to shift the meaning that this architectural grammar carries. In the final analysis, I would argue that Quatremère's contribution and relevance lie in his conception of a discursive and heuristic nature of type that enables us to seek an idea that can serve as an ideal that is common to all. At its most lucid level, this ideal also finds

95 Lavin, Sylvia, *Quatremère de Quincy and the Invention of a Modern Language of Architecture* (Cambridge, MA: MIT Press, 1992), p.176

96 Ibid., p.177

its corresponding reified instance, albeit partially in the typical, in the sensible model.

11. Argan: Precedents and Contingents

In his article *'On the Typology of Architecture'* (1963), Carlo Giulio Argan raised the question of *type* directly in reference to Quatremère. This was to later influence Rossi's definition of type, for the credit he attributed to Argan in his *'The Structure of the Urban Artifact'* (1982).[97] The context in which type was again raised in architectural discourse, in the 1950–60s, was concerned with the Italian debates about *continuità* and the Anglo-American preoccupation with 'meaning' as broached in Alan Colquhoun's article on *'Typology and Design Method'* (1967) for the first time in the English language. *Continuità* was a theme developed by Ernesto Rogers, the editor of *Casabella-Continuità*, that can be read as an effort in countering the orthodoxy of modernism and its hostility towards history[98]. 'Type' was among the three themes that arose out of this, alongside 'History' and 'Context'.[99]

The word typology, rather than type, was used more frequently, and is synonymous with a group of buildings, sharing something in common, within an urban context. It was used as a mean to describe the relation between buildings and the city in which they form part of the context. As these buildings are brought under scrutiny as a fragment of the city, a discussion is

97 Rossi, Aldo, 'The Structure of the Urban Artifact', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982)p.182

98 Ernesto Nathan Rogers (1909-1969), was the editor-in-chief of *Casabella-Continuita* from 1953 to 1964 and prior to that, the director of *Domus* from 1946 to 1947. He was a founding partner of BBPR Architectural Studio and a Professor in *Milan Politecnico*. His theoretical effort in writing and through his editorial can be characterized by his critique of modernism, the simplistic rejection as well as the unquestioning adoption of its legacy.

99 These were the themes that *Casabella-Continuita* focused on, led by Rogers, on the problem of historical continuity in light of the crisis and legacy of the modern movement.

initiated on the nature of the buildings forming a coherent group. As an extension of this, architecture was to broach the question of what constitutes the idea of the collective. This trajectory of inquiry was epitomized by Aldo Rossi in his *L'architettura della città*, (1966). Another parallel trajectory was concerned more with the question of morphology, in which typology formed an important analytical tool; and Saverio Muratori's *'Studi per una Operante Storia Urbana di Venezia'* (1960) was a demonstration of this. His study of the morphology of building plots and open spaces in Venice was able to concretize issues of growth, milieu and class, which to geographers were couched in abstraction. As this chapter concerns itself with the development of the idea of type, related to Quatremère, and not with urban morphology, Aldo Rossi's conception of type will be discussed below and in Chapter 3 as one that not only begins with Quatremère's understanding of type, but transformed it to include the idea of the city.

Argan, in his article, introduced a few additional considerations on the development of the understanding of type, but the focus was on typology and its instrumentality. The word typology with its suffix '-ology', from the Greek *'logia'*, means *'a discourse, treatise, theory or science'*. Thus 'typology' is the discourse, theory, treatise (method) or science of 'type'. The word typology is used here to describe a certain process within the field of architecture. It is seen both as a historical process of architecture, that is to say that there exist a notion of continuity; and as a thinking and working process of an individual. This suggests that typology can constitute a disciplinary knowledge in architecture, accessible and appropriated by an individual architect working within a received convention, from those sharing the same knowledge and discipline:

"Most modern critics who depend ultimately on some form of

idealistic philosophy would deny that an architectural typology could in any way be valid. They are right in so far as it would be absurd to maintain that the formal value of a circular temple is increased as it approaches an ideal "type" of circular temple. Such an idea of "type" is only an abstraction; so it is inconceivable that an architectural "type" could be proposed as a standard by which the individual work of art could be valued. On the other hand it cannot be denied that architectural typologies have been formulated and passed down in theoretical treatises and the work of famous architects. It is therefore legitimate to postulate the question of typology as a function both of the historical process of architecture and also of the thinking and working processes of individual architects". [100]

Argan also explicitly couples the terms architectural and typologies, suggesting that buildings with the same characteristics can be grouped for the purpose of comparison. He contends that there is an obvious analogy between iconography and typology. In figurative arts, iconographies contribution to the creative process is not always obvious and this is true for typology in architecture. Argan goes on to quote Quatremère's well known definition of type and draws upon his distinction between idea and model, *'All is exact and defined in the model; in the 'type' everything is more or less vague.'* Argan attempts to draw on this vagueness of type as being useful to the design process:

The very notion of vagueness and generality of type renders it incapable of affecting the design of buildings or their formal quality. However the vagueness also explains its generation, i.e., the way in which the 'type' is formed, never as a priori but from a series of instances. He further elaborates:

100 Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), p. 242

'The birth of a 'type' is therefore dependent on the existence of a series of buildings having between them an obvious formal and functional analogy. In other words, when a 'type' is determined in the practice or theory of architecture, it already has an existence as an answer to a complex of ideological, religious or practical demands which arise in a given historical condition of whatever culture.'[101]

The introduction of deduction from a series of models is important as it enabled Argan to emancipate the notion of the idea of type from the ideal, the ideal being the abstract principles that govern the way nature functions and its inherent beauty, as outlined by Quatremère. Here Argan introduces the possibility that various models that share the same characteristics can give rise to the emergence of a *type*. This is different to Quatremère, who stressed its abstract nature that is eternal, and is always given by nature. For Argan, analysis and deduction from a comparative method is the moment of the birth of the type. His proposition of considering buildings in a series also suggests that there is a process of transformation or evolution from one building to the another. For Argan, 'type' is an idea no longer residing in nature but in building precedents and therefore in the history of architecture. This value is thus relative, not an ideal nor immutable. This assertion points to the crucial fact that new 'types' can be detected as much as they can be surpassed, hence enabling a design process that is syntactic and discursive in equal measure.

For Argan, to arrive at a *type*, a process of reduction that strips away characteristics that are not common within the series is necessary,

'In the process of comparing and superimposing individual forms

101 Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), p.243

so as to determine the "type", particular characteristics of each individual building are eliminated and only those remain which are common to every unit of the series. The "type" therefore, is formed through a process of reducing a complex of formal variants to a common root form. If the "type" is produced through a process of regression, the root form which is then found cannot be taken as an analogue to something as neutral as a structural grid. It has to be understood as the interior structure of a form or as a principle which contains the possibility of infinite formal variation and further structural modification of the "type" itself. It is not, in fact, necessary to demonstrate that if the final form of a building is a variant of a "type" deduced from a preceding formal series, the addition of another variant to the series will necessarily determine a more or less considerable change of the whole "type".

We can only deduce from here, in the absence of further clarification from Argan, that the stripping away of characteristics would involve that of the *relative character* that depends on the act of 'characterization' by individual architects, as outlined by Quatremère. At the same time, it is also a critique of the abstraction of Durand's *Précis* that offered up didactic plates showing the reduction of building types to a set of regulating structural axes. The root form in this manner is seen with prejudice as it no longer consists of any character of the type. Instead he stressed that this 'root form' should be understood as the interior structure of a form, such that it enables formal variation and structural modification. There is an implicit materiality involved in Argan's notion of the 'root form' that renders it as sensible form. This is crucial in the development of the type in a series for Argan, as inherent in the sensible form - taking into consideration Argan's background as an art historian - is a visible idea. Argan also puts less emphasis on the continuity of the 'root form' of the type in question. He contends that the act of transformation and addi-

tion of another variant of a type would alter it significantly, thus this opens up the notion of type as an instrumental method in design. This is in contrast to type being understood as the rules governing the act of 'characterizing' a building in Quatremère's terms, which prescribed preserving the type as an immutable idea.

Argan also argues that the formative process of a typology is not for classification and statistical purposes but should be for definitive formal ends, as an instrumental design method. Importantly and in opposition to the functionalism of architectural modernism, Argan argues that, *'Typological series do not arise only in relation to the physical functions of buildings but are tied to their configurations.'*[102], stating that it was only in the second half of the 19th century that attempts were made to set up a typology based on the order of physical functions (typical plans for hospitals, hotels, schools etc.,). Argan believes that this process has not produced any important formal results. Building forms according to Argan, should be considered with all their 'experience matured in the past' and then made valid for the future. However, depending on a particular time, there is always a distinctive character that sets the type apart from its preceding and future variations. Instead of functional considerations and complementing the 'experiences of the past', Argan offers another way in which this classification should fall into three categories. The first considers the complete configuration of buildings - centrally or longitudinally planned buildings for instance; the second, major structural elements- flat or domed roofs; and the third, decorative elements like orders of columns or ornamental details. This, according to him, mirrors the process in which the architect works: first the laying out of the plan, followed by structural treatment, followed by surface treatment.

102 Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), p.244

To elaborate further on how an architect can proceed with the *root form*, Argan first accepts Quatremère's definition of type but crucially drops his adherence to a fixed ideal,

> *The "type", so Quatremère de Quincy has said, is an "object" but "vague or indistinct"; it is not definitive form but a schema or the outline of a form; it also carries a residue of the experience of forms already accomplished in projects or buildings, but all that makes for their specific formal and artistic value is discarded. More precisely in the "type" they are deprived of their character and of their true quality as forms; by sublimation into a "type" they assume the indefinite value of an image or a sign. Through this reduction of preceding works of art to a "type", the artist frees himself from being conditioned by a definite historical form, and neutralizes the past. He assumes that what is past is absolute and therefore no longer capable of developing. Accepting Quatremère de Quincy's definition, one might say that the "type" arises at the moment at which the art of the past no longer appears to a working artist as a conditioning model.* [103]

To avoid confusion here, it is necessary to point out that Argan equated historical form to model, and idea to image or sign. Thus for Argan, type, deduced through a comparative series, encapsulates an idea (image or sign); but as a model (historical form) that is no longer valid.

Argan goes on to make a distinction between type and model but specifically in the process of artistic creation. To Argan, accepting the model implies a value judgement: a recognition that a certain work of art is perfect and should be imitated. However, if the type is chosen, the action of the artist is no longer tied to

103 Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), p.244-45

this value judgment as the type is schematic and indistinct, where the type is accepted but not imitated, thus the process of mimesis is avoided. This understanding of the process of mimesis is different from Quatremère because for Quatremère, architecture itself is a mimetic art. What Argan tries to argue for here is a space where new formal determination can be achieved when the *type* is accepted. According to Argan, by accepting the *type* and not the model, it frees the artist from momentary historical judgement, and in this space of suspended criticality, new forms can emerge. Using *type* as a starting point does not include nor preclude definitive buildings as models according to Argan and he uses two examples to illustrate this fact. To include definitive buildings as models, Argan quotes the example of Bramante's *Tempietto* of *San Pietro* in Montorio; the peripteral circular temple in a courtyard obviously relied on a *type*, that is the peripteral circular temple described by Vitruvius (Book IV, Chapter 8) which integrates the abstraction of the *type* through historical models (temple of Sybil at Tivoli) and thus becomes both model and *type*. (Fig. 1.7). Argan argues that Bramante succeeds here in synthesizing both *type* and *model* and the *Tempietto* is a characteristic of Bramante's classicism that aspires to a syncretic union of ideal antiquity (type, therefore which is typical) and of historical antiquity (a formal model) (Fig. 1.8 and Fig. 1.9). Argan contrasts this to the '*... attitude of neoclassical architects who assume classical architectural typology, not classical architectures, as a model so that the movement produces works which were merely three-dimensional transcription of type.*'[104] Therefore Argan argues for the conspicuous idea of type rather than the compositional differentiation of architectural elements. Thus the value of typology as a method is always in response to a totality of practical and ideological demands and can proceed in two ways:

104 Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), p.245



Fig. 1.7 Temple of Sybil at Tivoli (circa first century BC), photo by Markus Mark

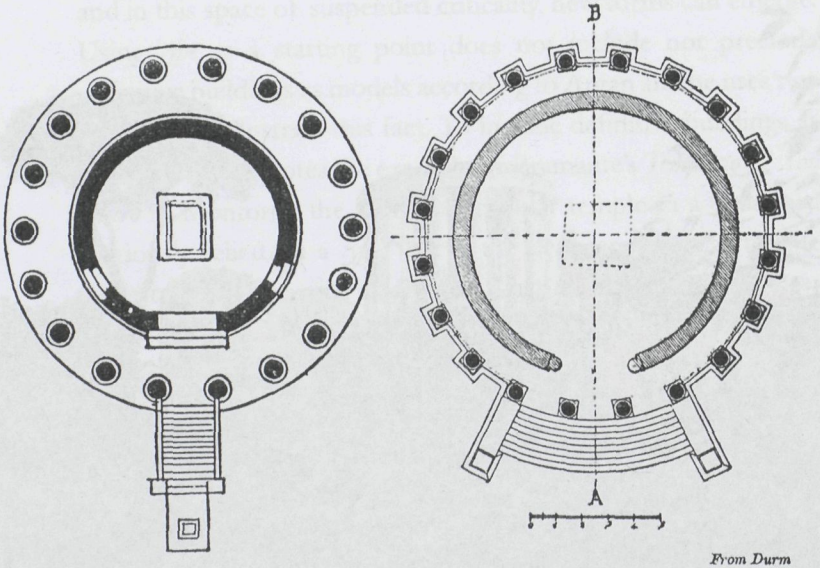

Fig. 1.8 Plan of Temple at Tivoli and Temple of Vesta at Rome



Fig. 1.9 Donato Bramante, Tempietto San Pietro Montorio (1502)

firstly, through formal invention that overcomes the *type* that has lost any real value, which was exemplified by the emergence of industrial buildings in response to new forms of production; and second as a recourse to *type*, when the immediate demand has its roots in the past, for instance the design of modern religious buildings like Le Corbusier's Ronchamp.

I would argue that this displacement of *type*, crucially departs from Quatremère's insistence on deriving principles from nature through his theory of imitation. For Argan, *type* is an idea no longer residing in nature but in precedents and therefore in the history of architecture, its value is relative and not ideal. Thus to work with type is to analyse, reason and propose through things which are of the same type, thus considering them in series. This reveals the shared characteristics between things and harnesses the embodied and cumulative intelligence of that series into architectural projections. This serial consideration emancipates the idea of type from a fixed ideal without displacing the need for an ideal. It also raises the possibility of a shared knowledge, for it works within received conventions and yet avoids the pitfalls of open-ended formal differentiation.

12. Rossi: The Structure of Permanence

The work of Rossi was introduced to an Anglo-American audience by Vidler's *'The Third Typology'* (1976)[105]. This article predates his own *'The Idea of Type: The Transformation of the Academic Ideal: 1750-1830'* (1977) and *The Writing of the Walls: Architectural Theory in the Late Enlightenment* (1987), and made no distinction between the word type and typology. It made no mention of Quatremère or Durand, and treated the entire discourse of the eighteenth century as one consistent entity under the yolk of nature. It was

105 Vidler, Anthony, 'The Third Typology', *Oppositions*, 7 (1976), 1-4

written predominantly to highlight the emerging typology that is tied to its operation within the city; as opposed to the earlier two typologies that required external legitimization to endow them with cultural meaning, the first being nature and the second being the machine as analogies. What these three versions of typologies share however, is reason and classifications as guiding principles. The fundamental attributes of the third typology are '*...as an espousal of the traditional city as the locus of its concern. The city, that is, provides the material for classification, and the forms of its artifacts provide the basis for re-composition.*'[106] For the first two typologies, architecture's validation came from outside itself, from nature and the machine. For the third, there is no such attempt at revalidation. Between the architecture and the city, there is the recognition for continuities between the elements, and is seen as a whole.

The city also became the site for new typologies, where the desire for these architects - the proponents of this third typology (Vidler would name Aldo Rossi and the brothers, Rob and Leon Krier) - was to stress the continuity of form and history, against the fragmentation of the 'elemental, institutional, mechanistic typologies' of modernism. For these proponents, the city is considered as a whole, through its architecture and vice versa. As such, the city itself is a whole typology, poised for decomposition into fragments as exemplified by Rossi's analogical architecture. For Vidler, these fragments do not re-invent institutional type-form nor do they repeat past typological forms, but are selected and reassembled, according to criteria derived from three levels of meanings: the first is the inherited meaning of form from its past; the second, from the choice of the specific fragment and its boundaries; the third is the one proposed by the recomposition of the fragments in a new context. There is no longer a cause-effect relationship between form and function. Instead it is explained by the continuity of life and history that is accreted in the city as

106 Vidler, Anthony, 'The Third Typology', *Oppositions*, 7 (1976), 1-4

a permanent and persistent man-made object, a work of art of civilized life. Another account for this interest in the historical city, but less so for Rossi, is the recreation of the qualities of the historical city, as a reaction to the *'nightmare of the isolated building set in an undifferentiated park'*[107], it draws from the concerns for a continuous fabric, a clear distinction between public and private realms, defined by walls of street and square. Above all it restores *'...a critical role to an architecture otherwise assassinated by the apparently endless cycle of production and consumption.'*[108]

In his article, *'Difficult Whole'* (2007),[109] Pier Vittorio Aureli argues that Rossi's theoretical contribution can be situated in his resolution of the problem represented by the idea of the 'difficult whole'[110]. The whole is difficult to achieve - in the architectural discourse and practice that engage the city and urbanism - because of the multiple numbers and heterogeneity of its constituent parts. It is also a problem that the unitary plan of architectural modernism was no longer able to engage with, let alone resolve. In this context, Aureli argues, Rossi approached this problem not through a compositional device, but through a formal and political understanding of the relationship between the city and architecture. Finally, Rossi overcame this problem not by proposing a methodological recipe to build coherent and linear solutions but by assembling the difficult whole into a theory; and in so doing surpassing the legacy of the Modern Movement. Rossi achieved this by accepting,

> *'... the existing urban landscape as a theoretical plane; a plane in which the project does not impose a new concept of habitable space,*

107 Vidler, Anthony, 'The Third Typology', *Oppositions*, 7 (1976), 1-4

108 Ibid.,

109 Aureli, Pier Vittorio, 'Difficult Whole' in *LOG 9, Winter/Spring 2007* (New York: Anyone Corporation, 2007)

110 The problem was broached by Robert Venturi in his *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art Papers on Architecture, 1966), p.88.

rather acknowledges, explains, and thus retroactively justifies what already exist. This was not a passive exercise but an active one, in which interpretation provided the space in which to invent the city.[111]

Rossi no longer viewed the problem of the city as one to be solved but rather as a problematic on which to base a more realist attitude towards the project of the city. Aureli argues that Rossi arrived at this view in his development of a typological study of the city. This development is constituted by three disciplinary themes – realism, rationality, theory – developed in succession, from 1953 to 1966.

Aureli contends that Rossi's interest in typology did not directly derive from Durand or Quatremère[112], but evolved gradually from reviews, articles, conferences, and cannot be reduced to a single definition. He gives an exhaustive account, biographical and theoretical, of Rossi's development towards a typological study on the city. I will build on this account and argue that the resulting framework and definition for type and critical ambitions of Rossi mirror that of Quatremère as a whole, referring specifically to the chapter *'The Structure of the Urban Artifact'* in *'Architecture of the City' (1982),* the English translation of Rossi's *'L'Architettura della Città'* (1966).

The context and sequence in which Rossi developed his ideas on typological studies, spanned a whole thirteen years, from 1953-1966. Aureli divided this into three phases coinciding with the three disciplinary concerns: realism, rationalism and theory. The first phase, from 1953 to 1957, formed Rossi's realist attitude towards history and social, political, and cultural development. His activities can be described as an attempt, like Italian neorealist

111 Aureli, Pier Vittorio, 'Difficult Whole' in *LOG 9, Winter/Spring 2007* (New York: Anyone Corporation, 2007), p.61

112 Ibid., p.49

cinema, to document man's life in every dimension of space, time, and place. It had its beginnings in *Milan Politecnico*, where he joined other students in the struggles to revise the legacy of the Modern Movement, and to recover popular traditions against the language of abstraction of late-modernist architecture, and monumental Fascist architecture. This is also where Rossi met Ernesto Rogers, professor, founding partner of the firm BBPR and editor-in-chief of *Casabella-Continuità.*

Rossi's first writings were on the Soviet Realist cinema and the urban language of Auguste Perret, author of the centre of Le Havre. *'What Rossi seizes in these different works is the will to concentrate social, cultural, and ideological expectations in a single artifact – a panorama of a popular suburbs, an architectural monument, or the plan of a city – artifacts, that due to their typicality, are repeatable, and hence instrumental to the construction of a new shared representation of the urban world.'*[113] The influence of the 'Seven Sisters' skyscrapers built in the post-war period in Moscow was also an embryonic moment for Rossi. Here he learned that *'... the possibility of architecture to impose itself as a culture, built event that evokes shared popular themes.'*[114]

From Antonio Gramsci[115], Rossi found the political dimension to the role of the architect. Gramsci's combination of the participatory spirit of the Communist revolution - the analytical approach of intellectuals, and the study of popular cultural traditions - for Rossi, was an antidote to the imposing rhetoric, abstraction and cosmopolitanism of the International Style. He found the reification of this architecture and space of the common man in the realism implicit in the austerity of the German Siedlung, which enabled him to rediscover the

113 Aureli, Pier Vittorio, 'Difficult Whole' in *LOG 9, Winter/Spring 2007* (New York: Anyone Corporation, 2007), p.44

114 Aureli, Pier Vittorio, 'Difficult Whole' in *LOG 9, Winter/Spring 2007* (New York: Anyone Corporation, 2007), p.46

115 Antonio Gramsci (1891-1937) was a philosopher and political thinker, for a detailed account of his influence on Italian architects see, ibid., p.46-47

emancipatory power of rationalism in neoclassical architecture and that of the modern movement. A realist attitude for Rossi lies not in formal mimesis but in the deep adherence of architectural language to man's historical reality.

In the second phase, from 1958 to 1963, Rossi's works consist mostly on reviews and monographic essays. This is a period of broad and general research on the methods for a general discourse on architecture and the city. His collaboration with *Casabella-Continuità* and studies were to cover urban planning, literature, art, sociology, urban geography, economy, philosophy, analysis of architecture's canonical works. This wide ranging study for Rossi, was an attempt to establish a highly specific knowledge of a disciplinary landscape that cannot be reduced to a formula, unlike the International Style. Rossi began to realize the concepts of repetition and interpretable forms inhered in type, not as mass production but as an idea or ideal. From Loos' purism, he would adopt an understanding of its deep attachment to the anonymity and abstract nature of the modern city. From Behrens' Mannesman Factory and Le Corbusier's *Unité d'Habitation*, lessons of architectural form evoking urban themes. It is through this that Rossi would later develop an understanding of type rendered not through universal rules but through the immediacy and singularity of an architectural event.

Rossi's reintroduction of an architectural dimension of the city, is not biased by historical form as commonly misunderstood, but by his insistence on the concreteness of an object in opposition to the vagueness of urban planning. This was the result of his confrontation with Quaroni, De Carlo, and Tafuri in an urban planning seminar organized by Olivetti Foundation in Arezzo. Typology for Rossi would from here carry the idea of both a general and concrete criterion of analysis and design.

The third phase, from 1964 to 1966, includes his first attempt to define typological studies through research and programmatic

interventions and attempts to found a theory of the city, influenced by French schools of urban geography, and Saverio Muratori. This phase was marked by three important events: the end of his collaboration with *Casabella-Continuità*, (Ernesto was fired for encouraging left-wing views), a grant to conduct urban research in Milan, and the university chair at IUAV as an assistant professor. This phase will also culminate with the publication of *L'Architettura della Città* in 1966. Muratori, preceding Rossi's work on type in IUAV saw it as a structure of permanent relations, not something to be classified and selected, then adopted or neglected,

> *'Muratori's notion of type was strictly methodological and a radically anti-theoretical position that attempted to recover the wholeness of the construction of the city by finding within it an intelligible, formative unity that exists beyond abstract schemes, models, metaphysical ideas, or images.'*[116]

He based his typological studies on an organic idea of the city, where the collective dimension of housing is so total that it drowns out any individuality and originality of architectural invention. On the contrary, Rossi would emphasize his typological study as a composite framework that gets actuated in the singularity of an urban event through decisions. Unsurprisingly, Muratori would choose, for his typological studies, the Gothic fabric that gives an even continuity of urban formal coherence. And Rossi would choose Berlin and Munich, with an urban structure composed of disparate parts.

Rossi proposed a research method that did not privilege traditional urban form; only that the definition of the urban plan can only proceed from the analysis of the existing condition, old

116 Aureli, Pier Vittorio, 'Difficult Whole' in *LOG 9, Winter/Spring 2007* (New York: Anyone Corporation, 2007), p.56

or new. To develop a definition of the concept of typology, he wrote five pieces in the form of lecture notes[117], but Aureli states that he never conclusively defined type. I will argue below that he did, if we are to understand it alongside Quatremère.

Rossi used typological knowledge as the empirical evidence to understand the structural and formal parts of the city that should not result in totalizing statements but as descriptions of singular moments in the life of the city. Aureli argues that Rossi thus furthers the realist legacies of the Modern Movement by adopting an analytical view of the city. For Rossi, typology is not imposed by an external overriding standard but is related specifically to problems of land division, formation of lots, building regulations and the needs of daily life.

All the ideas broached above can be examined in Rossi's *'The Structure of the Urban Artifact'*. The primary concern of this chapter is to introduce definitions and concepts that allow the analysis and interpretation of the city. His theoretical views can be understood from the dialectics that arise from his deliberations on the relation between architecture and the city, part and whole, rule and exception, general and particular, and housing and monument. It finds its synthesis in the urban artifact, in which I will argue fits into Quatremère's understanding of type.

Rossi introduces the city as architecture. He sees architecture as a creation inseparable from civilized life and society and by nature it is collective, it came into being with the first traces of civilization and is a permanent, universal and necessary artifact.

> *'The city, which is the subject of this book, is to be understood here as architecture. By architecture I mean not only the visible*

117 These are published as part of the reader for his course at IUAV, which includes, 'Considerations on the relationship between urban morphology and building typology' (1964); 'Typological problems and housing' (1964); 'Methodological problems of urban rsearch' (1965); Typology, manuals and architecture' (1966); and 'The city as fundamental for the study of building' (1966). This is now published as Aldo Rossi, *Scritti scelti.*, ibid., p.59

image of the city and the sum of its different architectures, but architecture as construction, the construction of the city over time. I believe that this point of view, objectively speaking, constitute the most comprehensive way of analyzing the city; it addresses the ultimate and definitive fact in the life of the collective, the creation of the environment in which it lives. [118]

For Rossi, the growth of the city accumulates memories and although this growth is inscribed by its architecture, the universality of this experience cannot explain the city's precise form as an object. The city's architecture embodies the tension between particular and universal, public and private spheres and buildings, rational design of urban architecture and the values of locus (place). Locus, Rossi would later define (and covered in Chapter 3) as the inter-relationship between the specific buildings on a site that creates a sense of place. The architecture of the city for Rossi, refers to two constructs: the city as a gigantic man-made object, a work of engineering, a large and complex architecture growing over time, and as urban artifacts, which are characterized by their own history and thus their own form.

Urban artifacts can be divided into two further categories: housing and monuments, both of which attain the status of an urban artifact because of their individuality, permanence and persistence. Housing leaves its imprints as signs of daily life on dwelling types. Urban monuments rely on their quality of permanence as primary elements and fixed point in the urban dynamics. Rossi cites the example of Palazzo della Ragione in Padua as an example of an urban artifact, for the multiplicity of functions this type can contain over time and how these functions are entirely independent of its form. This gives it the

118 Rossi, Aldo, 'The Structure of the Urban Artifact', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.21

character of permanence as well as a propelling element. In other words, the Palazzo is an urban artifact because it is transparent to function and independent of programmatic failure; and is thus a permanent element in the city because it is able to change its function in time whilst retaining its physical presence. It is propelling in the sense that it continues to evolve and contributes to the growth of the city despite its permanence. For Rossi, its individuality depends more on its form than material; and on being a complicated entity developed over space and time, with its richness of history. In these urban artifacts certain original values and functions remain, and some are altered. What remains are its spiritual values and the sum of all experiences and memories, both ominous and auspicious.

The urban artifact can also be considered as a work of art and it is closely linked to its quality, uniqueness and definition. Rossi admits that this quality is difficult to define. This may appear tautological but it does reveal the dialectics that Rossi was wrestling with in trying to posit a typological study that is a general method of analysis that does not preclude any individual quality that is an exception to the rule. He also states that the urban artifact could be a building, a street, a district. This is consistent with his understanding of the city as architecture, that precisely, the city can be seen in various disparate parts, as urban artifacts. Above all, Rossi stresses that this realism that is rooted in urban life, should be experienced, *'The city is seen as human achievement par excellance; perhaps, too, it has to do with those things that can only be grasped by actually experiencing a given urban artifact.'* [119]

The city as a work of art is above all the conception of the nature of collective artifacts, with the public as common denominator.

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119 Rossi, Aldo, 'The Structure of the Urban Artifact', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.33

Borrowing from Maurice Halbwachs' 'Collective Memory'[120], Rossi argues that the urban artifacts embody the collective memory that are their typical characteristics. Rossi also notes that it is important to consider the way in which people are able to orient themselves in the city and cites the work of Kevin Lynch's nodes, district, path, landmarks and edges. Lynch similarly argues that our image of the city is defined by the memory we have of these five elements. However, the memory that Rossi is referring to has to do with the collective memory that is lodged by history within a locus. This memory is above all typical and common as it belongs to the city's inhabitants, its citizens.

Rossi opens up the question of classifications and cites Durand's *Précis*, drawing from him the recombinant method that observes the fact that buildings are the elements which compose cities,

> *'We must begin with a question that opens the way to the problem of classification – that of the typology of buildings and their relationship to the city. This relationship constitutes a basic hypothesis of this work, and one that I will analyze from various viewpoints, always considering buildings as moments and parts of the whole that is the city. This position was clear to the architectural theorist of the Enlightenment. In his lessons at the Ecole Polytechnique, Durand wrote, "Just as the walls, the columns, &c., are the elements which compose buildings, so buildings are the elements which compose cities."' (Rossi, 1984), pg. 35*

Following his deliberation on the concept of permanence and collective memory, Rossi finally provides his definition of type as such: *'I would define the concept of type as something that is permanent and complex, a logical principle that is prior to form and that constitutes*

120 Halbwachs, Maurice, *La memoire collective* (Paris: Presses Universitaires de France, 1950)

it' [121] Rossi goes on to quote Quatremère's famous definition of type and in his footnote, cites Argan's reading of Quatremère in *'On The Typology of Architecture'* as particularly interesting. [122] Rossi agreed with Quatremère's distinction between type and model and draws a conclusion that the type is the structuring principle of architecture and that this principle is constant. He goes on:

> *'Such an argument presupposes that the architectural artifact is conceived as a structure and that this structure is revealed and can be recognized in the artifact itself. As a constant, this principle, which we can call the typical element, or simply the type, is to be found in all architectural artifacts. It is also then a cultural element and as such can be investigated in different architectural artifacts; typology becomes in this way the analytical moment of architecture, and it becomes readily identifiable at the level of urban artifacts. (...) Type is thus a constant and manifests itself with a character of necessity; but even though it is predetermined, it reacts dialectically with technique, function, and style, as well as with both the collective character and the individual moment of the architectural artifact. (...) Ultimately, we can say that type is the very idea of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the "feelings and reason" as the principle of architecture and of the city.'* [123]

Therefore, type is the principle that can be found readily in the urban artifact, it is permanent and prior to form. This definition brings together two ideas on the notion of type; one from Quatremère and one from Argan. Rossi brings them together to

121 Halbwachs, Maurice, *La memoire collective* (Paris: Presses Universitaires de France, 1950), p.40

122 Rossi, Aldo, 'The Structure of the Urban Artifact', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.182

123 Halbwachs, Maurice, *La memoire collective* (Paris: Presses Universitaires de France, 1950), p.41

address the dialectics of permanent and contingent, whole and part, and architecture and the city. From Quatremère it is type as a constant, prior to form (model or reified idea) and as a principle. Thus the urban artifact is the type that embodies the idea of the city. The idea of the city here understood as the collective memory or shared history accreted in the permanent structure of the city or the urban artifact. The city is for Rossi what nature is for Quatremère; similarly it is not the image or appearance of the city or nature that serves as a principle but its geography, climate, and total environment that condition the way of life.

From Argan, Rossi borrows the idea of type as a contingent, one that can be detected through analysis. It is also through Argan that Rossi borrows the analytical process of reduction to arrive at 'root form', a typological analysis. Rossi even cites the planar organization that Argan describes in Bramante's Tempietto but inserts the category of the city in place of architecture:

> *'Thus typology presents itself as the study of types of elements that cannot be further reduced, elements of a city as well as of an architecture. The question of monocentric cities or of buildings that are or are not centralized, for example, is specifically typological; (...) no type can be identified with only one form, even if all architectural forms are reducible to types. The process of reduction is a necessary, logical operation, and it is impossible to talk about problems of form without this presupposition. In this sense all architectural theories are also theories of typology, and in an actual design it is difficult to distinguish the two moments.* [124]

Thus Rossi shifts Argan's proposition of typology as an analytical method of building types to the analysis of the city, through its urban artifacts.

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124 Halbwachs, Maurice, *La memoire collective* (Paris: Presses Universitaires de France, 1950), p.41

Returning to the question of the idea of type, both Quatremère and Rossi returned to antiquity to formulate this structuring principle that conditions their type. Rossi in the final chapter of *Architecture of the City*, turned to Athens, and gave the account of the constitution of the city state. It rest on the double nature of the word *polis*, first as a constitution which is abstract and second as a city that is concrete. For Rossi, the city comes into being first and foremost from a collective decision to live among others.

> *To understand more clearly the value ascribed to the Greek city and its modernity as an urban artifact that persists throughout subsequent history, it is useful to recall the original structure of the Greek city, (...) Athens was a city formed by citizens, a city-state whose inhabitants lived scattered over a reasonably large region that was still closely tied to the city,(...) In this ancient organization it seems that the physical aspect of the city was secondary, almost as if the city were a purely mental place. Perhaps the Greek city owes its extraordinary beauty to this intellectual character.* [125]

To conclude, Rossi's type can be understood as the permanent principle of the urban artifact. This permanent principle is 'the idea of the city' as both the collective memory and the collective decision to live in coexistence; that is to say, the idea of the city as a political choice.

13. Conclusion

The idea of type is at its most instrumental when it is used as a heuristic device to uncover the very essence of architecture and

125 Halbwachs, Maurice, *La memoire collective* (Paris: Presses Universitaires de France, 1950), p.136-137

its relevance to the wider context in which it is pursued. The abstract principle of type is the culmination of Quatremère's effort in reasserting the supremacy of Greek architecture in light of the new archaeological evidence of Egyptian architecture, that there exists a more ancient civilization predating it. Quatremère solved this by proposing an epigenetic theory of origin that accounted for the emergence of the primitive hut, forfeiting Greek architecture's claim on the first original model, for its claim on the beautiful and abstract model. Quatremère's type was thus the primitive hut, arising from nature but tied to geography and the nature of society. The leap from the hut to the temple required abstraction and rationality of construction, qualities the Greeks possessed due to their nature of society. Through this abstraction, rationality and allegory, Quatremère was to revalidate the architecture of classicism and draw a link between architecture and society. The most important aspect of Quatremère's conception of the notion of type is in the abstract and secular nature in which it conceives of history: that architecture is no longer inspired by God and its theory modelled on the natural hut. Architecture found its framework in rationality and abstraction.

Argan emancipated the idea of type from an ideal residing in nature to one detectable in the history of architecture, through architectural models as precedents considered in series. Taking a less polarized approach to the distinction between idea and model, Argan presented the idea of type as a more instrumental device in the process of invention. Rossi, through Argan and Quatremère, transformed the idea of type as the idea of the city. Unlike Quatremère who insisted on the idea and the metaphysical aspect of type as ideal, Rossi's treatment of type was approached from the productive dialectics of idea and model, general and particular, abstract and concrete, and architecture and city. Through this, the problem of the 'difficult whole' is turned into

a unified theory of type, residing as a permanent principle in the urban artifact, a permanence that finds its metaphysical ideal in the idea of the city and bearing the traces of urban life.

Rossi's meta-critical project mirrors that of Quatremère for they both conflate architecture with sociality; and they do so through the heuristics of type. The former finds the allegory of a rational, abstract and beautiful architecture befitting the society of his time, the latter constructs the notion of the collective out of the idea of the city that acts as the permanent principle for architecture. For both, the idea of type here is arrived at when everything that is relative and contingent is stripped away, leaving behind what is most essential, irreducible and typical; in other words what is common to all.

2 THE DEEP STRUCTURE OF TYPE

1. Introduction

The theoretical works of Jean-Nicolas-Louis Durand (1760-1834) (Fig. 2.1) offer a different interpretation of the notion of type to that of Quatremère de Quincy. Durand's type in fact should not be taken as the direct opposite to that of Quatremère's. This conclusion is often arrived at when the theoretical works of Durand are read primarily as a reductive combinatorial formal exercise in designing a building. In such an exercise, the model as opposed to the idea as outlined by Quatremère, is given primary emphasis. Here, the model is cast as the opposite of the notion of type as an idea, understood as principles embedded in the object. The extreme reading of this is that Durand's theoretical work is reductively utilitarian, devoid of any idea and bearing no meaning.

It should be pointed out that Durand did not use the word type in his two books and did not explicitly set out to define the concept of type. Durand's theoretical ambition was to systematize architectural knowledge, to set out a rational method in designing buildings and in doing so to construct a science of architecture. It is my contention that this can be seen as an explicit attempt by Durand to formalise architecture's disciplinary knowledge, in line with the rapid rise of other scientific disciplines in his time, each with their own object of knowledge and methods. Nevertheless, Durand's theoretical construct is firmly based on the idea of type. This is not constructed out of the doctrine of imitation used by Quatremère and Laugier, but out of his attempt to systematize architectural knowledge by utilizing graphical means. This graphical method, I will argue, involves the use of comparative matrixes, diagrams and ideograms; it is structurally driven and guided by Durand's belief that architecture should be governed by 'Utility' and 'Economy'. I also propose that Durand's idea of type inheres in this method and offers the possibility to formulate



Fig. 2.1 Rondelet, Portrait of J.N.L. Durand, Notice historique sur la vie et les ouvrages de J.N.L. Durand

the disciplinary knowledge of architecture itself. This suggests that the idea of type through Durand can be understood in two ways: the first involves the principles that can be abstracted from building precedents and the second involves a generative method to further these principles in the design of buildings, utilizing the abstracted principles or 'deep structure'. This implies a rational process, the logic of type as a method; in other words, typology.

By moving away from the doctrine of imitation and rejecting the theories of Vitruvius and Laugier, Durand moved the practice of architecture away from the singular pursuit of beauty - through the imitation of nature and the human body - to one which is open ended and procedural to enable differentiation. Villary argues that this method is syntactic and has likened it to the structure of language. I offer an alternative reading, that is, this method cannot be fully abstract as the 'elements of architecture' that Durand sets out in his *Précis* are physical and this method can be seen more as a phylogenetic process. This is not to suggest that the method produces bio-mimetic architecture but that a building can be broken down to its irreducible part and be reconstructed again to a completely different building whilst bearing the imprints of that irreducible part. This serial process sets up an unbroken link to its precedent, I argue, and as such a link to the history of building types.

Although Durand utilizes typology in a pragmatic manner, evidenced in his pedagogical approach to teaching architectural design in the École Polytechnique, his larger ambition was to arrive at a general principle of architecture that is understandable and can involve not only architects and engineers but the general public. In this light, I propose that Durand's typology can be seen as a common grammar, where this form of disciplinary knowledge no longer utilizes symbolic means to construct a shared value but utilizes the very material of architecture as a common uniting knowledge.

2. Durand's *Recueil* and *Précis*

Durand was born in Paris, on *Rue Saint-Étienne-des-Grès* on September 18, 1760, into a family of modest means. But due to the kind intervention of his father's well-to-do client, Durand was able to study at the Montaigu College. He first studied sculpture but his talent for architecture was soon recognized and he was referred to the architect Pierre Panseron, professor of design at the *École Royale Militaire* and subsequently taken on as a draftsman in Boullée *agence* in 1777. In this period, Boullée was designing his *Hôtel des Invalides* (1778), *Opéra* (1781) and the *Métropole* (1781-82), and proved to be instructive to Durand's later independent career as an academic[1]. Durand did not attain great fame in his lifetime and dedicated his life to

> *'... teaching, treating it as a sort of secret and inspired mission that required rigourous anonymity. Secondly, he was above all a simple citoyen, product of the new bourgeois revolutionary engagement: l'homme inconnu, a man conscious of his civic responsibilities, one who refuses every form of renown while working quietly toward the construction of the new revolutionary society.* [2]

To do so in the context of the period of revolution, Villari argues, is to declare that one is self-sufficient and free of aristocratic relations and patronage. Although Durand had an early and relative success in architectural competitions[3], this did not spur him on in that direction. He in fact stopped altogether from producing any architectural proposals from 1780 - 1793. Villari

1 Villari, Sergio. *J.N.L. Durand (1760-1834), (* New York : Rizzoli International Publications, Inc., 1990), p.23

2 Ibid., p.23

3 Among them, the annual competition for the Prix de Rome in 1778, where Durand was the finalist but judging was undecided due to disputes over the running of the competition; and in 1780, winning the second prize for a proposals for a museum and college. See, Villari, Sergio. *J.N.L. Durand (1760-1834), (* New York : Rizzoli International Publications, Inc., 1990), p.25

argues that this further supports the view that Durand withdrew himself, as an act of renunciation that reflected the cultural and ideological orientation that resonated with the self-sufficiency and freedom of the individual[4].

In 1794, the *École Centrale des Travaux Publics* - later the *École Polytechnique* was established and Durand was charged with the preparation of the material for the course of architecture, but officially his career began in May 1796 as *Substitut de l'Administrateur de la Police* with the responsibility of organizing the second year courses for architecture; which comprised of 38 lessons, on a weekly basis, with eight monthly competitions[5]. This short and compressed study, would affect the way in which Durand structured an efficient and instructive pedagogy.

Durand's theoretical output can be summed up in two books: the *Recueil et parallèle des edifices de tous genres, anciens et modernes* (Collection and Parallel of Edifices of All Kinds, Ancient and Modern), (1799-1801) better known as *le grand Durand* (Fig. 2.2) and the *Précis des leçons d'architecture données à l'École Polytechnique* (*Précis* of the Lectures on Architecture Given at the Ecole Polytechnique), (1802-1805), also known as *le petit Durand*; the graphic portion was published in 1821.

The *Recueil* is a compilation of large plates of drawings. It consists of historical buildings grouped together according to the same architectural programme and presented in a single drawing. These buildings are drawn at the same scale, in plans, sections and elevations. There are no washes applied to the drawings and the buildings are not represented in perspective. They are measured orthographic projections, devoid of any 'pleasing effects'. These drawings are for comparative purposes and Durand considers the charm of perspective as a distraction and impediment to the true

4 Villari, Sergio. *J.N.L. Durand (1760-1834), (*New York : Rizzoli International Publications, Inc., 1990), p.31

5 Ibid., p.28

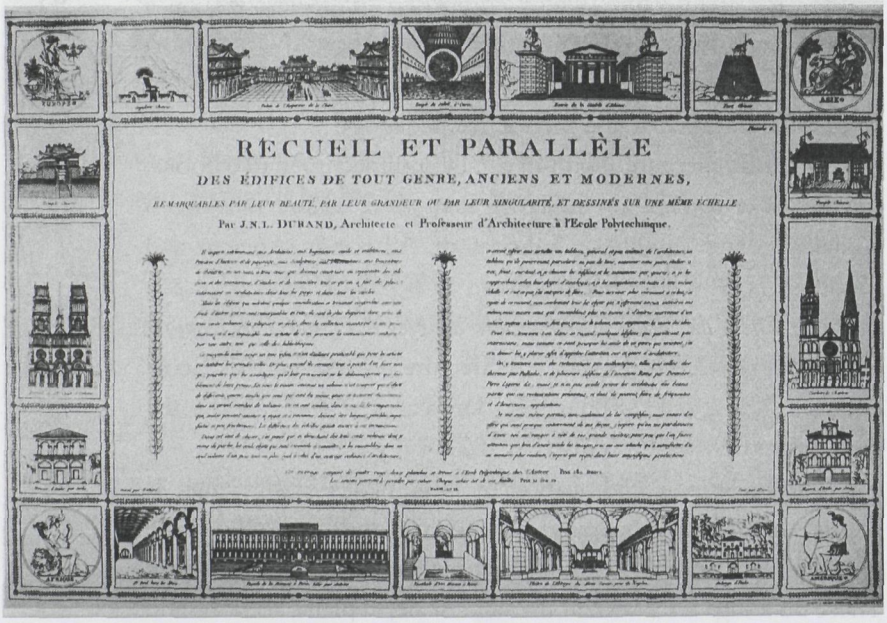

Fig. 2.2 J.N.L. Durand, Frontispiece of *Recueil et parallele des édifices de tout genre*

understanding of architecture. The *Recueil* in Durand's time was regarded as the source of reference for the study of the historical evolution of building types, according to their architectural programme.

The *Précis*, on the other hand, was considered more inferior to the *Recueil* when it was first published, due to its lack of illustrative content. It was meant as a didactic tome for the teaching of architecture in the École Polytechnique, but soon became a classic in architectural education and a staple for the École des Beaux-Arts. The success of the *Précis* is also evident from the number of times it was published and the languages it was translated into. After the first edition, three more editions were published: 1817-19, 1823-25, and 1840- (posthumously)[6]. It was translated several times in Belgium and translated into German by Durand's student, Courday. The influence of the *Précis* began to wane with the collapse of the École des Beaux-Art and was eventually replaced in the advent of Architectural Modernism that rejected the academic tradition in design.

Considered one of the earliest writings on composition and type, the *Précis* attracted both critics and admirers throughout two centuries. Alberto Perez-Gomez clearly holds Durand's *Précis* responsible for the irrevocable separation between architecture and its symbolic meaning in the advent of modern science. He sees Durand's method as one which is driven purely by functional considerations. In contrast, Bernard Huet in his introduction to Szambien's *J.N.L Durand,* credits Durand for his search for a design method, and in so doing posits design as the most important aspect of architectural education[7].

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6 Villari, Sergio. *J.N.L. Durand (1760-1834), (*New York : Rizzoli International Publications, Inc., 1990), p.58

7 Picon, Antoine, *'From "Poetry of Art" to Method: The Theory of Jean-Nicolas-Louis Durand'* in Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.2

Although Durand's compositional procedures that favour axial symmetries and the disposition of walls and columns in the language of neo-classicism are no longer practised today, the question as to how to 'design a design method' remains a persistent preoccupation in the discourse of architectural pedagogy. Also, the question as to the nature of architectural knowledge, if it is scientific or artistic, remains one of architecture's enduring problems.

3. The Discipline of Architecture

The period in which Durand prepared his *Recueil* and *Précis* is one that saw the creation of new scientific disciplines, with their own object of knowledge and methods. This rise of and subsequent triumph of science, not only challenged the foundations of the nature of knowledge but also enabled rapid technological progress that transformed every aspect of life. At the heart of this modern outlook is the authority of science founded on reason rather than on ecclesiastical authority; that seeks not only to understand the world (theoretical science) but to also change the world (practical science). This general culture of enlightenment fostered a climate that was critical of unfounded assertions and saw an increasing hold of empiricism from Britain into France[8]. Increased travel

8 *'The increased influence of Newton, as distinct from Descartes, was one of the most crucial factors. The Meditations were not republished between 1724 and 1824. During this same period, Voltaire declared himself a fervent disciple of Newton, and Madame du Châtelet translated the Mathematical Principles of Natural Philosophy. Descartes had come to seem a distant and somewhat forbidding ancestor, whereas Newton's thought now appeared to be at the very heart of the century's preoccupations. His account of the bond between mathematics and the world seemed to provide scientists with the answers they had been seeking, (…). Voltaire's contemporaries regarded first causes as irrecoverable, and preferred to draw conclusions from experiments, a word epitomising a curiosity that ranged from an analysis of the workings of the soul to the properties of matter. Everyting became the object of experiment.'* Picon, Antoine, trans. Thom, Martin, *French Architects and Engineers in the Age of Enlightenment* (Cambridge, Cambridge University Press, 1992), p.35. For the general characteristics of the Enlightenment in France, I have referred to Roberts, J.M., *History of Europe* (London: Penguin Books, 1996), p.250-271 and Russell, Bertrand, *History of Western Philosophy* (Oxon: Routledge, 1996).

also brought about new evidence of other architectural cultures, some being more exotic than others, and hence raising new questions as to the validity of the received assumption that all architectures originated from the Greek temple.

The tendency for architecture to question its own methods of investigation and reasoning seems to occur in times of crisis and transition. This occurred in the eighteenth and nineteenth century and again in the 1970s as the modern movement in architecture was waning with the passing of the modern masters. This in part has been highlighted by Vidler's 'Third Typology' as discussed in Chapter 1. The nature of these questions inevitably leads to attempts at the construction of a science of architecture. It reflects architecture's anxiety over its role in society. To sustain or regain its relevance in this context, architecture's knowledge and method are to be restructured along the lines of other scientific disciplines. The work of Durand epitomises the efforts to achieve this goal.

The context that marked the shifting of disciplinary boundaries saw the role of the architect increasingly being challenged by the rise of the engineers, who oversaw the construction of public infrastructure and new building types, often large and with more complex technical considerations. These new types began to emerge in the form of facilities buildings, such as markets, schools, courthouses, slaughter houses, hospitals, taking over the monuments and buildings for the king or church. The increased complexity and new problems associated with these new building types increased the separation between the artistic and the technical. The Vitruvian unity of art and science soon gave way to a new impetus of utility and technical problems, with the technical aspects of building taking over the issues of *ordonnance*. This highlighted the urgency among architects and theoreticians to define architecture's disciplinary boundaries and, as such, to set out its object of knowledge and

methods.

Picon, in his *'From "Poetry of Art" to Method: The Theory of Jean-Nicolas-Louis Durand'*[9], highlighted the fact that as architecture began to find itself in service to the community, the imperative towards utility spurred on the technical aspects of architecture. Architecture in these circumstances must be useful and correspond to the needs and norms of society as they evolve. Utility was the new concern for architects and engineers, both eager to demonstrate the suitability of buildings or structures for the community they served[10].

Furthermore, the importance placed upon utility can be understood, according to Picon, by the moral authority that utility bears, drawn from the sensationalist philosophies of John Locke and Étienne Bonnot de Condillac. According to them, ideas and judgement are ultimately derived from the senses. Thus what conditions the mind and soul should be the sensations (or enjoyment as Picon would argue) of the physical realm, and architecture that enables this claims a position of higher morality.

In the context of enlightenment culture, the concept of utility also relates to the idea of human beginnings. That is, our most pressing needs, of both the body and mind, date back to the very dawn of civilization. And these needs are tied to the question of utility in architecture as clearly outlined in Laugier's *Essai sur l'architecture*[11]. However, the mythical extrapolation of the origins of the primitive hut to its evolution as the Greek temple and to architectures henceforth, can no longer be sustained. Laugier's proposition based on only one archetype, was untenable in light of the increasing demands of contemporary building requirements and the newly discovered architecture's from

9 Picon, Antoine, trans. Thom, Martin, *French Architects and Engineers in the Age of Enlightenment* (Cambridge, Cambridge University Press, 1992), p.16

10 Ibid.,

11 Laugier, Marc-Antoine, An Essay on Architecture (Los Angeles: Hennessey & Ingalls Inc, 1977), p.11

around the world that did not derive from the Greek temple. Although the question of the origins of architecture was opened, it began to shift to the causes of utility. This was in line with Locke's theory of understanding that relies on empirical methods and inductive rather than deductive logic.

Both Picon and Villari have outlined the influence of Boullée on the way in which Durand was to reconstruct the discipline of architecture. The latter argued that Durand adopted the 'logical system' of Boullée's architecture, and this rational principle is in turn indebted to the sensationalist philosophers. Both opined that Durand's work lacks the poetry of his master and is indifferent to the '... *passion impérieuse*, (...) epic spectacle of nature, visions of sublime and the disqueting torment' that sustained the work of Boullée. It is a generational shift from *génie froid et calculateur* and the *génie instinctif et inspiré*'[12]. Villari described the transformation of the conception of architecture from Boullée to Durand, as a route from the 'spiritual family' to the new domain of technical and scientific thought; and Picon similarly characterizes this as the movement form 'poetry of art' to method. As this is already well argued by the two authors and the context of the works of Boullée and Ledoux have been masterfully contextualized by Emil Kaufmann[13], I will only give a brief summary of the work of Boullée and its influence on Durand, as the focus here is on the question of type.

Boullée and Ledoux saw that the discipline of architecture had to be reconstituted on some basis other than the manipulation of classical orders. Both Boullée and Ledoux were Blondel's students, and thus were educated in the Vitruvian traditions through Blondel's *Cours d'architecture*. Kaufmann ascribes the term 'revolutionary' to these architects because they wanted

12 Villari, Sergio. *J.N.L. Durand (1760-1834), (*New York : Rizzoli International Publications, Inc., 1990), p.32

13 Kaufmann, Emil, *Three Revolutionary Architects: Boullée, Ledoux, and Lequeu* (Philadelphia: American Philosophical Society, 1952)

architecture to be liberated from this tradition that they saw had little to do with the prevailing political context. This early attempt at rebuilding the discipline of architecture saw Boullée, Ledoux and Le Camus leaving aside the orders and focused instead on the sensations produced by elementary forms and volume. Faced with the task of dealing with platonic solids to express the function that the building contains, the process of composing and decomposing became important (and this realization would continue with Durand in his attempts at constructing the discipline of architecture), Boullée looked to the philosophies of sensations and drew a relation between sense and judgement - that the clarity of platonic solids would convey meaning through the senses. Yet the gulf remained between the simplicity of form and the complexity of judgements in the mind and the new demands of utility that architects needed to face. Boullée attempted to resolve this by 'instilling work with character' and uses both forms and inscriptions. The former predate language, as the elementary form is rendered with light and shade and is primordial; the use of inscriptions and ornaments are like writing architecture. Because the architecture of Boullée aspires to be the bearer of collective values, it marks a complete break with Vitruvian tradition. Where Vitruvian principles have architecture embodying the transcendental, in Boullée and Ledoux, it is firmly in the collective, in men. Boullée stressed the difference between building and architecture, and insisted that architecture must ultimately start from a conception, from design. He fought to preserve the role of the architect against the engineers. Picon argues that the failure of Boullée's project is due to his inability to theorise a design method based upon the application of the concept of type and character. Thus there was an unbridgeable gulf between what the architecture represents and the utility it needed to serve. Durand, a student of Boullée, took this problem on and completes the quest to institute a discipline of architecture,

but in the process drops the 'poetry of art'; this transition is what Picon terms the transition from aesthetics to epistemological concerns. The nature of the challenge that Durand confronted is the same – the possibility of maintaining the autonomy of architecture in a world increasingly dominated by scientific and technological rationality. The *École Polytechnique* was first and foremost a school that teaches scientific and technological knowledge, hence exacerbating the challenge for Durand.

4. The *Recueil*: from the Ideal to General Principles

Whereas the *Précis* was a treatise on architectural design, the *Recueil* precedes it as a survey of the knowledge of architecture. Both however clearly outlined Durand's ambition to search for the general principles of architecture. The former accomplishes this by utilizing procedural composition and the latter the comparative method.

The *Recueil* takes architecture itself as its object of knowledge, by recognizing historical buildings as precedents. In bringing together different buildings from different historical periods and geographical regions on one large plate for the purpose of comparison, it acknowledges the very existence of architecture as a field of knowledge. It extends the study of architecture beyond the lessons contained within a single building as an ideal archetype. In this manner, using the comparative method, the *Recueil* is different from the books of Palladio, Serlio, Scamozzi and Vignolla; Durand's plates no longer compare the different proportions of the orders as received canons or measure its proportions in relation to the human body. Instead, they compare different buildings as a group, in series, to uncover general principles that bind them as a 'genre'[14].

14 Durand in this instance, uses the word 'genre' rather than 'type' as categories that define

4.1. The Comparative Method

Classification as a comparative method was therefore the technique used in extracting general principles from particular cases. In the *Recueil*, buildings are grouped around two general categories. The first is historical, bringing together Egyptian temples, Roman palaces, etc. The second category is functional, grouping churches (Fig. 2.3), townhalls (Fig. 2.4), theatres, markets, hospitals etc. There is however a third category, but it only appears in one plate (Fig. 2.5), that is the 'Round Temples'. Its inclusion suggests that Durand considered form as constituting a distinctive feature, like history or function. The significance of geometry as a category was to inform Durand later in his *Précis*. Extracting general principles from shared characteristics is a method adopted from the discipline of natural sciences. According to Mari Hvattum,

'The comparative method had been celebrated as the nineteenth century's 'ruler of science' and the means by which the 'individual event' of history and culture could be lifted 'up to the level of general truths'[15]

The *Recueil*, with its methods influenced by the natural sciences shares many similarities with Linnaeus's *Species Plantarum* (1753) which compares reproductive organs of plants and Buffon's *Histoire Naturelle* (1749) that proposes a classification system based on the evolution of animals. However, following Hvattum's argument, a significant difference should be made between the method adopted by Georges Baron Curvier (1769-1832) and that of Linnaeus.

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the grouping of the buildings according to their use.

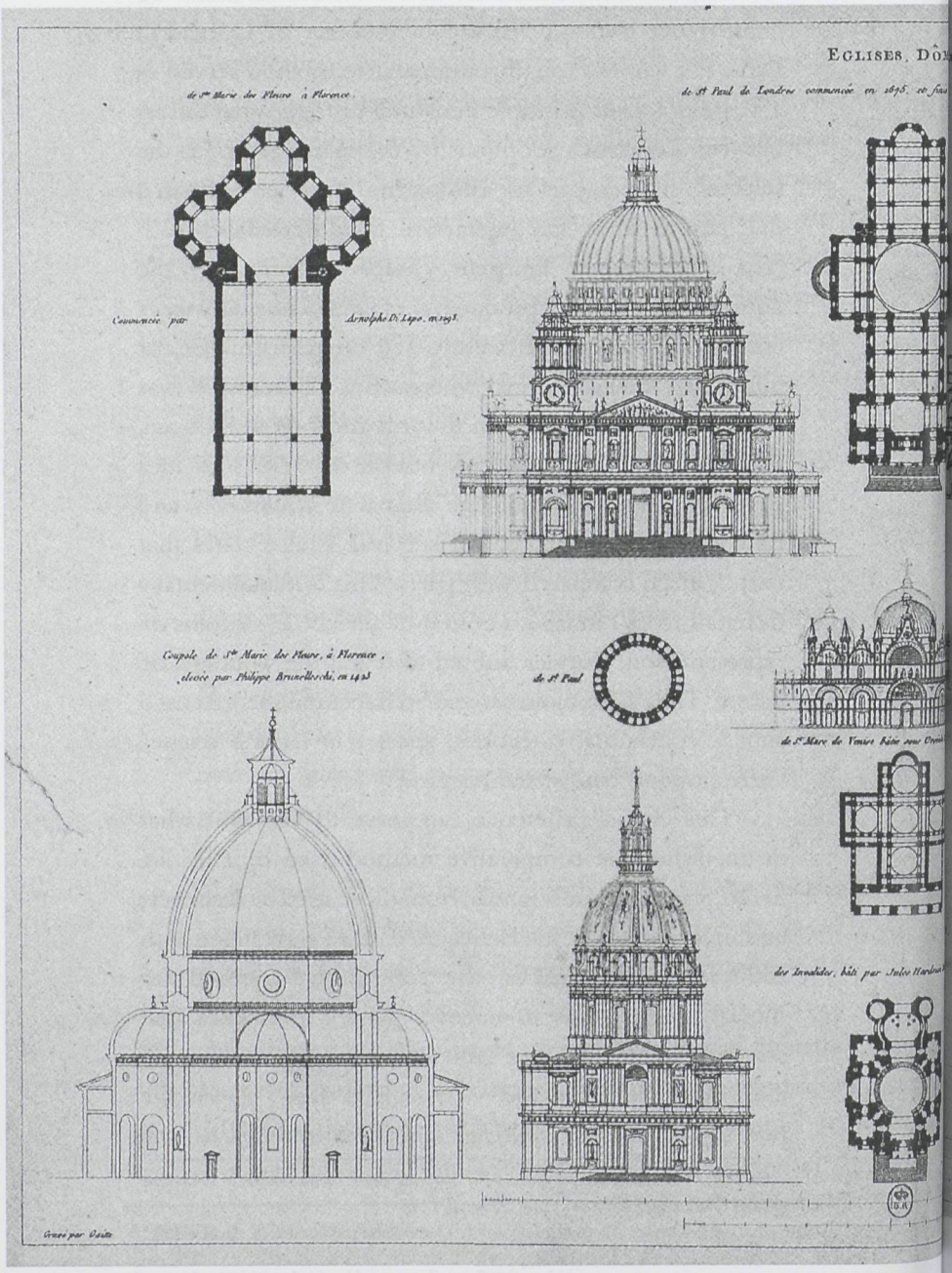
15 Hvattum, Mari, 'The Comparative Method', in *Gottfried Semper and the Problem of Historicism* (Cambridge UK, Cambridge University Press, 2004), p. 115

Curvier, a French anatomist and a celebrated father of comparative anatomy was a contemporary of Durand in Paris. For Curvier too, the comparative method served as a methodological principle in natural history. What differs between Linnaeus's adoptions of the same method is the selection of elements for comparison. Curvier compared the 'performance and interaction of different organs'[16] (Fig. 2.6) whereas Linnaeus compared form and the number of plant's reproductive organs. Thus, Curvier's criteria for comparison were based on performance, or utility in Durand's terms, whereas for Linnaeus, it was form. This shift, from form towards function introduced, according to Hvattum a new notion of type. This idea states that every part of the animal is structurally and functionally differentiated for survival. It also states that parts can be compared with parts. This is fundamentally different from Linnaeus's notion of science as a means of representation; Curvier wanted to reveal the workings of nature. Thus both biologist and architectural theorist used similar conceptual categories, species in natural science correspond to type in architecture[17].

This crucial difference can serve to highlight what distinguishes the comparative method used by Palladio, Serlio, Scamozzi and Vignola, from those used by architects and theoreticians in the late eighteenth to early nineteenth centuries. The focus on the comparative method for the latter, thus, was to uncover general principles that structure its performance rather than its representation of ideal beauty. For Durand – through Le Roy - it was the performance of the buildings compared in series, as well

16 Hvattum, Mari, 'The Comparative Method', in *Gottfried Semper and the Problem of Historicism* (Cambridge UK, Cambridge University Press, 2004), p. 126

17 Madrazo, Leandro makes the same argument in 'Durand and the Science of Architecture', *Journal of Architectural Education*, 48.1 (1994), pp. 12-24.


EGLISES, DÔ
de Ste Marie des Fleurs à Florence.
Commencée par
Arnolphe Di Lapo, en 1298.
de St Paul de Londres commencée en 1675. et fini
Coupole de Ste Marie des Fleurs, à Florence,
elevée par Philippe Brunelleschi, en 1423
de St Paul
de St Marc de Venise bâtie sous
des Invalides, bâti par Jules Hardouin
Gravé par Gaitte

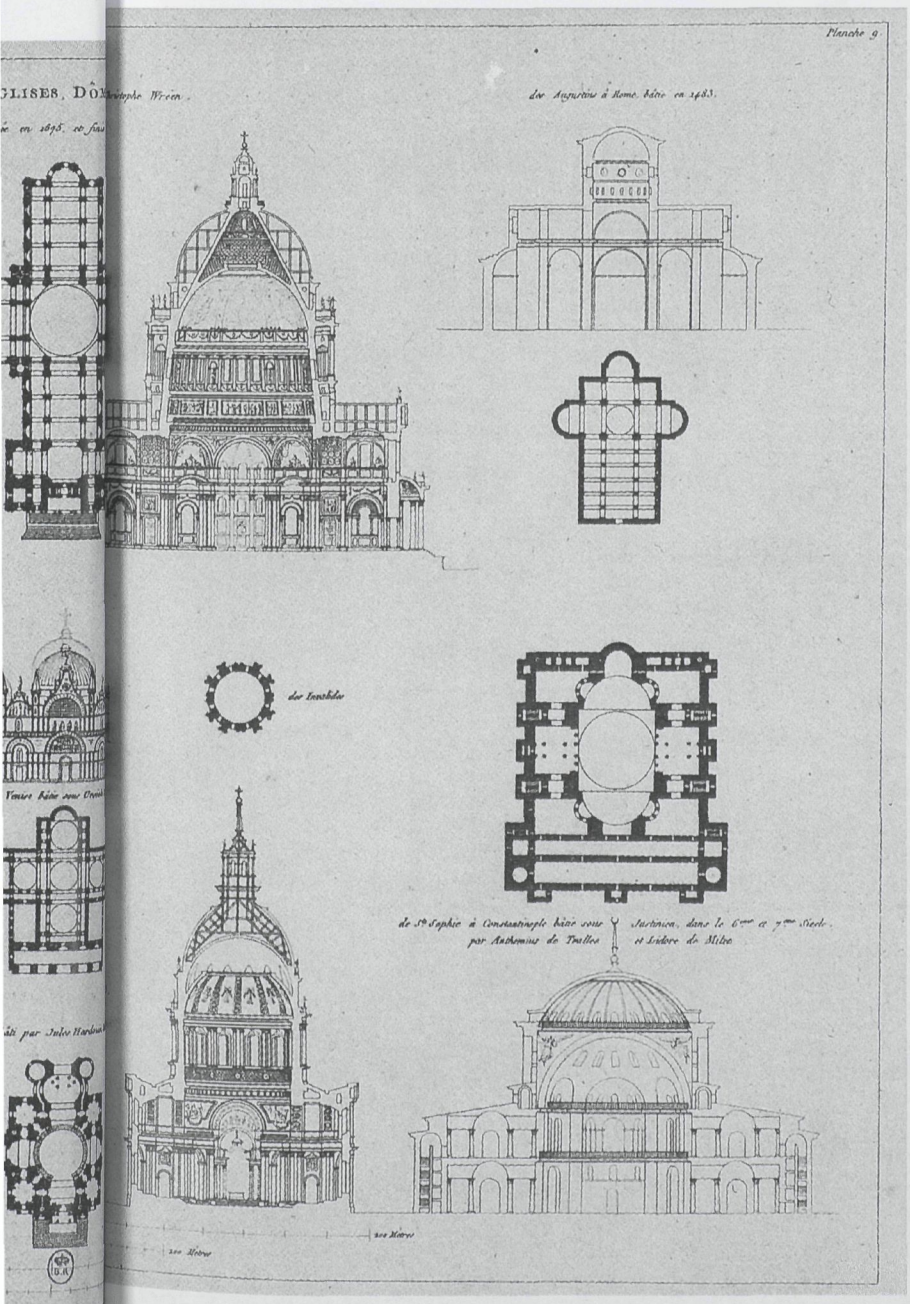
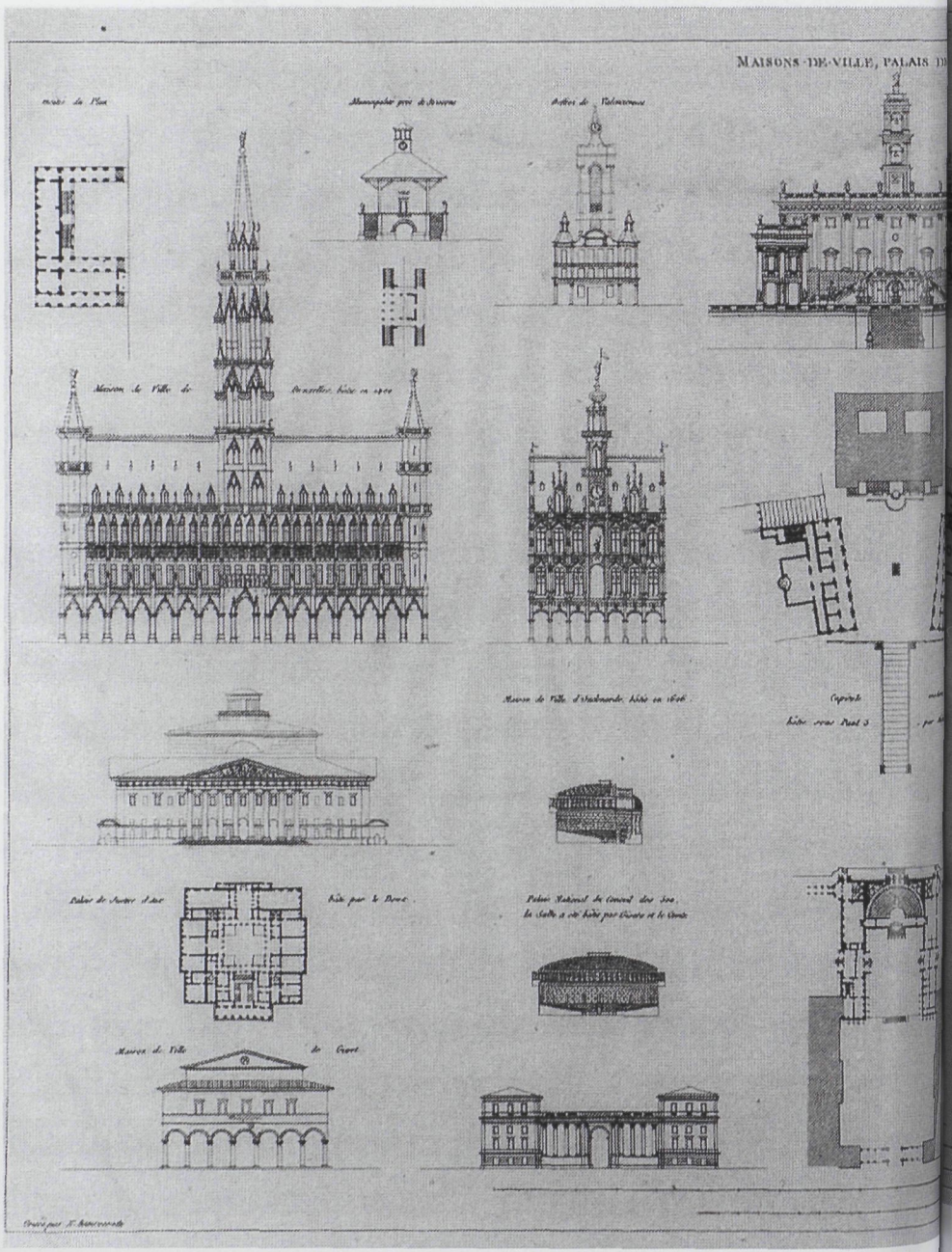


Fig. 2.3 J.N.L. Durand, Churches, *Recueil et parallele des édifices de tout genre*


MAISONS-DE-VILLE, PALAIS D

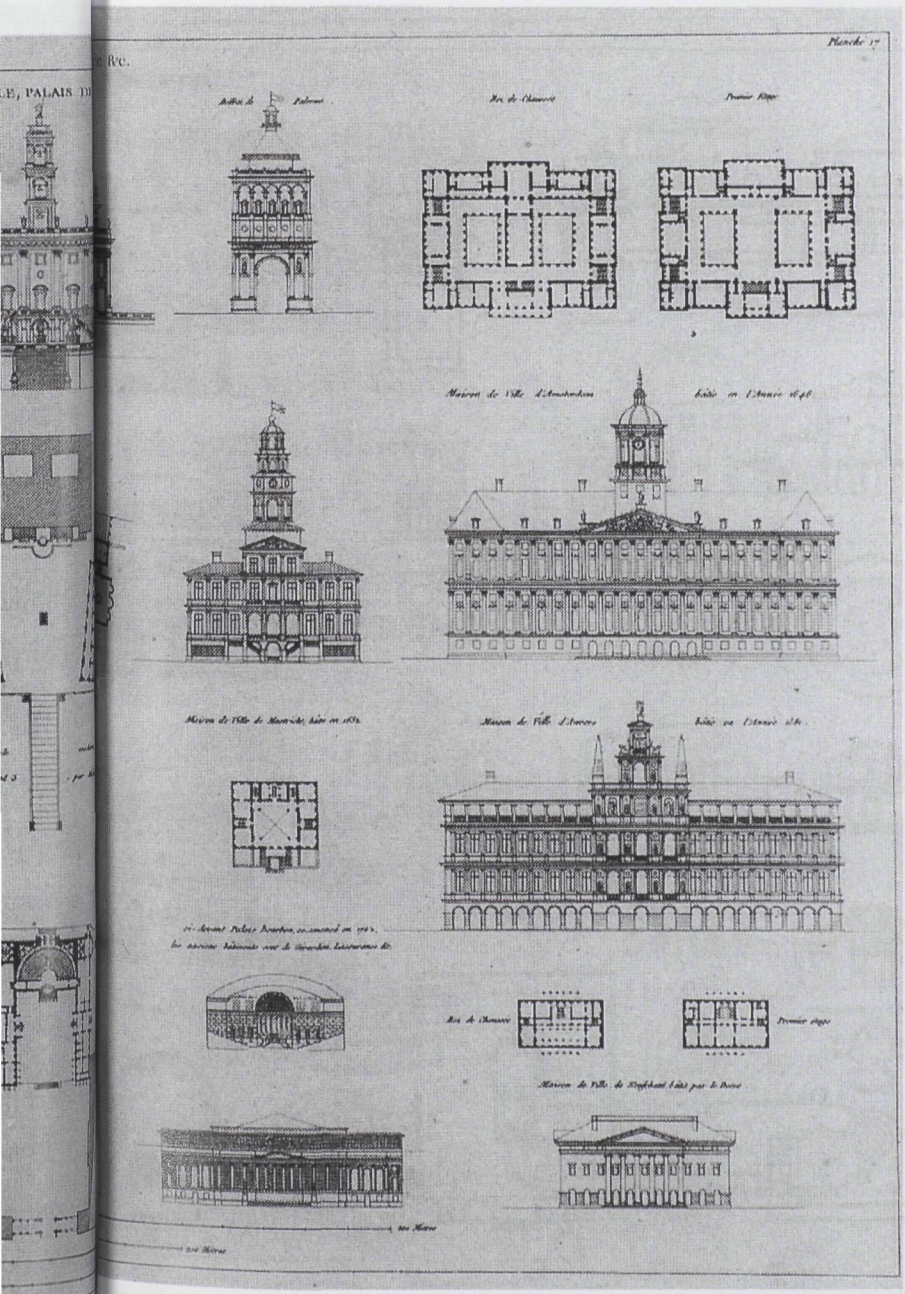
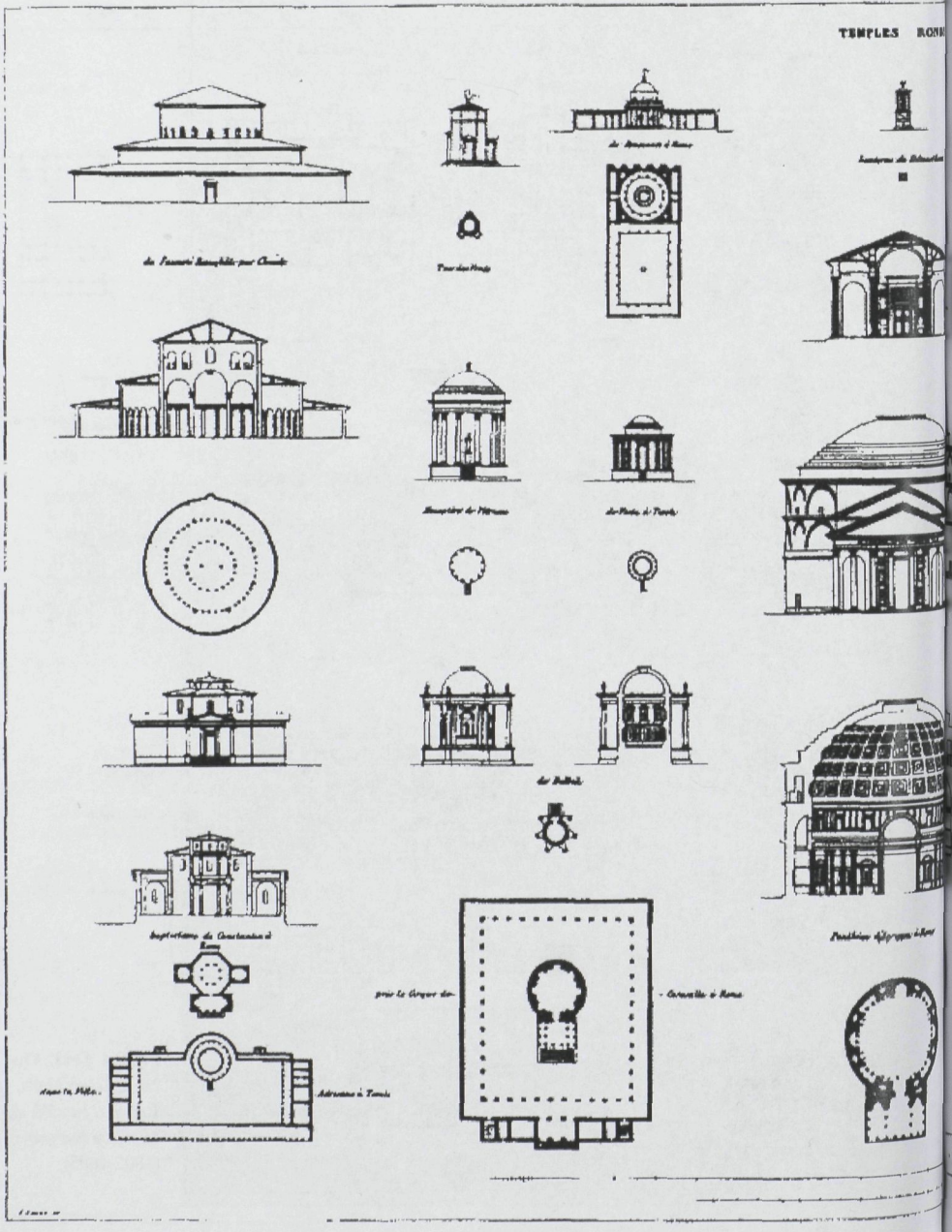


Fig. 2.4 J.N.L. Durand, Town Halls, *Recueil et parallèle des édifices de tous genres* (1802-1805)


TEMPLES

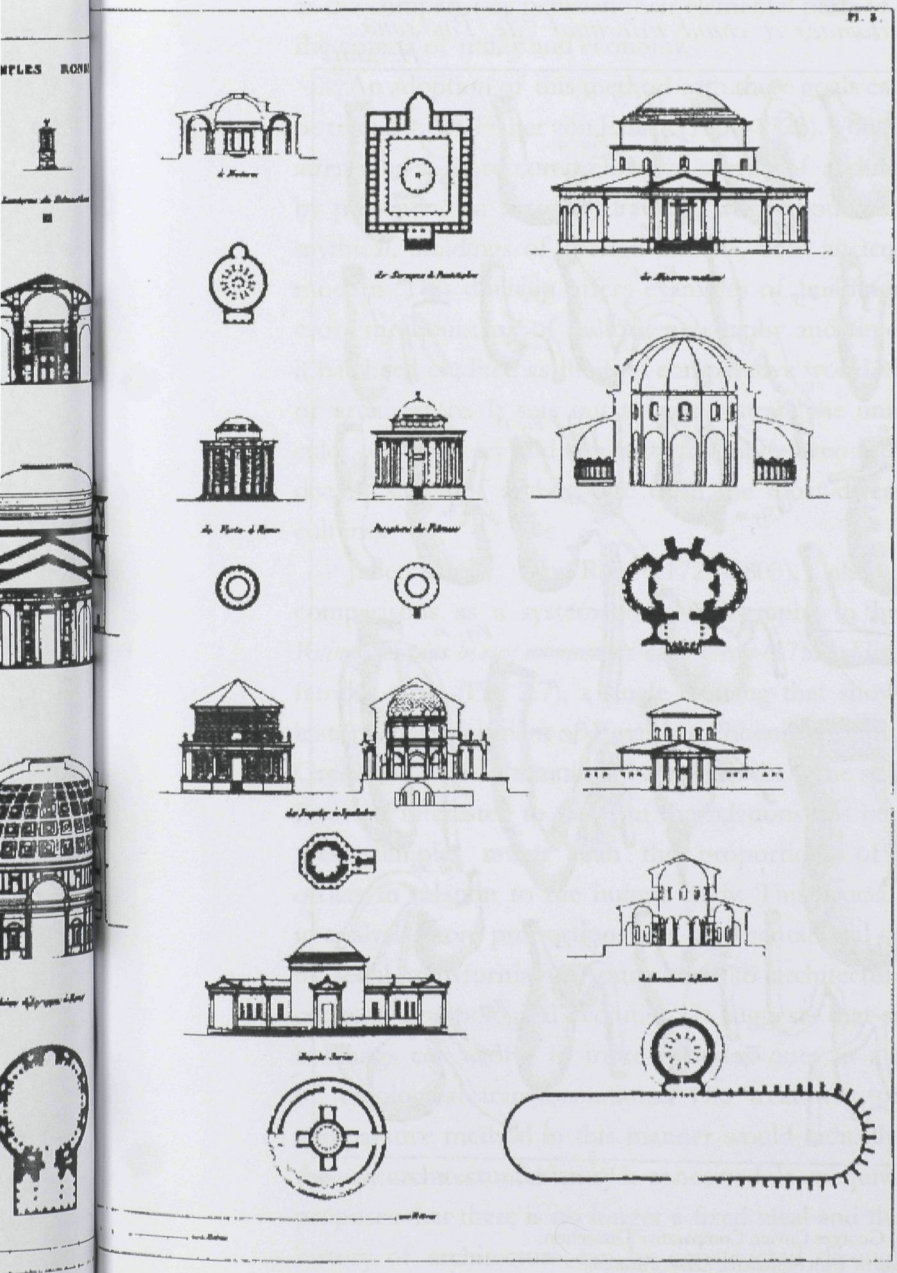


Fig. 2.5 J.N.L. Durand, Round Temples, *Recueil et parallèle des édifices de tous genres* (1801)

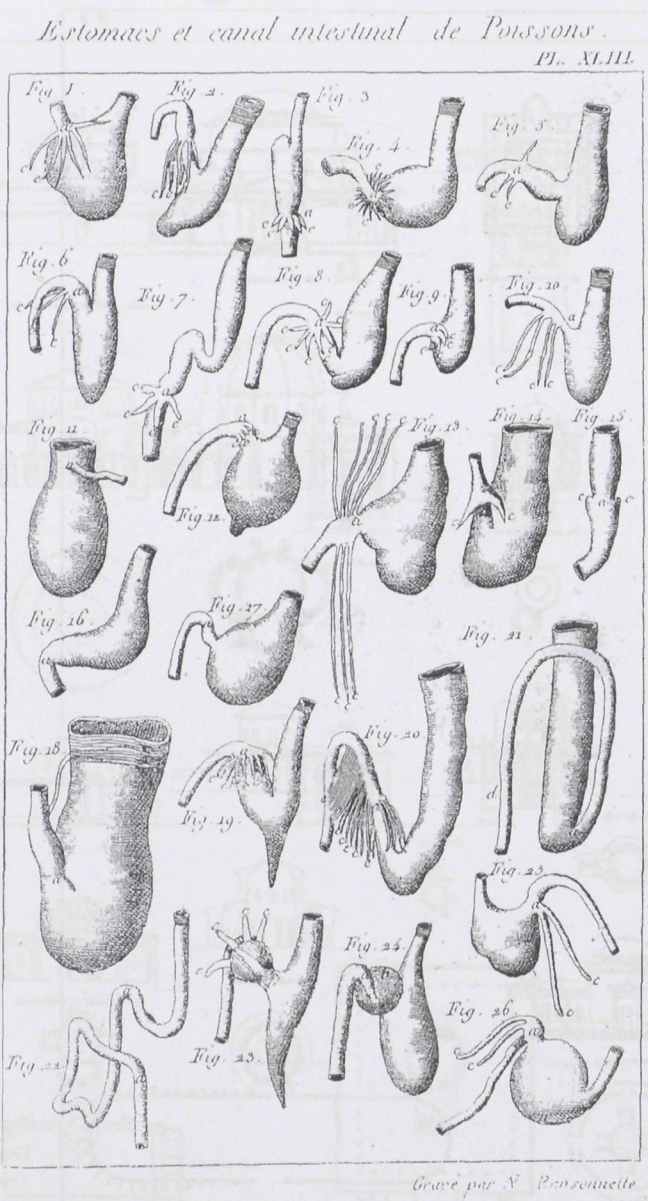


Fig. 2.6 Georges Cuvier, Comparative Dissection Drawings of Fish Stomachs, *Leçons d'anatomie comparée*, Paris 1805, vol.5, fol. XLIII. Glasgow University Library, Dept. of Special Collections.

as the comparisons between their elemental parts to serve the criteria of utility and economy.

An adoption of this method with these goals can first be traced to J.B. Fisher von Erlach (1656-1723). Von Erlach attempted a more comprehensive survey of architecture by presenting in a single drawing, works both real and mythical, buildings of foreign nations, both ancient and modern. This drawing offers examples of buildings that cross the boundary of culture, geography and time, and it has been credited as the first comparative world history of architecture. It sets out to demonstrate the universal rules of symmetry and regularity that unite even the most diverse styles of architecture from the most diverse of cultures.

Julien-David Le Roy (1724-1803), also used comparisons as a systematic historiography in his *Les Ruines des plus beaux monuments de la Grece* (1758). His most famous table (Fig. 2.7), a single drawing that shows the historical development of Egyptian, Phoenician, Christian, Greek and Roman temples all drawn to the same scale. Le Roy was interested to find out the relationships between these temples rather than the proportions of their orders in relation to the human body. This crucial shift in analysis, from proportions as a representational system to serial transformation, introduces to architecture the concept of typological evolution. It suggests that simple buildings can evolve to more complex ones in a series of typological transformations. The treatment of the comparative method in this manner would radically alter the way architectural history is conceived. It unequivocally proposes that there is no longer a fixed ideal and that the history of architecture can be constructed through the study of the evolution of its buildings rather than as a

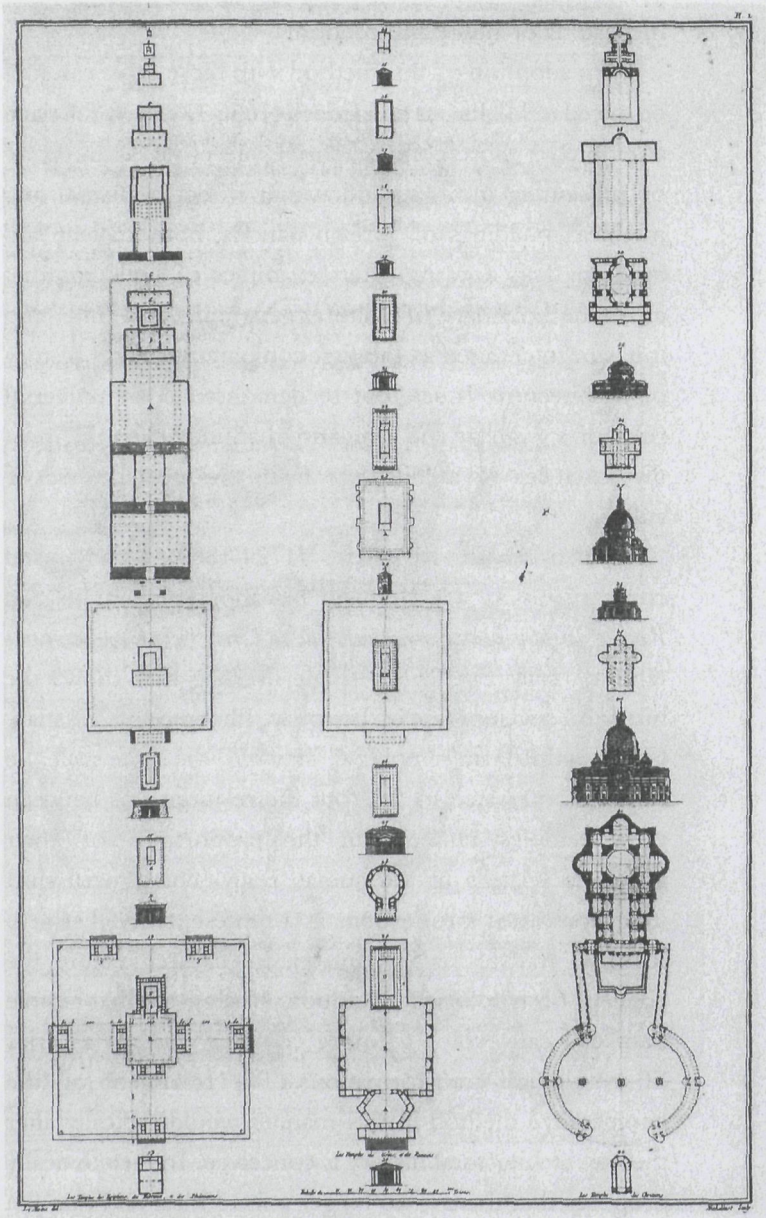


Fig. 2.7 Julien-David Le Roy, Parallel Between Ancient and Modern Temples, *Les ruines des plus beaux monuments de la Grèce*, 2nd ed., Paris 1770

received canon from the ancient. Although Le Roy was not the first to create plates lining up historical building types in a comparative matrix, he was the first to use them as a basis for a theory of comparative architectural history. This method seeks to measure historical development, classifying works of architecture according to evolutionary lines of progress or decay[18].

Durand, a former student of Le Roy, clearly used this comparative method in his *Recueil* as a diagnostic device. Like Le Roy, Durand's drawings are characterized by the use of a same scale in plans, elevations and sections, sorted according to type. Where Durand differs from Le Roy is that in his *Précis*, Durand would further the comparative method into a design method.

4.2. Classification and Simplification

In the *Recueil*, the types selected are no longer the ideal types like those selected by Le Roy. Durand was more concerned with utility and economy and saw it as more fitting to bring together a comprehensive - although not exhaustive or definitive - selection of buildings that serves to highlight the problems and considerations that are associated with the particular genre. The *Recueil* thus provides students of architecture with empirical standards for design. Picon argues that the idea of type for Durand can be found here in the *Receuil*:

'The type is a complex device stabilized by function and usage, a condensation of architectural culture; it relates symmetrically to the element. The architect's apprenticeship begins with a catalogue of

18 Hvattum, Mari, *Gottfried Semper and the Problem of Historicism* (Cambridge UK, Cambridge University Press, 2004), p. 117

the elements of buildings; the practice of design starts with a survey of established types, just as we comb a library for reference before starting to write an academic treatise. [19]

As a typological sourcebook, the *Recueil* however cannot be considered an accurate archaeological survey of historical building types, as Durand consciously modified some of the plans to make them more regular and geometric, citing that Palladio and Piranesi did the same[20]. This process of modification is carried out by removing small or insignificant traits that cause inconsistencies and by rationalizing their geometries. Durand found this necessary as it assists the process of comparing the general characteristics of the buildings and from there on deriving their general principles.

This act of modification also involves the act of simplification and was seen later in Durand's *Précis*. In Plate (Fig. 2.8), the plan of St. Peter's is shown next to an invention by Durand, based on the original basilica that stood on the same site. This act of simplification is carried out to show that the true principles that underlie the complex form of the actual design can be revealed or reconstructed through the use of grids, simple geometric figures and simple building types. This irreducible configuration, that can give rise to St. Peters as well as Durand's version of St. Peters, is the one which Durand proposed in this plate. Thus Durand's concept of type corresponds to the irreducible geometric form, from which other forms can be derived. They can be understood as both the irreducible composition of geometric forms and

19 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 49.

20 Madrazo, Leandro, 'Durand and the Science of Architecture', *Journal of Architectural Education*, 48.1 (1994), p. 13

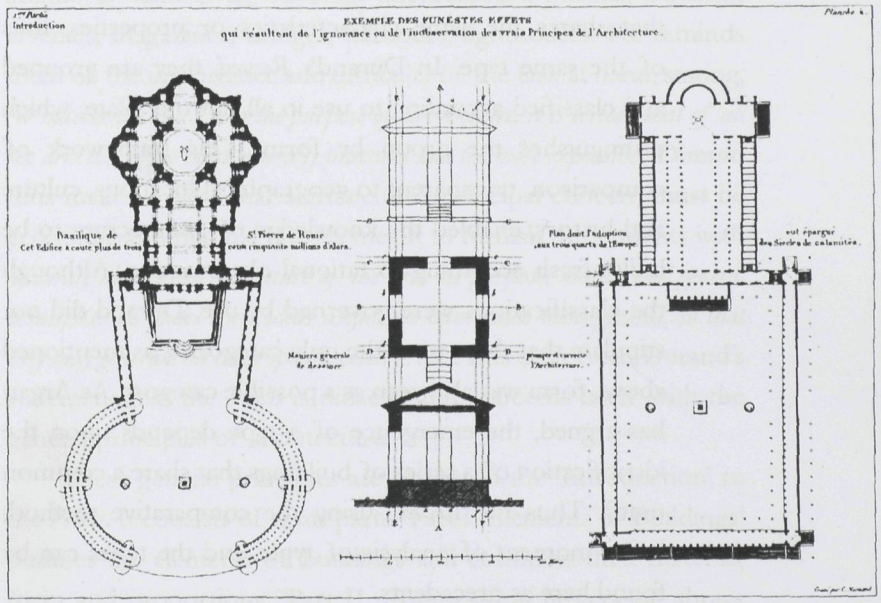


Fig. 2.8 J.N.L. Durand, Exemple des funestes effets qui résultent de l'ignorance ou de l'inobservation des vrais Principes de L'Architecture, *Précis of the Lectures on Architecture* (1819)

the geometric figures themselves.

4.3. Type as Precedents in the *Recueil*

The comparative method, as utilized in the *Recueil,* replaced the archetypes, or the ideal architectural models with a more general and contingent notion of the building types. They are building types because they belong to a group that shares the same characteristics or properties, thus of the same type. In Durand's *Recueil,* they are grouped and classified according to use in all but one plate, which distinguishes the group by form. This framework of comparison, transparent to geographical locations, culture and history, enabled the knowledge of architecture to be built afresh according to rational observations. Although the classifications were governed by use, Durand did not stipulate that these were the only categories, as mentioned above, form was also seen as a possible category. As Argan has argued, the emergence of a type depends upon the identification of a series of buildings that share a common trait[21]. Thus the *Recueil,* using the comparative method, is the moment of analysis of types and the types can be found here as precedents.

21 *'The birth of a 'type' is therefore dependent on the existence of a series of buildings having between them an obvious formal and functional analogy. In other words, when a 'type' is determined in the practice or theory of architecture, it already has an existence as an answer to a complex of ideological, religious or practical demands which arise in a given historical condition of whatever culture.'* in Argan, Giulio Carlo, 'On the Typology of Architecture', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), pp. 242-46 (first publ. *Architectural Design*, 33.12 (1963), 564-65

5. *Précis*: General Principles and Procedural Differentiation

Where the *Recueil* is theoretically descriptive, the *Précis* is prescriptive. The *Précis* was prepared for engineering students in the École Polytechnique as a concise course in architecture. In his preface to the *Précis*, directly addressing the engineering students of the École Polytechnique, Durand acknowledged that they may be required to design large buildings, more likely than architects themselves, buildings like hospitals, prisons, barracks, arsenals, magazines, bridges, harbours, lighthouses. He reminds them of the importance and difficulty of the task at hand, stating, *'Whatever the object and the purpose of architecture, it is certain that of all the arts this is the most generally practiced and the most expensive'*. Durand thus makes it clear that architecture's principal concern must be economic and that his *Précis* is meant to furnish the students with *'accurate ideas as to the nature of the arts: its purpose, means, and general principles. To make these ideas useful, we have made them general, so that they may generate all those specific ideas ...'* [22]. It is clear from Durand's statement that the *Précis* is didactic and concerns itself with the general principles of architecture.

These general principles are set out in the 'Introduction' to the *Précis*. It consists of three parts. 'Part I. Elements of Buildings' outlines the elements of buildings and considers their material, form and proportions. 'Part II. Composition in general' shows how the different building elements can be composed into various parts of a building, namely porticoes, porches, vestibules, stairs, rooms, courtyards, grottoes, fountains etc. 'Part III. Examination of the Principal Kinds of Buildings', which forms Volume 2, shows the application of the earlier parts into as many examples as possible, both private and public buildings.

22 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 73

5.1. The Instrumentality of Graphic Representation

In the preface, Durand went to considerable lengths to make a distinction between the drawings that are presented in the *Précis* and the drawings of perspectives using washes. He begins by contrasting knowledge and talent. He contends that knowledge alone does not make an architect. It requires talent, and talent to Durand is the skills in the application of knowledge and this talent comes from repeated practice. And practice requires the aid of drawing. Thus drawing becomes the fundamental tool in the *Précis*.

'But knowledge, useful though it may be, does not make an architect. That requires a ready skill in the application of knowledge and this skill is what we call talent. Talent comes only with repeated practice, and this requires the aid of drawing. [23]

Durand goes as far as to forbid perspective drawings outright and prescribes only geometric drawings:

'Perspective alone might give a true idea of the effect of a building. Strange to relate, however, in an art that is alleged to be founded upon drawing, this is one kind of drawing that is not in use. Indeed it is strictly forbidden, and an exclusive preference is accorded to geometric drawing – which is false, not to say absurd, if the intention is to represent the effect of a building, and dangerous in the extreme, whether architecture be considered for its usefulness or for the pleasure that it gives. [24]

This is because to Durand, perspectives are misleading

23 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 74

24 Ibid., p.74

due to their charm and it is dangerous for students to concentrate and labour over the refinement of drawings so as to confuse between drawings and architecture. Durand instead proposes to be economical with drawings, *'We have more or less reduced it to a single line, drawn to indicate the shape and arrangements of objects; ...'* Durand also stresses that this reduced drawing is to underpin the drawing of figures: *'... we make no claim that the foundation of art is architectural drawing alone: it is drawing in general, and that of the figure in particular.'*[25] It is clear from the outset that Durand relies on the instrumentality of a graphic devise to uncover the general principles of architecture, to the extent of the outright exclusion of any kind of artistic embellishments.

5.2. The General Principles of Architecture

From the introduction of the *Précis*, Durand makes clear that architectural education should not be based on the study of particular styles but on the study of general principles. These principles follow a logical path, based on the rigour of observation of sciences and technical efficiency of engineering. The task of designing buildings can be broken down to two principal categories of buildings according to Durand, *'Architecture has as its object the composition and execution of buildings, both public and private.'*[26] Public buildings comprise city gates, triumphal arches, bridges, palaces, hospices, markets, schools, libraries, museums, town halls, basilicas, palaces, baths, fountains, theatres, prisons, barracks, arsenals, cemeteries and so on. Private buildings comprise private town houses,

25 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.75

26 Ibid., p. 77

tenements, villas, and country houses. This classification is set up according to economic use and from the point of the commissioner of the works, and reflects the shift away from the monarchy as the principal patron of architecture. Durand further adds that the factors that affect the variations of these classes of buildings are: manners, customs, places, materials and financial resources. With these factors, it can be said that the practice of architecture as taught by Durand is responding to societal functions.

How architecture should be studied according to Durand is through observation and to reveal the first principles of the art – that is, the pursuit of those few ideas that can be generally applied to derive other particular ideas. This cannot be carried out by an exhaustive study of all the building classes in succession and the circumstances that modify them. Thus Durand rejects the norm in all courses of architecture that divides the art into three distinctive parts: Decoration, Distribution and Construction. For Durand, decorations do not apply to most buildings. As for distribution, Durand contends that there is not much said about the disposition of the different parts of a building according to present-day customs. Of the three, only construction is applicable to all buildings. Before the building can be constructed, it must first be conceived, according to Durand. This declaration mirrors Boullée's dictum *'You must conceive in order to execute'*. Thus Durand contends that the prevailing method mentioned above is a defective one, as all three distinctive parts do not offer a way to 'conceive'. This method also affords an incomplete idea of architecture (second defect) and the separation into three independent arts creates a conflicting set of considerations, rather than a unifying theory (third defect).

The right way to study architecture for Durand

requires one to have a tangible and rational aim, and the means to attain it. Thus Durand's first concern is with the aim to be pursued in the composition and execution of buildings, both private and public and the means to be employed to achieve it. The task that follows is to deduce the general principles of architecture and then to apply them to the elements of buildings as the objects that architecture uses, followed by composition in general, that is, the combination of the above elements of architecture; and finally the composition of these parts to a building.

Durand then sets out to reconsider the idea of architecture conveyed by most writers at the time. He disagrees with the need to decorate buildings, through the use of orders, as imitation of nature, bearing the proportions of man, invented by the Greeks, imitated by the Romans. He sets out to challenge three basic ideas. First, if the first hut made by man is a natural object. Second, if the human body can serve as a model for the orders and third, if the orders constitute an imitation of the hut and of the human body. Quoting Laugier's account of the origins of the primitive hut, Durand concludes that what are commonly understood as orders: columns, entablatures and pediments, which are the essential portion of the art, are an imitation of nature. However, according to Durand, the primitive hut (branches and tree trunks) cannot account for the distance that separates the hut and the orders of the Greek temples that are held as the epitome of beauty. Thus the Greek temple is not an imitation of the hut. Apart from highlighting these fallacies, Durand, unlike Quatremère, did not offer an alternative model to replace Laugier's version of the primitive hut.

Durand then quotes Vitruvius on the origins of the five orders, regarded as the essence of architecture and the

source of all beauty, from which decoration is achievable. They are so, because they are an imitation of the forms of the hut and the proportions of the human body. Durand disproves this by noting that the Doric column which should have a height six times its diameter, because a man's foot is one sixth his height, is not so. First of all, he shows in his *Recueil et parallèle* that there are many variations between the height and the base of the column, and not a single case where the one sixth proportion is used. Furthermore, a man's foot is one eighth of his height. Durand also noted that the same variations also occur in other orders. Thus, how can the body of a man be compared to a column, which has a constant diameter throughout? Hence, Durand concludes that the proportion of the human body did not and cannot serve as the model for the orders. Here Durand goes on to argue that the entablature does not imitate the beam as it goes round the entire perimeter of the building, whereas the beam of the hut only runs along the length of the building. The triglyphs also are a poor imitation of the open rafters as they are fluted in the frieze board.

By rejecting all the above, Durand concludes that the human body can never serve as a model for architecture, and the orders are not an imitation of the human body. And thus the orders are not the essence of architecture. This statement is only true if we still insist that the human body constitutes what we mean by beauty. Durand goes on to conclude that, decorations derived from the orders are therefore 'a chimera', 'futile' and the 'expense that it entails is folly'. And if the principal aim of architecture is to please, Durand proposes that it has to imitate to better effect, choose other models to imitate or adopt other means than to imitate. By disproving both Laugier and Vitruvius, Durand most crucially now proposed that

architecture is not an imitation of nature.

Now that Durand has rejected decoration on the account of its false claim to beauty through the imitation of nature, he sets out to replace decoration as a principal consideration in architecture with Utility. Durand agrees with Laugier in that the art of architecture owes its origin to necessity alone, and has no other goal than public or private utility. And this casts further doubt on why the primitive hut is a 'prototype' used for all architectures and the source of decorations. Durand, feeling the urgency of the challenges posed by new emerging building types, new ideas, and new needs, states that these must be satisfied and that decoration has no place in these circumstances. He further claims that the architects who argue that decorations are used when nations attain a certain degree of wealth and luxury, are wrong; for the Greeks were poorer than the Romans but both adorned their buildings with ornaments. Having rejected all that is superfluous, Durand declares the aim for architecture as follows,

'... it is evident that pleasure can never have been the aim of architecture; nor can architectural decoration have been its object. Public and private utility, the happiness and the protection of individuals and of society: such is the aim of architecture. [27]

Durand contends that architecture is the means to achieve comfort and avoidance of exertion. He elaborates *'... in all ages and in all places, all of men's thoughts and actions have sprung from two principles alone: love of comfort and dislike of all exertion.'* In erecting buildings for public or private use, men sought to make their buildings as fit for purpose as

27 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 84

possible and to gain the most advantage by building them in the least laborious way and with the least cost. Finally, Durand makes his declaration on the source from which architecture must derive its principles:

'Thus fitness and economy are the means that architecture must naturally employ, and are the sources from which it must derive its principles: the only principles that can guide us in the study and exercise of the art. [28]

This declaration may seem to have emancipated architecture from imitating nature, but if we were to understand the comparative methods employed by Durand and Le Roy, it can be said that architecture now imitates the concept of fitness in nature. That is, every part of any living organism serves the functional purpose of survival. Durand elaborates on this declaration and says, *'First, if a building is to be fit for its purpose, it must be solid, salubrious, and commodious.* [29] Solidity relates to good and sound construction and structural layout. Salubrity deals with the appropriate siting of the building, access to air and light, away from damp, rain, and cold and commodity refers to the number and size of all its parts that should be in close relation to its purpose.

In relation to the consideration of economy, Durand argues that the circle is the most economical compared to other geometrical figures, and in consideration of form, the sphere is more economical than the cube. This is justified in terms of their surface area to volume ratios, with the sphere being the most efficient as it requires the least surface area to contain the same volume of space as

28 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.84

29 Ibid., p.84

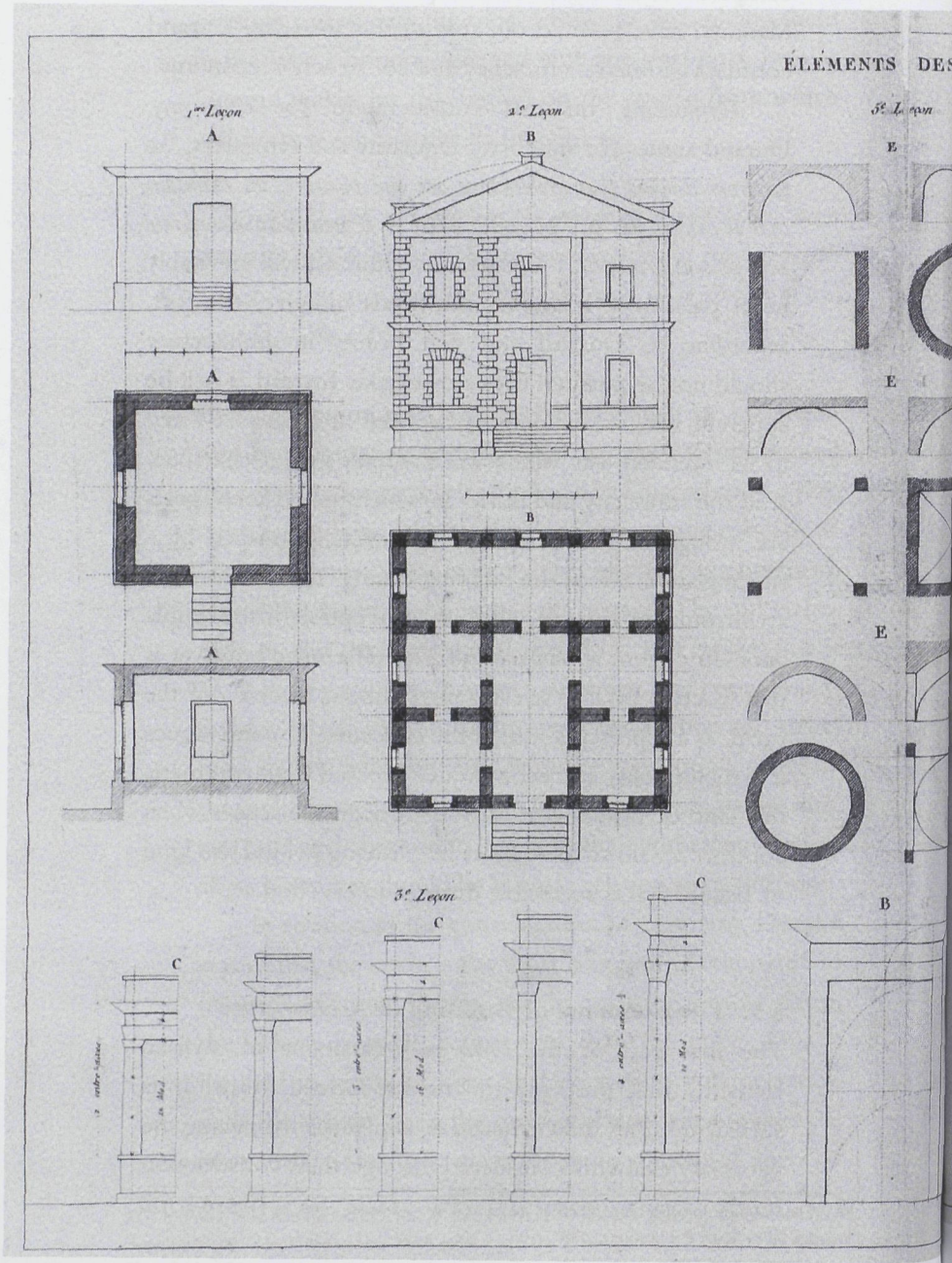
compared to the cube or other platonic solids. Picon and Madrazo have pointed out that in this instance, Durand confuses geometric efficiency and construction economy.

Expanding on this consideration for economy, Durand argues for simplicity, regularity and symmetry, *'So far from denying that architecture can give pleasure, we maintain that it cannot but give pleasure, where it is treated in accordance with its true principles."*[30] Furthermore, this art will inevitably be of pleasure if it answers our needs and gives comfort, according to Durand and that beauty in architecture should not be pursued for its own sake. Instead, it will be apparent when a building is disposed in a manner fitted to its intended use, which will naturally give it character. And the simplicity and clarity in which the different parts are brought together and are immediately grasped by a single glance, afford the building beauty. This mirrors the architecture of Boullée, where the perception of the simple geometric form is paramount. The difference however is that whereas Boullée stresses the symbolic meaning of the form, as a representation of the collective, Durand argues it through utility and economy. Compared to Quatremère, this kind of beauty is accessible through the senses when comfort is said to have been felt, leaving behind the kind of beauty that is accessible through intellection.

5.3. The Elements of Building or Architecture

The first part of the *Précis* is a catalogue of stylised elements that purports to answer societal needs. It is sufficient rather than exhaustive, aimed at introducing the necessary elements considered through their construction

30 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.85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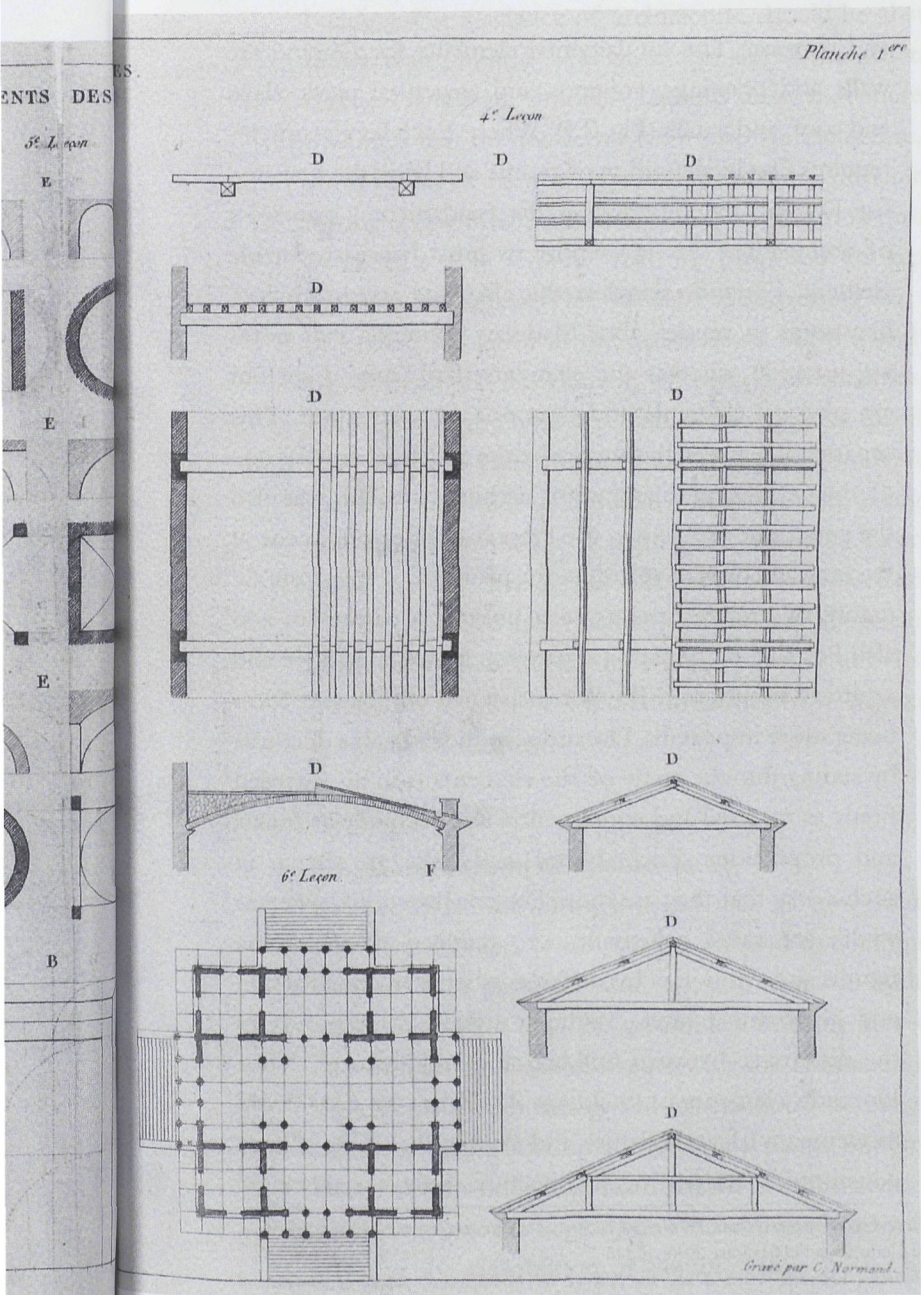


Fig. 2.9 J.N.L. Durand, Éléments des Édifices, *Précis of the Lectures on Architecture*, Graphic Portion: Plate 1 (1821)

and material. The fundamental elements for Durand are walls and openings, columns and structural parts, slabs and roof, and vaults (Fig. 2.9). Where Euclidean geometry requires first its definition of points and lines, the first step for Durand in constructing his fundamental principles of architecture was to identify its most basic irreducible element. Durand considers the elements an abstraction, like notes in music[31], but Madrazo contends that notes are notation whereas the elements that Durand set out are physical elements and thus not an abstraction. This separation between the physical realm and the abstract is one of the permanent dilemmas of architecture. This was also the persistent problem in the French architectural scene at the time and directly relates to the problem of the scientific nature of architecture, as seen both in Quatremère and also Perrault, who made a separation between positive and arbitrary beauty, and Boulle's insistence on abstract form being more important. Durand responded to this dilemma by stating that the study of the elements is to be regarded firstly as material and construction and secondly as forms and proportions. Pitched roof and slabs are drawn in such a way that they are more like constructions, whereas vaults are more schematic, i.e., reduced to geometric figures and symbols. This difference between construction and geometric figures, Madrazo argues, corresponds to the difference between building and architecture[32]. Thus Durand's elements of buildings could not be considered as elements of architecture and thus walls, vaults cannot constitute a science of architecture, only a science of

31 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 115

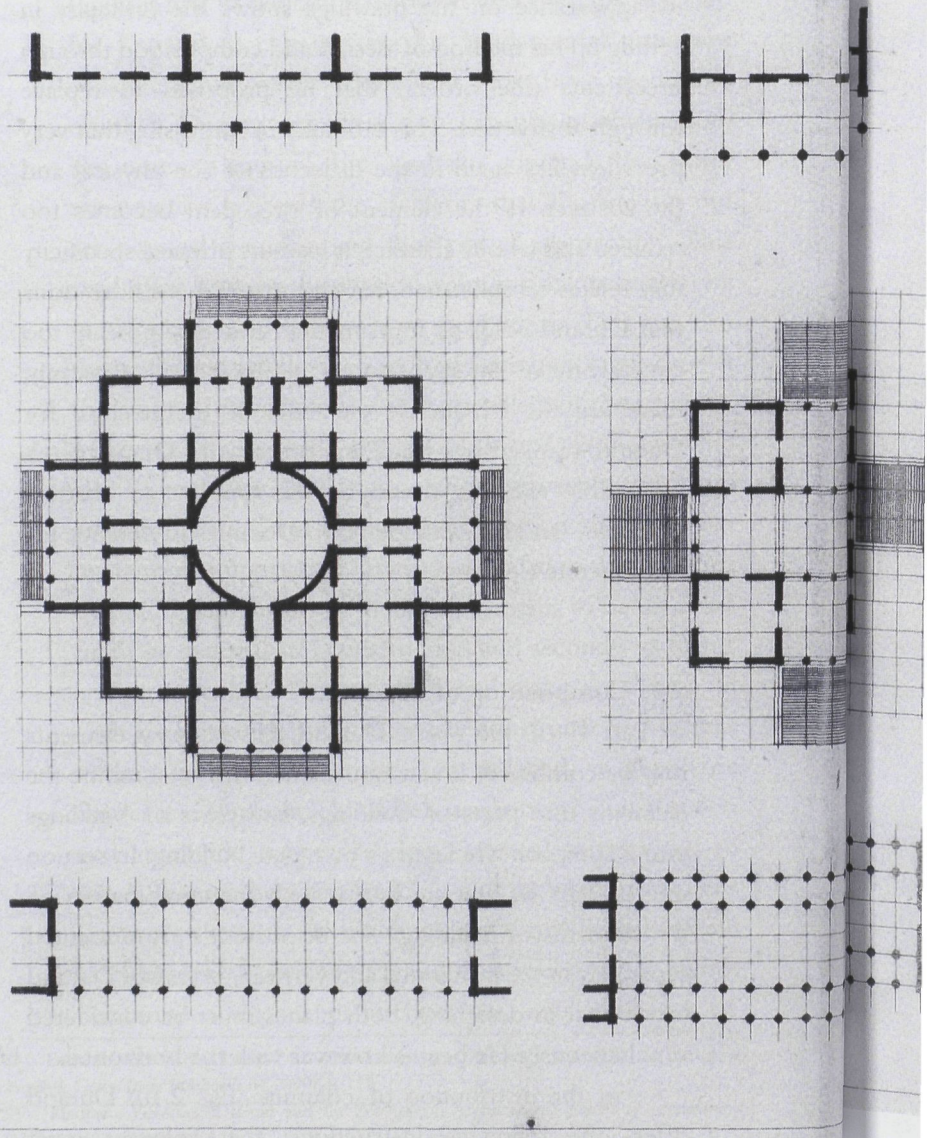
32 Madrazo, Leandro, 'Durand and the Science of Architecture', *Journal of Architectural Education*, 48.1 (1994), p. 15

building. For a science of architecture should be abstract rather than physical. This plate also shows the orders of classical language, although Durand insist that there are buildings that do not derive from Greek architecture, but its appearance on the drawings shows the difficulty in setting up his method of design and composition through precedents (the orders) that he proposed to replace through abstraction. This difficulty in surpassing that very precedent lies again in the dialectics of the physical and the abstract. If the element of precedent becomes too reduced and wholly abstract, it loses its physical specificity that relates to constructional and material considerations that Durand holds as fundamental; conversely, being too concrete makes the act of emancipation difficult. Crucially, these are the irreducible elements of architecture for Durand, distilled from building precedents. Quatremère's irreducible element would be the type as an abstract principle - an idea - compared to Durand's preference for the concrete element.

5.4. Composition of Elements

In Part II of the *Précis*, Durand tells us how elements may be combined. It sets out the method to combine the elements into parts of buildings, and parts of buildings into a complete whole, i.e., a complete building. In section one of Part II, Durand begins with the combination of the elements of building. The dispositions are presented separately in the horizontal and vertical planes but Durand insists that in designing, both planes must be considered simultaneously. He begins however with the horizontal.

For the distribution of columns (Fig. 2.10) Durand offers the following instructions: that columns must



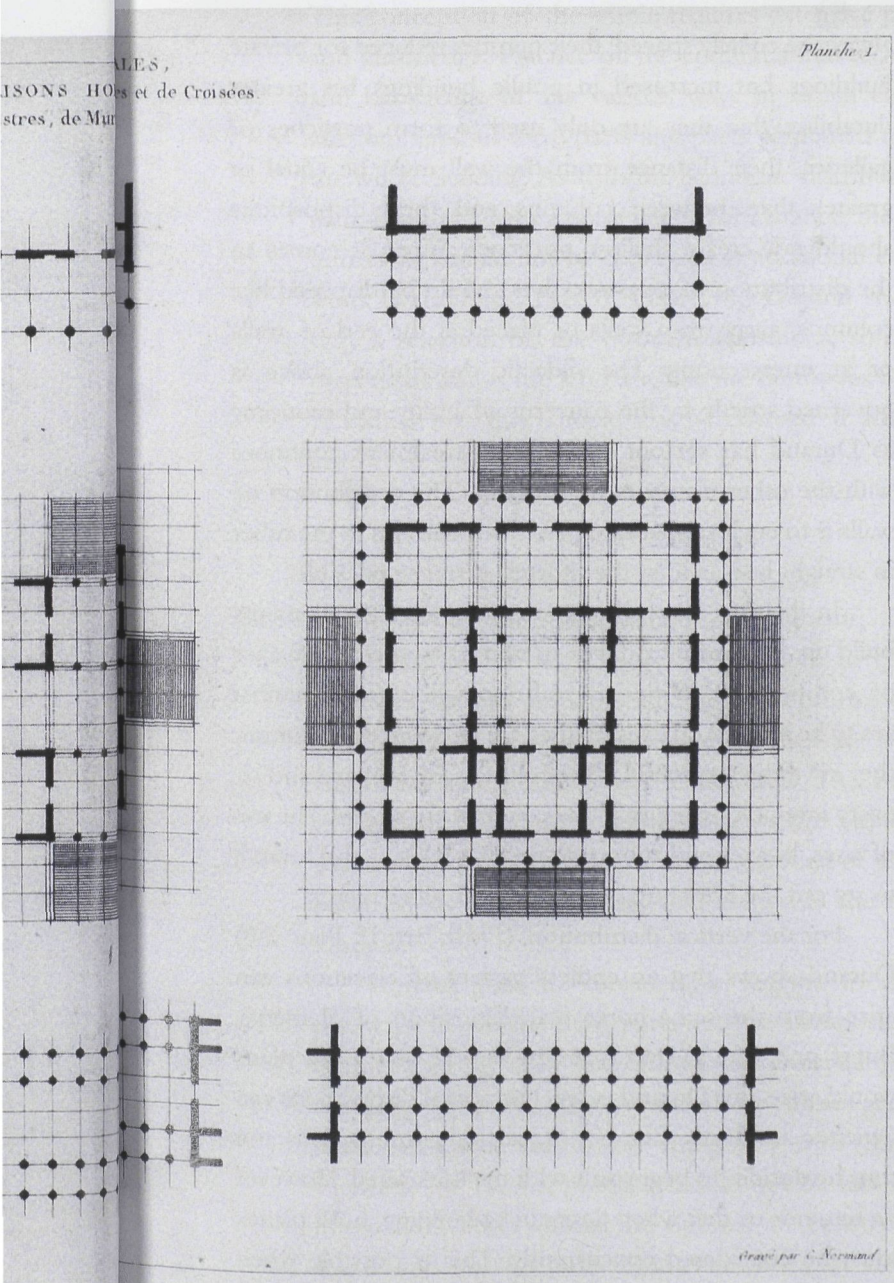


Fig. 2.10 J.N.L. Durand, Combinaisons Horisontales, *Précis of the Lectures on Architecture*, Part II. Composition in General: Plate 1

Widths and heights of risers and treads are also specified. Consideration to the way a building is entered governs this placement of stairs in relation to rooms, vestibules and porches. Importance is also placed on the entry sequence towards rooms from the stairs. Rooms are defined by their proportions, width, length and height, whether it is an uninterrupted volume or divided by columns. Attention is also given to the treatment of ceilings, depending on the shapes of the rooms and arrangements of columns.

Reading it in today's context, it may appear too limited to create a taxonomy of building parts that follows the classical language of architecture. But in the eighteenth to early nineteenth centuries, this taxonomy, albeit not exhaustive in its ambition and form, brings together the prevailing ways in which building parts are designed.

5.6. 'Ensemble d'Edifices' and Type

Having described how to combine elements into parts, Durand proceeds to show how these parts are assembled into a whole building. There are two plates which Durand uses to describe this process. The first and most well known is his *'Ensemble d'Edifices'* (Fig. 2.11). A more detailed plate (Fig. 2.12) showing the process of composition is added in the Graphic Portions to his Lectures, years later in 1821. In reference to the *'Ensemble d'Edifices'*, Durand says:

'As we saw in discussing combinations in general, the general principles of architecture require that walls, columns, doors, and windows, whether in the length or breath of a building, should be placed on common axes. It naturally follows that the rooms formed by such walls and columns, and opened by such doors and windows, are necessarily also placed on common axes. Along those axes they

may be combined in a thousand different ways. (...) to be convinced of this, it is enough to look at the plate that shows the most important of these divisions, and combine each of the horizontal dispositions with all the varieties of vertical disposition that one can devise; for there is no telling how many different compositions this host of combinations can produce'.[33]

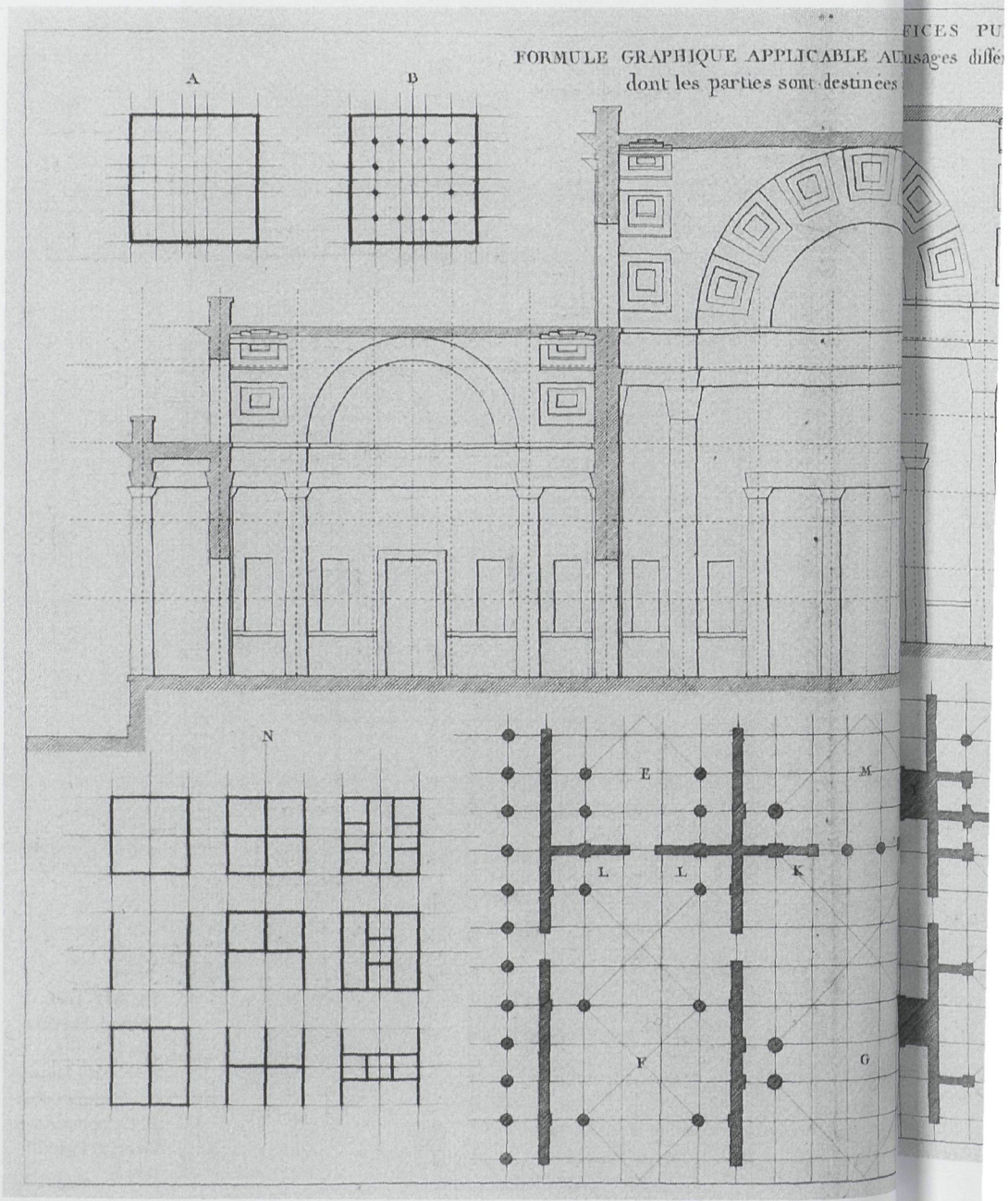
The striking difference between this plate and Durand's other plates is the complete absence of any building elements or any drawings resembling a building. It is a collection of geometric figures. The common misunderstanding in reading the *'Ensembles d'Edifices'* is that all buildings for Durand are reduced to these geometric figures, with no discernable qualities as types. As such, any further variations and elaborations from these types – according to one of Durand's most vehement critics - cannot but yield equally banal results,

'Finally with Durand, architecture did become understood as formal language or style. And in this we discern the source of the most banal formalist approaches, still popular today in many schools and offices on the Western world. (...) The objective of all theory, for Durand, was to ensure the efficiency and economy of operations. In order to achieve this and to simplify architectural design, Durand taught his students the mécanisme de la composition, (...) Combinations were the means by which any architectural problem could be solved, which is another way of saying that method was the theory.'[34]

Moneo argued that Durand in fact offered a simple method to cope with the programmes and the new building

33 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 126

34 Perez-Gomez, Alberto, *Architecture and the Crisis of Modern Science* (Cambrdge Massachusetts, MIT Press, 1983), p.304,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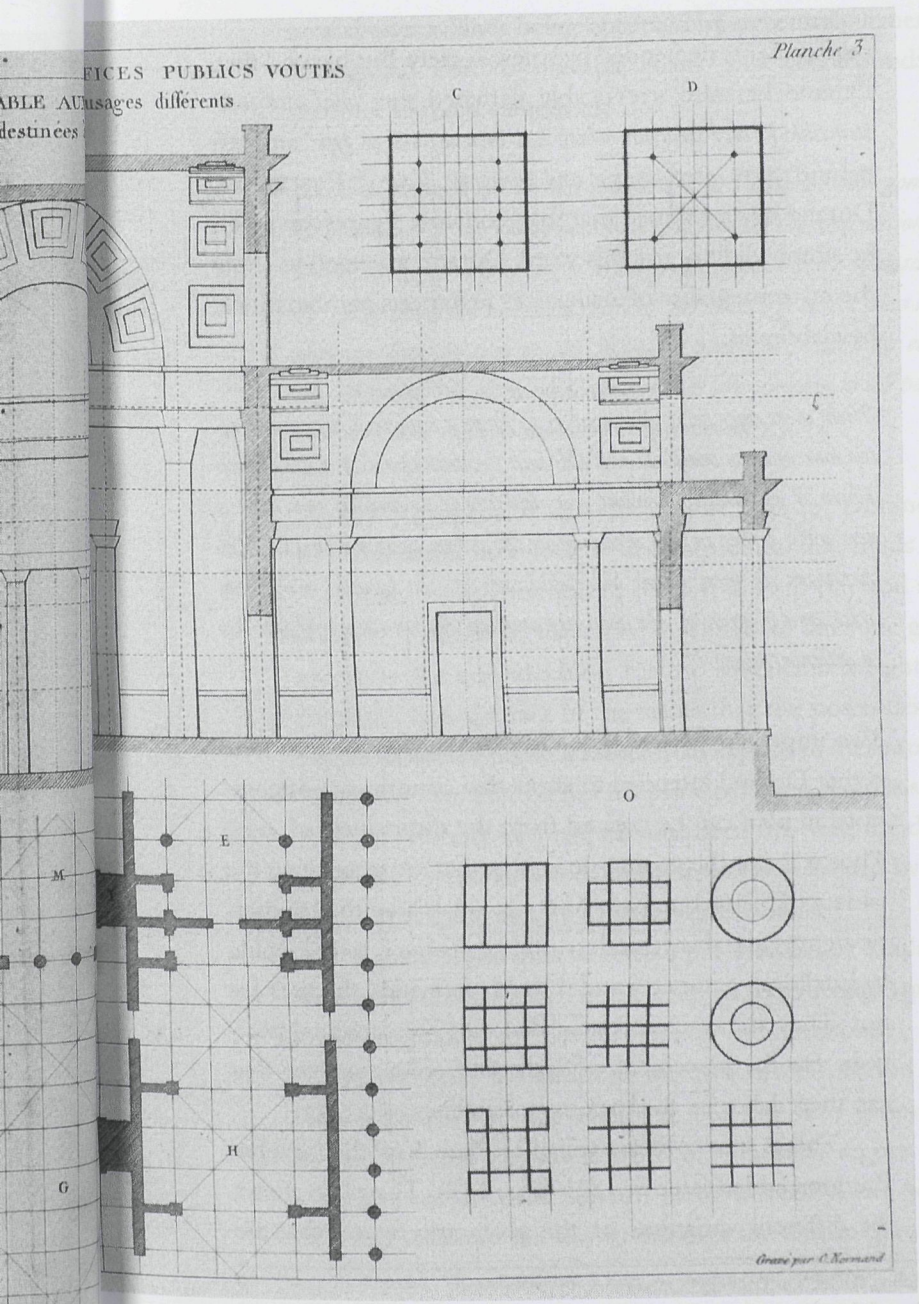

Fig. 2.12 J.N.L. Durand, Formule Graphique Applicable aux Édifices Publics Voutés, *Précis of the Lectures on Architecture*, Graphic Portion: Plate 3 (1821)

However, it is wrong to equate geometric figure to interior structure. In fact Argan argued against the reducing of architecture from its physical properties into abstract lines. If we are to follow Argan's argument, we have to read the geometric figures as concrete abstractions, a diagram that indexes material, and as ideograms imbued with ideas of organization. Durand's *Ensemble d'Edifices* should not be read, as is commonly done, as the culmination point of his theoretical works, but instead as a starting point. Where Quatremère sought the idea of type in the Platonic realm of Form, Durand's can be located in the potential inherent within the limits of its materiality, the *telos* of Aristotle.

5.7. Composition, Theory and Method

Durand's *'Method to Be Adopted When Composing or Copying'* is illustrated by (Fig. 2.13) and later with another plate (Fig. 2.14). In both plates and following Durand's instructions, his method of composition can be broken down to six steps: the first involves the layout of main axes followed by a new grid of secondary axes. The third step involves the laying down of walls and the fourth, the placing of columns along the grid lines. The fifth step is when walls, porticoes, stairs are drawn in plan. The sixth and final step is when the elevations are drawn.

The method does not start with the selection of architectural elements, despite the importance that Durand placed on the elements of buildings. Instead it begins with the setting out of geometric lines. The method also does not explain how the combinations occur from one stage to the next. All it does is to describe the transformation from geometry to architecture. There are no functions attached to this composition, so it is more geometricism

than functionalism or formalism. When it moves to the fifth and final steps, the method becomes unclear as to how the dome is chosen. According to Picon, it is due to his background and the influence of Boullée, but it could also be argued that the dome offered the most structurally economical means of capping a centralised volume.

To be consistent with his assertion that the idea of composition is the combination of elements and rules, this method should have started with the selection of architectural elements rather than geometric lines. Thus for Durand, it is in fact geometric lines that constitute the fundamental elements of the discipline of architecture according to Madrazo[38]. However this is not true if we refer to the oral portion of the *Précis*, where Durand states:

'In learning to compose, therefore, the following method is to be adopted: conceive an ensemble formed of a certain number of parts, similar or dissimilar, placed in a certain relation to one another; then, having a clear idea of all these parts, and the relation that unites them, you will necessary have a clear idea of the ensemble. Then consign your ideas to paper by means of a croquis, in the order in which they have been conceived ... [39]

It is clear that Durand calls for the conception of the ensemble as an idea before committing to the first sketch. And that the six steps should only be undertaken in the presence of an idea of the parts, which are composed of course of the elements. Thus, this method should not be understood as a geometric exercise or pictorial task but as an analytical method along the definition of Locke, that is,

38 Madrazo, Leandro, 'Durand and the Science of Architecture', *Journal of Architectural Education*, 48.1 (1994), p. 18

39 Durand, Jean Nicolas Louis, *Précis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p. 195

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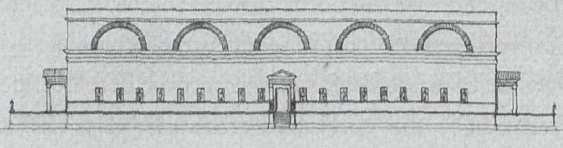

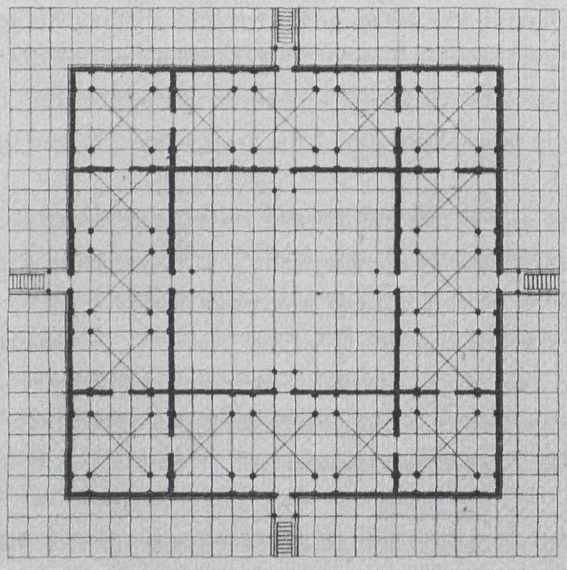

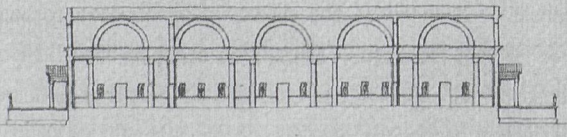

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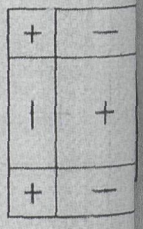

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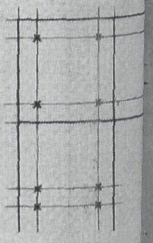

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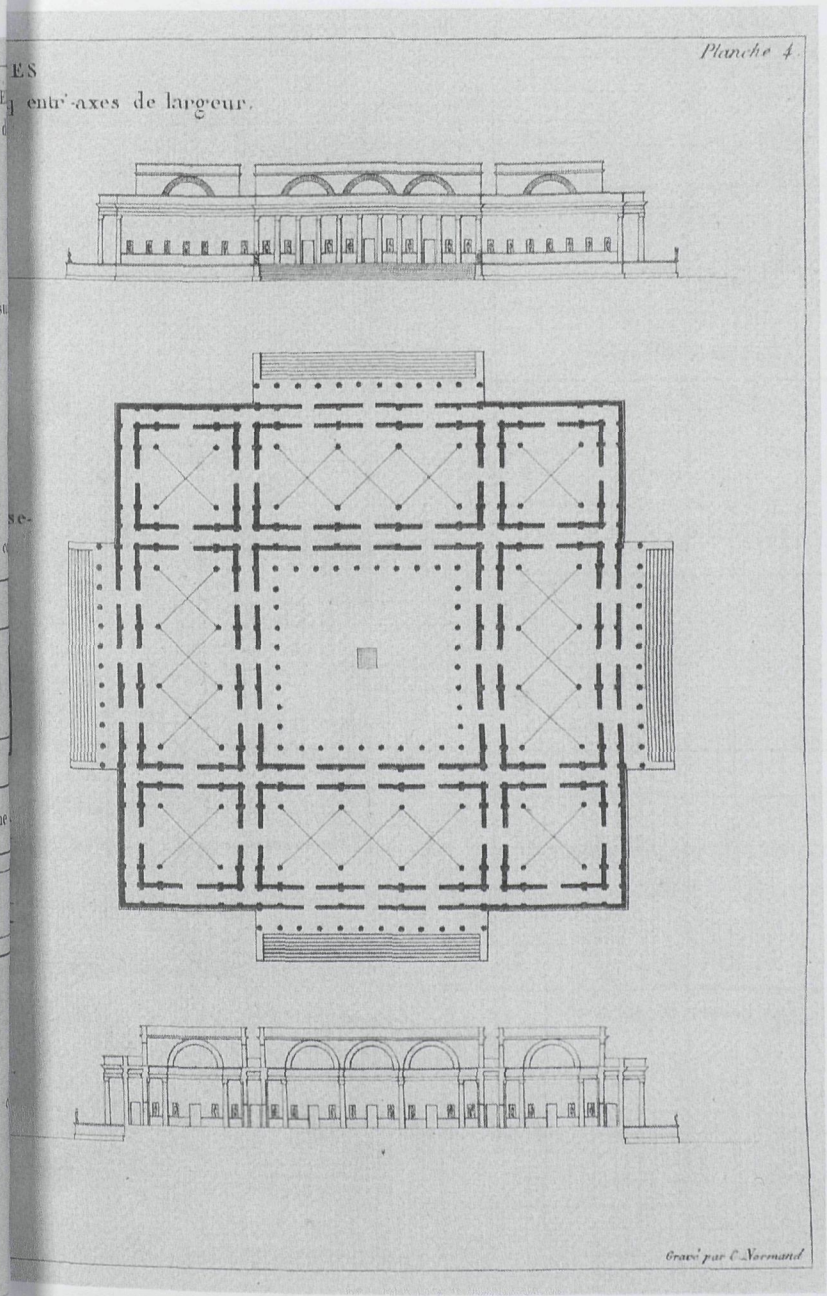

Fig. 2.13 J.N.L. Durand, Ensembles d'Édifices, *Précis of the Lectures on Architecture*, Graphic Portion: Plate 4 (1821)

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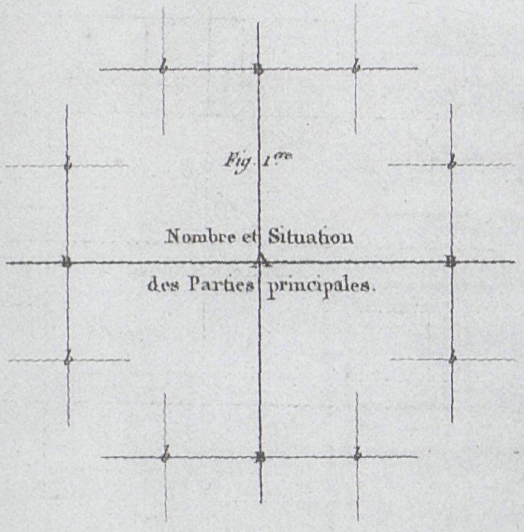

Fig. 1re

Nombre et Situation
des Parties principales.

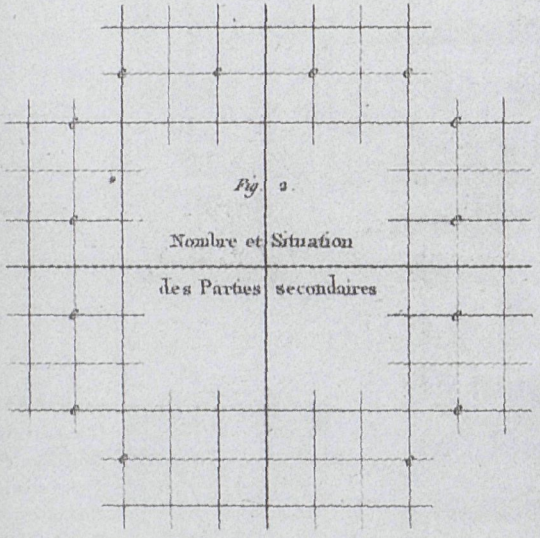

Fig. 2.

Nombre et Situation
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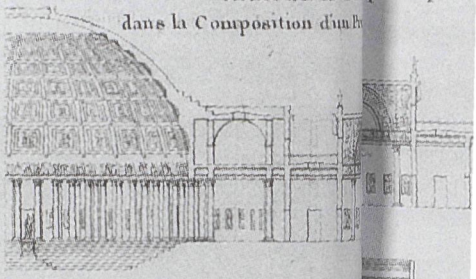


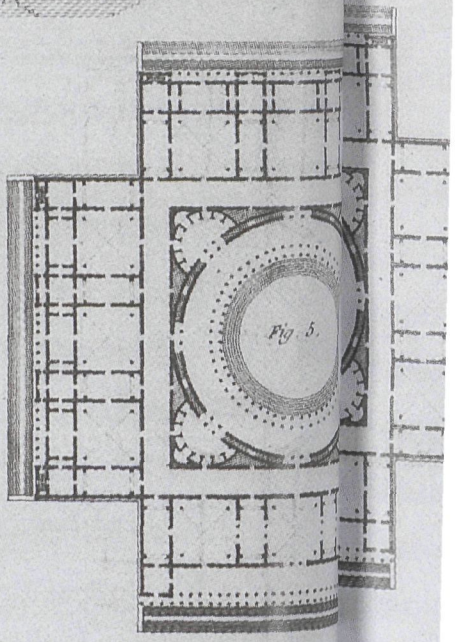
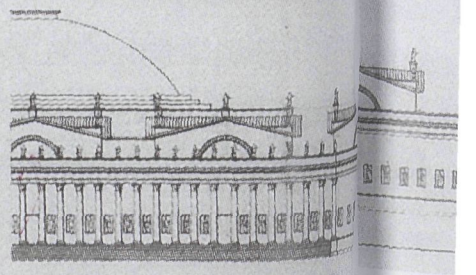


Fig. 5.



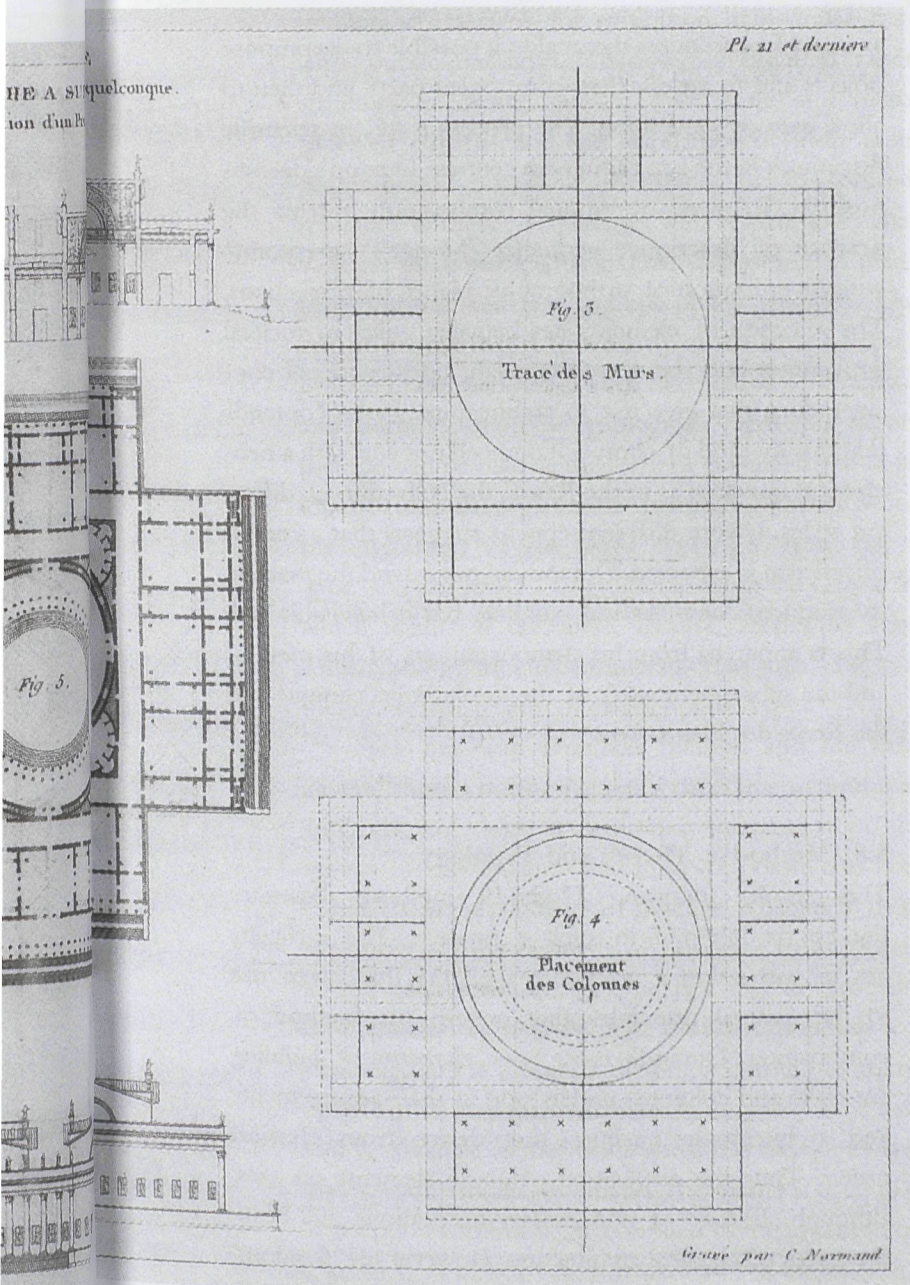


Fig. 2.14 J.N.L. Durand, *Précis of the Lectures on Architecture* Given at the Ecole Polytechnique, (1813)

as a set of procedures that makes it possible to decompose objects and to set out their component parts, and then to allow ease of generation. The process is key in scientific disciplines in the late eighteenth century. Durand's decomposition, followed by rational composition mirrors the practice of descriptive geometry (Monge's stereotomy) with its utilization of orthographic planes of projections. The selection of elements lies between utility to societal convention and the most important constructional considerations that give rise to architecture. Picon contends that this method of composition need not end with a neoclassical building: as in the *Recueil*, the collection of different styles is from different epochs suggests that a certain eclecticism is expected. Durand did not intend the method to produce a neo-classical building, but it inevitably did. This is apparent from his demonstrations of his method and the subsequent work of the École Polytechnique and the École des Beaux Arts.

5.8. Method as Theory and Typology

This result, following Durand's method, illustrates the aporia inherent in such a process. The difficulty lies in surpassing a precedent type that has given rise to the general principles that govern the method of composition. Durand's most basic elements of building are walls and columns, understood in their arrangements and architectonic qualities that derive from classical orders. Thus the disposition of these elements on axes, although cleansed of unnecessary decorations, still bears the traces of classical architecture. However the 'freedom' that is attained by this method anticipated the designs of modern building types almost a century later, evident

in Durand's designs for exhibition halls, museums and large public buildings. These types required repetitive structural elements, due to their scale and increased speed of construction and disposition of more complex programme[40]. So, while the traces of the precedents remained in these new designs, with respect to its element to parts relationships, its overall disposition in plan and programmatic function has completely changed. Thus, it can be argued that it is precisely in the method that type inheres in Durand and as such his method of composition and decomposition is typological. Here, his theory as method can be read as the logic of precedents, that is, the logic of the deep structure mentioned above. Secondly, the etymology of the word 'typology', from the word 'type' and the suffix –ology, comes from the Greek 'logia', which means 'a discourse, treatise, theory or science'. Thus typology should be understood as such - a discourse, theory, treatise (method) or science of 'type'.

Seen this way, Durand's method and the *Précis* in general should not be seen as a catalogue of immediately applicable solutions, as commonly misunderstood. It is a system of classification that makes it possible to become familiar with the problems of practice. It begins by distilling and accepting the elements of buildings from precedents as the deep structure of type that can be procedurally differentiated to new configurations, responding to new demands; and in Durand's dictum, according to utility and economy. Its instrumentality lies in its ability to be didactic and yet flexible, as the *Recueil* and *Précis* are not exhaustive and are not entirely systematic. The matrix is used to assist conception without being confined to the imitation of the

40 Etlin, Richard A., *Symbolic Space: French Enlightenment Architecture and its Legacy* (London: University of Chicago Press, 1994)

model. The buildings sampled are not types but illustrate the utility of typology as a comparative method, as shown clearly in the *Recueil.* The architectural type defines itself only through comparison with others. Thus, it is the systems and method that distinguish Durand's approach from his contemporaries.

6. Idea, Model and Seriality

Durand is often accused of being a pedagogue who brought into architecture a method that is antithetical to architecture's connection with its history and meaning. The *'Ensemble d'Edifices'* is often that locus of controversy. One such example is Perez-Gomez's unequivocal condemnation of Durand's theory:

> *'Thus architectural design as a whole was reduced in Durand's theory to a formal game of combinations, devoid of transcendental intentions. Meaning was to be derived from within the system. Architecture became a language whose possible meaning depended entirely on syntax, and absolute semantic relations were obviously beyond positivistic reason.'*[41]

In his *'Premises for the Resumption of the Discussion of Typology'*[42], Werner Oechslin offers an alternative reading to the theoretical work of Durand, by relating Quatremère de Quincy and Durand and by discussing Durand's work in relation to history. This revolves around the distinction between Idea and Model as discussed in the previous chapter. According to Oechslin, Durand's *'Ensemble d'Edifices'* is commonly seen as the narrow conception of typol-

41 Perez-Gomez, Alberto, *Architecture and the Crisis of Modern Science* (Cambridge Massachusetts, MIT Press, 1983), p.303

42 Oechslin, Werner, 'Premises for the Resumption of the Discussion of Typology', *Assemblage, 1* (1986), p. 36-53

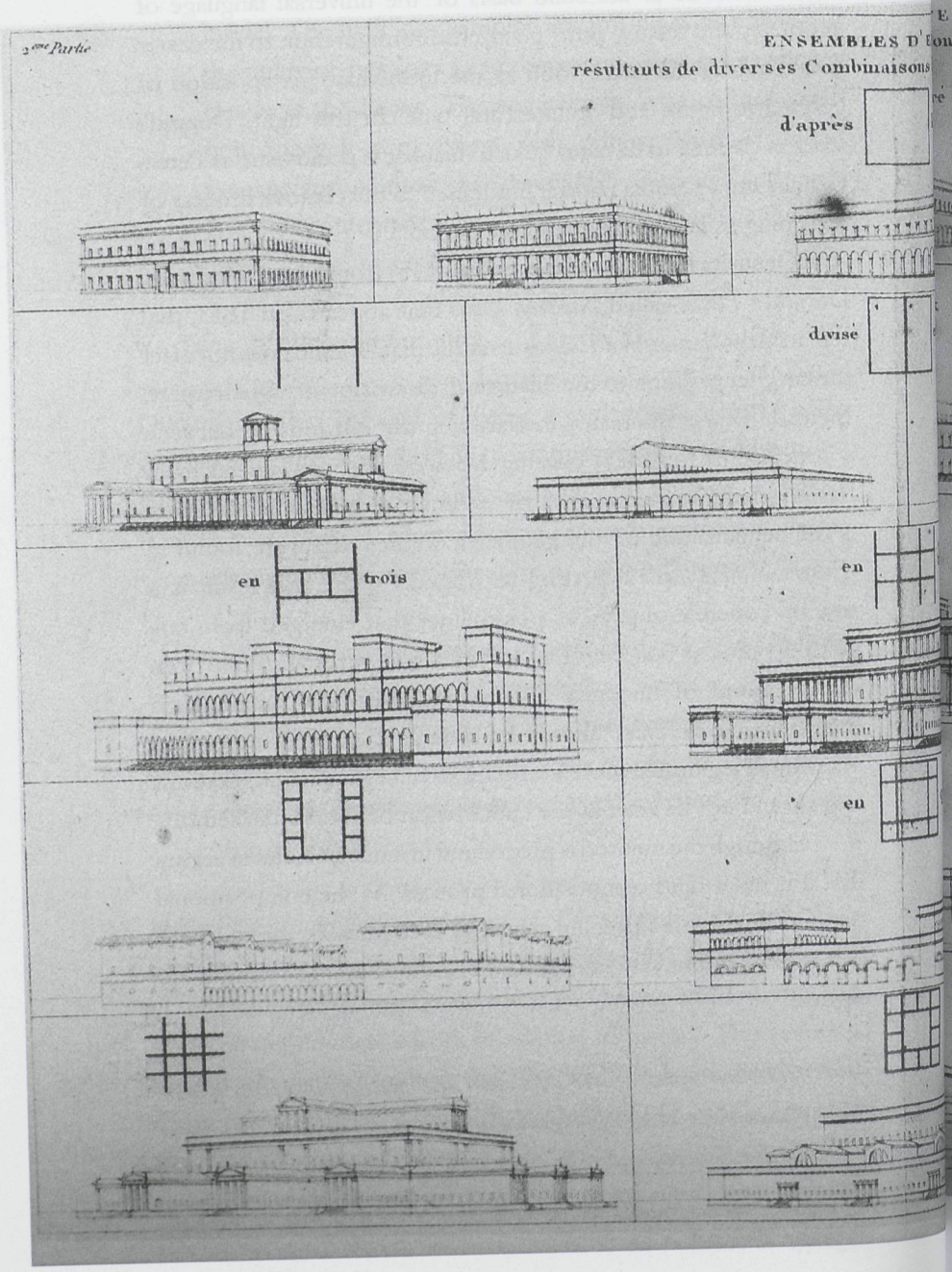
ogy, that turns to the solid basis of the universal language of geometry and relates 'pure' geometric configuration to the design process. It is misunderstood as the immediate juxtaposition of geometric figure and architectural type. In this light, Durand's work is claimed to have no links to history, is positivistic as Perez-Gomez argues and a natural hindrance to the creative process of designing as Bruno Zevi would contend[43].

Oechslin referred to a plate (Fig. 2.15) from a later version of Durand's *Précis*, called *Nouveau Précis* that appeared in 1813, that replaced the '*Ensemble d'Edifices*' to argue that Durand does not offer the counter position to the 'historical' discussion of Quatremère. Instead, he was interested in clarifying the relationship between a concrete (historically) existing typology and the general form based on the universal laws of geometry. Evident in the plate is the actualization of the geometric figures that were found in '*Ensemble d'Edifices*'. Referring to (Fig. 2.15) the end result is a row of concrete objects, as possibilities that emerged from one starting point, as buildings that are immediately recognizable from the taxonomy of historical buildings found in the *Recueil*. Thus the '*Ensemble d'Edifices*' should be seen as a carefully developed attempt to legitimize more complex architectonic configurations and should not be seen as the culmination of Durand's method.

Although the method is procedural in nature, Oechslin argues that it is not a rigid compositional process. As the compositional method leads to something which is recognizable immediately, it forges an immediate link to history according to Oechslin. He argues,

> *'Durand maintains the connection with precise, historically contingent objects, which was regarded as given at the time and thus placed at his disposal, clearly in sight. Neither thoroughly systematic nor*

43 Oechslin, Werner, 'Premises for the Resumption of the Discussion of Typology', *Assemblage, 1* (1986), p.38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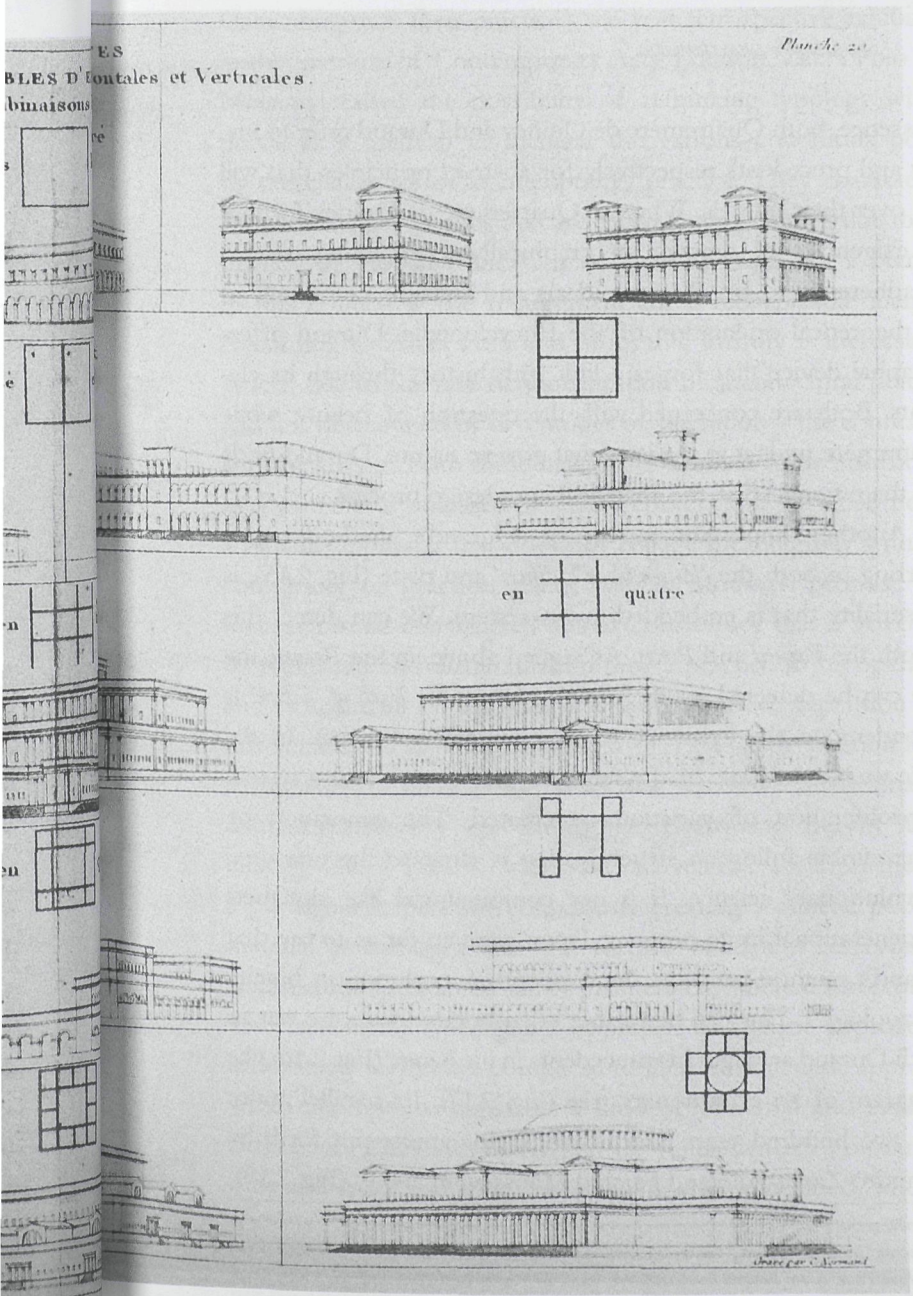


Fig. 2.15 J.N.L. Durand, Ensembles D'édifices, *Précis of the Lectures on Architecture* (1813)

historically unsystematic.[44]

In essence, both Quatremère de Quincy and Durand refer to history and precedents respectively for abstract principles that will rule over their models. Whereas Quatremère de Quincy forgoes the exigencies of drawing or graphically representing type in his adherence to his Platonic ideals and remains consistent to the theoretical orientation of the Encyclopédie, Durand offers a graphic device that forges a link with history through its elements. Both are concerned with the question of beauty, while Quatremère finds it in the laws that govern nature, Durand finds it in the rationality of the analytical and design process.

Another important aspect of Durand's method, again referring to both the *'Ensemble d'Edifices'* and plate (Fig. 2.15), is the seriality that is embedded in his system. We can detect this in both the *Recueil* and *Précis*. As argued above, in the *Recueil*, the type can be detected, or in Argan's phrase *'the birth of a type'* is dependent on the existence of a series (of buildings). In the *Précis*, we see the logic of the series, in the way in which a system of proliferation of variations is created. The generation of the ensemble follows a structure that is close to the one used in evolutionary science. It is not combinatorial like alphabets but generational in its progeny. Picon goes so far as to say that Durand's method predates the concept of evolution in botany and zoology[45]. This can be further corroborated with the way in which Durand arranges his precedents in his *Recueil* (Fig. 2.16) like a diagram of an evolutionary tree (Fig. 2.17). Its parallel, more than two hundred years later is the phylogramme put forth by Alejandro Zaera-Polo and Farshid Moussavi in 2003[46] (Fig. 2.18).

44 Ibid., p. 50

45 Picon, Antoine, 'From "Poetry of Art" to Method: The Theory of *Jean-Nicolas-Louis Durand*', *in Precis of the Lectures on Architecture*, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.48

46 Zaera Polo, Alejandro, and Moussavi, Farshid, *Phylogenesis: FOA's Ark* (London: Actar &

Coinciding with their practice's ten year retrospective exhibition in the Institute of Contemporary Arts, London, Zaera Polo and Moussavi raised the possibility of rethinking typology within praxis as a method to mediate the various conditions posed by the challenges of contemporary practice. They characterize these challenges as ones that are increasingly complex due to the process of globalization. One of the challenges for a practice in this context is the requirement for a recognizable identity. According to Zaera Polo and Moussavi, identity is increasingly crucial due to the rate of globalization of architectural practice and it is determined by two modes of operation – the contextual and the artistic. Both these modes are deemed to be insufficient as the former is bounded by a fixed context and the latter merely a stylistic approach that does not engage meaningfully with the complexity of practice. Zaera Polo & Moussavi propose that identity can be constructed out of consistency that is governed by repetition and differentiation. For a practice to be operative and to maintain consistency, a balance between repetition and differentiation has to be negotiated - as excessive repetition leads to inflexibility on the one hand and excessive differentiation dilutes consistency on the other. Borrowing heavily from biology, Zaera Polo & Moussavi characterize their practice as a phylogenetic process, consciously creating a genetic pool of material assemblages that will form a consistent reservoir of architectural species that can be proliferated, mutated and evolved. They see that a typological[47] approach or stylistic approach is increasingly ineffective compared to their phylogenetic approach which attempts to construct a kind of alienated and evolving authorship. They see that types are fundamentally constant in time and space and their operativity is always localised, whereas

ICA, 2004), p.6-17

47 Zaera Polo & Moussavi did not elaborate the notion of typology that they reject, only to state that it is stylistic.

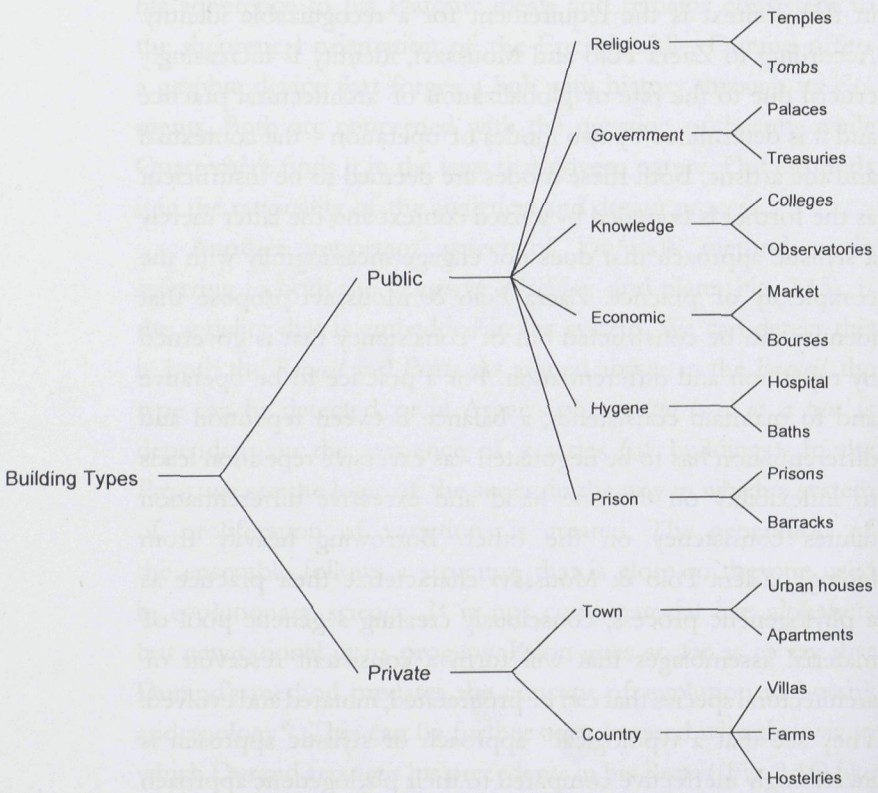


Fig. 2.16 Classification of Buildings following Durand's *Recueil et parallèle des édifices de tous genres*, Diagram by Author and Bolam Lee (2011)

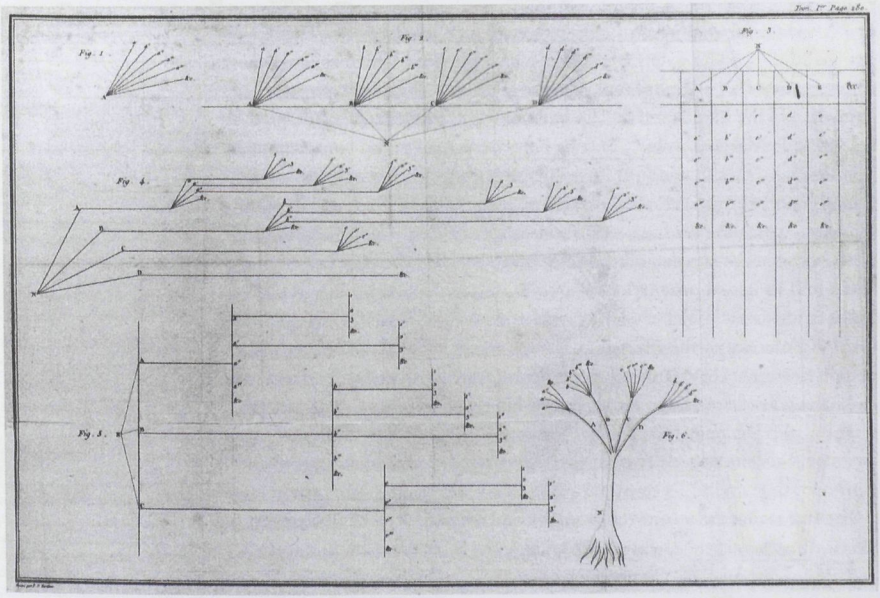


Fig. 2.17 P.F. Lancelin, Analytical expression of complex ideas, *"Poetry of Art" to Method à l'analyse des sciences*, 3rd ed. (1801)

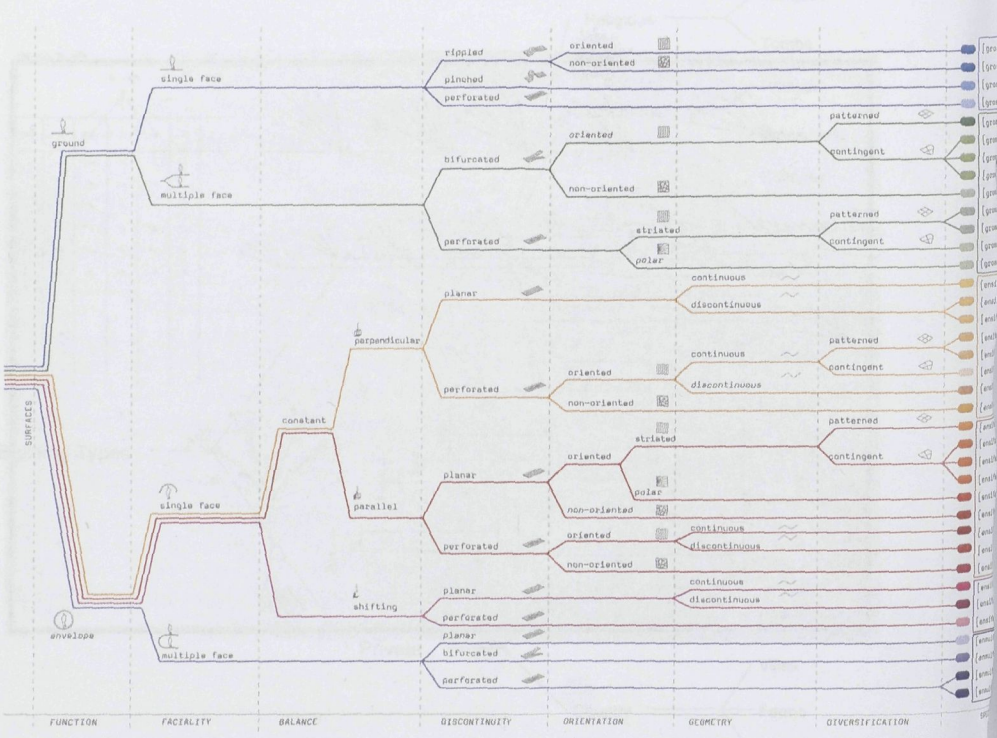
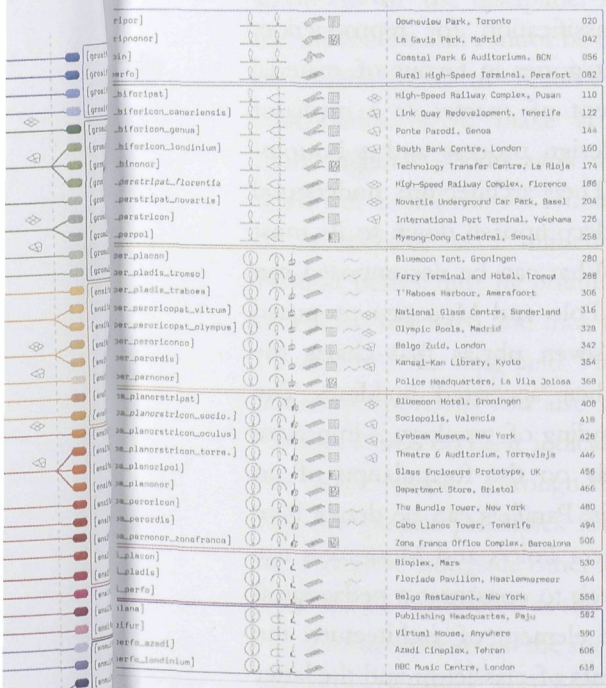


Fig. 2.18 Alejandro Zaera Polo and Farshid Moussavi, Classification System, *Phylogenesis: FOA's Ark* (2003)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Link Quay Redevelopment, Tenerife 122
_biforicon_genua]
Ponte Parodi, Genoa 144
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South Bank Centre, London 160
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Technology Transfer Centre, La Rioja 174
_perstripat_florentia
High-Speed Railway Complex, Florence 186
_perstripat_novartis]
Novartis Underground Car Park, Basel 204
_perstricon]
International Port Terminal, Yokohama 226
_perpol]
Myeong-Dong Cathedral, Seoul 258
per_planon]
Bluemoon Tent, Groningen 280
per_pladis_tromso]
Ferry Terminal and Hotel, Tromsø 288
per_pladis_traboea]
T'Raboes Harbour, Amerafoort 306
per_pericopat_vitrum]
National Glass Centre, Sunderland 316
per_pericopat_olympus]
Olympic Pools, Madrid 328
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Belgo Zuid, London 342
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Department Store, Bristol 466
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The Bundle Tower, New York 480
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Bioplex, Mars 530
_pladis]
Floriade Pavilion, Haarlemmermeer 544
_perfo]
Belgo Restaurant, New York 558
lana]
Publishing Headquarters, Paju 582
lifur]
Virtual House, Anywhere 590
perfo_azadi]
Azadi Cineplex, Tehran 606
perfo_londinium]
BBC Music Centre, London 618
COMMON NAME

species are sets of consistent morphological relations that vary across time and space. Thus their ultimate aim is to have projects that are not designed but bred. Returning to the question of typology, they acknowledge that typologies were the traditional instrument by which groupings of traits and organizational features became part of a disciplinary knowledge. They consider this as a top-down approach and contend that typological studies presuppose taxonomies and classification for reproduction. They have avoided functional categories in favour of material assemblages and used the concept of species as a mediator between top-down typological design process and a bottom-up parametric design approach. Their architecture, understood as material assemblages, can be decomposed down to its most irreducible element as surfaces. What can be decomposed can also be recomposed, and Zaera Polo and Moussavi proposed a phylogenetic tree containing seven phylas that charts the decomposition and progeny of their 'speciated' buildings. The overall treatment of the understanding of typology is imprecise on their part and focused largely on the formulation of an internal consistency in their praxis. Parallels can be drawn here between Durand's Précis and Zaera Polo's and Moussavi's use of the phylogenetic tree. Both seek to construct a pedagogical method based on the irreducible element of architecture; the former using the structural elements of classicism and the latter surfaces - as the deep structure of their types. This process is not a random combinatorial process but one with a clear trajectory of genesis. In addition to this, Durand's method should not be read as one that leads fatefully to the mass production of object types in the twentieth century using standardized elements, but as a method for mass-customization. This is because the type rather than the prototype as standard or example resides in the method rather than the object. Architecture as method, through Durand's abstraction, whilst retaining its elements rooted in the reality of

building, was able to respond to the demands of a fast changing society.

7. Rationality and Grammar

Durand, through the *Précis* constantly strove to maintain the autonomy of the discipline. Although the scientific discipline has moved on and cannot be carried out simply with the matrix of combinations of finite numbers and elements, Durand's contribution is to make architecture rational, by replacing transcendental origins with an insistence on method, is still worthy of consideration. Durand turned his back on the doctrine of architecture as a mimetic art, by imitating nature. Like Perrault before him, he pointed out that the proportions of the orders are not fixed and thus there is no such thing as an ideal. He attacked the long-held Vitruvian notion of orders bearing human proportions and also rejected Laugier's primitive hut as having offered no clear indication to the complex structures of the Greek temple. Through these rejections, Durand strove to find the general principles for architecture and to reconstitute the discipline alongside other scientific disciplines. The resulting *Précis* can be considered as the earliest rationalist manifesto.

Its implications on the societal role of architecture, however, has divided critics and historians. Perez-Gomez, makes the following judgement:

> *'For Durand, economy and efficiency were not limitation, but sources of inspiration. They became the only acceptable values of architecture. And as long as the work fulfilled its program, it would be pleasant. The idea of efficiency is a functional relation: to achieve a maximum result with minimum effort, with maximum economy. The system of values in architecture was thus reduced to*

a scale between pleasure and pain. Value could be "measure" as it approached ideal efficiency and maximum pleasure. The ethics of the new architecture of positivism was, then, nothing but a transposition of the laws of maximum and minimums (...)This system of values lays at the origin of the still prevalent emphasis on comfort over meaning in contemporary architecture' [48]

Meaning in architecture and in architectural form in particular is historically constituted, as Colquhoun has argued in his 'Typology and Design Method'[49]. Thus, Perez-Gomez's argument above cannot be sustained, that there is an absence of meaning in Durand's work. Indeed, Oechslin has shown how Durand forges a historical link with the elements of architecture. In close examination, Perez-Gomez's ire is linked to his propensity for myths:

'The reconciliatory mission of the architect is poetic. This is necessarily an individual task, encompassing personal expression and reference to the totality. There is no meaningful logic without acknowledging the inter-subjective world, best revealed in dreams and myth. (...) Part of our human condition is the inevitable yearning to capture reality through metaphors. Such is true knowledge, ambiguous yet

48 Perez-Gomez, Alberto, *Architecture and the Crisis of Modern Science* (Cambrdge Massachusetts, MIT Press, 1983), p.303

49 The thrust of Colquhoun's argument is that typology as a design method is best approached through intuition. In using their intuition, designers will find solutions where scientific analysis fails. His critique was directed at the biotechnical determinism and teleology of architectural modernism; and he argues that intuition is based on the knowledge of past solutions, applied to related design problems. This process is typological, and it involves a process of adapting forms derived either from past needs or from past aesthetic ideologies to the needs of the present. Through this the solution derives not only a use value but an exchange value, where the latter is determined by the meaning that has been passed on through generations, thereby fomenting a link between the past and present. See Colquhoun, Alan, 'Typology and Design Method', *Arena*,83 (1967), repr. in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), pp. 250-57

ultimately more relevant than scientific truth.[50]

It would be absurd to attempt to reconcile the disciplinary autonomy and its social nature, in the climate of the Enlightenment, with the increasing importance of the role of engineers in erection of buildings to resort to dreams and myth. In the absence or impossibility of a universally accepted myth or dream in that period, myth-making associated with design methods leads not to subjectivism but to the idiosyncratic and the hermetic.

'So far from denying that architecture can give pleasure, we maintain that it cannot but give pleasure, where it is treated with its true principles', Durand insists in his Précis. For a rationalist like Durand, nothing is more beautiful and more meaningful than reason and the systems to which it gives rise. The most attractive nature of Durand's work is that it is both coherent and ambiguous, closed in its selection of analysis but open for new solutions and it makes sense only when it is viewed in series.

The rationalist legacy that Durand leaves behind in his method, prompts various readings to its instrumentality as a language. Villari suggests that the methodology of the *Précis* is like a treatise on 'general grammar' but can also be linked (although certainly with no intent on the part of Durand) to linguistics. Villari proposes as much:

> *'... for Durand was in fact able to develop his Leçons d'architecture as a treatise on general grammar thanks precisely to the principle of arbitrariness. Such a notion, denying all mimetic origin to architecture, allowed him to remove the symbolic value from the orders (the term symbolic is here used in the sense intended by Saussure); it allowed him, that is, to submit the orders, essential as*

50 Perez-Gomez, Alberto, *Architecture and the Crisis of Modern Science* (Cambridge Massachusetts, MIT Press, 1983), p.326

they are to architecture, to the grammatical or–better-the normative laws of composition.[51]

Finally, Villary suggest that having freed the architectural grammar from its mimetic origins, Durand subjects it to an economic one, where *'the idea of economy gathers and organizes the internal grammatical laws of the architectural language; hence, arbitrariness of the sign, composition as the entirety of the language of architecture, and the structural relation of the part to the whole must necessarily realise, at least formally, the idea of economy.*[52]

A more direct and instrumental nature to Durand's method is given by Picon, one that corresponds directly to Durand's ambition in creating a discipline of architecture, on a par with the other scientific disciplines. Picon notes that the general grammar of Durand employs the primacy of the floor plan and axes. Picon argues that the instrumentality of these axes is not solely for the ease of composition but an emphasis on structural clarity was used as a negotiation tool between architects and structural engineers[53]. This is an important statement, it acknowledges the rationalization of composition implicit in Durand's method and systems that allows architecture to be a more inclusive discipline, retaining its autonomy and at the same time engaging other disciplines with a common knowledge. At the heart of this common knowledge is the irreducible deep structure of type, bearing both the structural logic accessible to the engineers and the potential reification of the idea of solidity, salubrity and commodity as Durand's aim for architecture, and as its source of beauty. It can be argued that for Durand, science and rationality are seen as a means of

51 Villari, Sergio. *J.N.L. Durand (1760-1834), (*New York : Rizzoli International Publications, Inc., 1990), p. 66

52 Villari, Sergio. *J.N.L. Durand (1760-1834), (*New York : Rizzoli International Publications, Inc., 1990), p.67

53 Picon, Antoine, 'From "Poetry of Art" to Method: The Theory of Jean-Nicolas-Louis Durand', in Pr'ecis of the Lectures on Architecture, trans. by David Britt (Los Angeles: Getty Trust Publications, 2000), p.44

emancipation for the revolutionary society. Where Quatremère attributed rationality and abstraction to Greek architecture and classicism as an allegory for the enlightened society, Durand scribed it to a method. This method, in all its pragmatic leanings is political. Durand believed that architecture should be accessible to all, not through the reserve of monarchical and aristocratic patronage. It is available to all when it can be taught to all and thus, for Durand, the study of architecture required a scientifically rigourous method.

8. Conclusion

Durand can be credited for introducing a method to systematized architectural knowledge and for broaching the possibility of a disciplinary knowledge of architecture, with its own object of knowledge and method, founded on reason and observation. Durand went beyond Boullée, in that he rationalised Boullée's 'conception of design' by introducing a method to compose and decompose, a method that is repeatable. Durand furthered Le Roy's comparative method into a typological tool of analysis, exclusively to draw out the shared and thus general characteristics of building types considered as wholes and parts. Unlike Le Roy, Durand was no longer interested and thus not bound by the relations between proportions and beauty of the orders.

Architectural knowledge and its praxis can be considered scientific through Durand for the following reasons: First by creating a method, which means that architectural knowledge is no longer embedded in the buildings themselves (as received canons) but in the procedures used to create them. By codifying architecture into a method, it becomes objective, it can be transmitted, taught, applied by other architects. When the method is ultimately repeatable and verifiable, it is scientific. So architects

should study the method rather than studying buildings of the past. Thus the idea of method, the science of the irreducible element of architecture, is Durand's contribution. This rigour is more applicable to the *Recueil*, the moment of analysis; as Rossi would say, *'the typological moment is the moment of analysis'*.

Type resides both in the *Recueil* and the *Précis* as the irreducible structure: a 'deep structure' that gives rise to organization in plan. It is both physical and abstract; physical in the sense that it is governed by structural consideration and abstract in the sense that the potentials of organization are embodied in it. Typology, understood as a discourse, theory, treatise (method) or science of 'type' can be located in Durand's method of composition and decomposition. Here, his theory as method can be read as the logic of precedents, that is, the logic of the deep structure – the type.

Durand's position is not the opposite of Quatremère de Quincy. Both refer to history and precedents respectively for abstract principles that will rule over their models. Durand, unlike Quatremère de Quincy offers a graphic device that forges a link with history through its elements. Both are concerned with the question of beauty, Durand finds beauty in the outcome of a rational, analytical design process, whereas Quatremère finds it in the laws that govern nature.

Durand's method is serial in nature. Its method of classification, composition and decomposition is phylogenetic and predates evolutionary science. Durand's method also predates the industrial revolution and offers a method for mass-customization as opposed to mass-production. This is because the type rather than the prototype, as standard or example, resides in the method rather than the perfectible object.

This notion of type and typology deduced from Durand's *Précis* and *Recueil*, represented graphically as diagrams, introduces

precepts that are fundamental to working typologically: precedents, classification, taxonomy, continuity, repetition, differentiation and reinvention. Its draw-back however lies in its ease in creating variations, and such methods of composition can become ends in themselves when the model is no longer governed by an idea or by general principles. In these instances, this method of procedural differentiation becomes pure syntactic formalism.

At its best, the rationality of Durand's method introduced the notion of common knowledge into architecture. Architecture governed by reason, bestowed architecture with a 'scientific language' that enabled the discipline to be more inclusive and in turn to retain its autonomy.

3 DOMINANT TYPES AND THE IDEAS OF THE CITY

1. Introduction

To make a connection between type and the city is to establish a link between the works of architecture and the wider milieu in which the work is produced. It is also an act of validation as to the relevance of the works of architecture outside its disciplinary domain. I will propose to use the term 'dominant type', to define this notion of type and locate it in the writings and works of Rossi and Koolhaas, architects who have specifically approached the problem of the city through its prevalent building types. The definition of the dominant type will be guided firstly by the idea/deep structure coupling that was discussed in Chapters 1 and 2 but will be defined more closely with the understanding of typical, typicality and commonality.

I will discuss the various ideas of the city, starting from Aristotle's definition of the city or polis as a partnership and will consider the challenge to the city as a space of pluralism posed by Schmitt's friend/enemy coupling as the precondition of the political. This resolution will be informed by Mouffe's idea of agonistic pluralism. I will then examine and offer an alternative reading to the writings and works of Rossi and Koolhaas. It is uncommon to bring together both Rossi and Koolhaas and to examine their works through the lens of type. But it is my argument that in both cases, the dominant type features prominently in their efforts to redefine the idea of the city that can no longer be sustained as a homogeneous and uniform totality.

The word 'dominant' means ruling, governing or having an influence over something; it also means something that is prevailing. Thus, for a type to be dominant, it has to prevail and be of influence. What is the most prevailing is also the most typical and what is the most typical is also common to all. And no other sphere is more common to all than the city itself, when it is understood in its most fundamental sense, as a space

of coexistence. Thus, dominant types can be understood as the typical elements that constitute the city and are the embodiment of what is common. To define what is common through the dominant type and the city fundamentally touches upon the very reason why the question of type is raised in architectural theory and history. Type as a heuristic device uncovers architecture's connection to society through a discursive understanding of what is common at every juncture in history when the universal principles of architecture and its accepted conventions are no longer valid. The three moments that Vidler speaks of in the 'Third Typology', as discussed in Chapter 1, outline such a shift. This notion of what is common obviously cannot be reduced solely to a formal or tectonic similitude, like a prevailing style of architecture, nor can it solely mean public property or space (as opposed to private). In this chapter, this notion of what is common can be understood through seven categories, centred on the relation between the dominant type and the idea of the city. The first, as argued above, is the idea of what is common, reified as the most typical element of the city. The second understanding extends from Peter Carl's typicality as a framework of recognition, like language itself. The third understands this commonality as the idea of the city through - Aristotle's *Politics* as a space of coexistence which requires a constitution or *nomos* as a precondition, that is to say, a political choice to live among others. The fourth equates this notion to the idea of agonistic pluralism; as an extrapolation of Chantal Mouffe's counterpoint to Carl Schmitts's notion of homogeneity as a precondition for the 'demos'. The fifth will be Rossi's concept of collective memory and permanence afforded by the urban artifact. The sixth is an alternative reading of Koolhaas's project of the city through Agamben's concept of the 'dispositif', where the idea of what is common is understood as the framework and borders of heterogeneous containment. The last category will be discussed

in Chapter 4 in the context of the production of the dominant type in a developmental city state. What is common will be understood here as immaterial labour – outlined by Michael Hardt - and used to further the proposition of the common knowledge of the deep structure, identified in Durand's notion of type and typology, as shared biopolitical production.

2. Typical and Typicalities

Peter Carl draws a clear distinction between type and typicality[1]. For Carl, *'Typology is the very embodiment of conceptual thinking: it isolates similarities (categories) from the flux of reality in order to make purified clusters of these similarities suitable for manipulation (insertion back to reality)*.[2] In such circumstances, the tension that arises from the conceptual field of type to the concrete topographies which we inhabit, is customarily resolved through the variations of type. For Carl, the most important aspect of type is its heuristic value that embodies a much wider experience and knowledge. Too often, design reifies this knowledge and shuts off the true 'depth of typicalities'. To illustrate this point, Carl uses the example of the type 'bedroom' versus the 'typical situation' associated with the bedroom. The former refers to a medium size room with a bed, side table, window, closet and an access to a WC. Whereas the latter refers to a richer and more profound interpretation that can include sleep, sex, illness, death and so on. Thus for Carl, types are isolated fragments of a deeper and richer structure of typicalities and *'The principle difference between typology and typicality is that the*

1 Carl, Peter, 'Type, Field, Culture, Praxi's in *Architectural Design*, 81.1 (2011), Typological Urbanism. This distinction between type and typicality was first drawn by Dalibor Vesley 30 years ago according to Carl and appears now as the role 'paradigmatic situation' in *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production* (Cambridge, MA: MIT Press, 2004).

2 Ibid., p.39

former concentrates upon (architectural) objects, the latter upon situations.[3] Typicalities, for instance, operate in language as a framework of understanding, for mutual understanding requires the element of recognition, otherwise we will be compelled to invent language afresh at every meeting. Carl argues that this 'language' should not be understood as the structuralism of French linguistics that attempts to translate all language into a grammar of messages or codes. Instead this language as framework of understanding disposes typicalities in strata. The most immediate are common meanings, followed by accents or sounds, then bodily gestures. As such, recognition is only possible through the common elements carried by typicalities. It is through typicality - either by the replacement of type with typicality or the conflation between type and commonality - that we can advance the conception of the dominant type to mean more than a building type and its variations in the city as a context of architectural production. For Carl, type is a subset of typicalities and does not command the same depth as that suggested by typicalities. This position is tenable if we understand type strictly as the reification of a limited band width of typicalities as concrete (architectural) objects, as Carl does. But it is equally valid to propose that the dominant type oscillates between both extremes of this depth of typicalities that Carl proposes: both as framework of recognition and as reified typical architectural objects.

Carl's argument for typicalities is most instructive in that it introduces the notion of what is common into the understanding of the dominant type. I argue that precisely by fusing this idea of what is common with type as a framework of recognition, that the dominant type becomes an indispensible tool and conceptual framework (or topos) to understand, describe and theorize the city and subsequently to produce an architecture that is relevant to the city.

3 Carl, Peter, 'Type, Field, Culture, Praxis' in *Architectural Design*, 81.1 (2011), p.40

This search for what is common in the city - through architecture - has been underpinned by the discursive definition of the typical, I would argue, and in *'The City as a Project: Types, Typical Object and Typologies'*, Marina Lathouri highlights two critical moments in the late nineteenth and twentieth centuries where type established a fundamental connection between architecture and society, with an abstract and flexible view of history. Here Lathouri expands upon Vidler's 'Third Typology' but focuses the argument on the link between the typical and architecture's sociality. According to Lathouri, this possibility was laid out by Quatremère de Quincy, where the amalgam of type as origin, natural principle, symbolic mark and legible form of a purpose, was eventually fixed in the practice of the academic architect in the first quarter of the 19th century. As discussed in Chapters 1 and 2, the reintroduction of history into architecture also reconfigured the notion of type to mean the process of formation of a particular building arising out of societal demands and needs, rather than of a divine or natural origin. This allowed the signification of the process as well as the object type, and allowed design as a process to claim a functional justification as well as an active role in the emerging disciplinary specificity of architecture. For Lathouri, this is the most evocative possibility of type, that it is not a fixed ideal to imitate or aspire to, but a historically contingent idea, subject to functional and programmatic changes, as well as economy. The consequence of this is the transformation of the figure of the architect as a redeemer through the extended boundaries of architecture, beyond its accepted role as an art form or as a craft of utility. The architect must now articulate and express architecture as a response to external changes and internal demands, that is, to synthesize the spatial, material, economic and social.

In the conception of the Modernist city, the notion of the typical came to be identified with the standard. Lathouri elaborates

that the Modernist 'typical object' and 'standard product' were symptoms of this new understanding of architecture. Walter Gropius, in his *'The New Architecture and the Bauhaus'*[4], argues that the typical building can increase civic dignity and cohesion, be used to meet the demands of urban industrial population for the emergence of a new harmonious social order. To link the notion of 'standard' to 'typical', we need to turn to Le Corbusier's *'Eyes Which Do Not See III: Automobiles'*[5]. For Le Corbusier, the problem of perfection – as well as the opportunity provided by machine production - should be dealt with by the establishment of standards:

> *'Architecture is governed by standards. Standards are a matter of logic, analysis and precise study. Standards are based on a problem which has been well stated. Standardization is imposed by the law of selection and is an economic and social necessity.'*[6]

If we substitute the word 'standard' with 'type' in the statement above, it becomes apparent that the understanding of 'standard' parallels that of Quatremère's notion of type as the abstract principle that governs or rules over the model. This understanding of standard can be furthered to mean the level of quality or attainment (of perfection), something used as a measure, a norm, or model in comparative evaluations, and a rule or principles that are used as a measure of judgement. As such, the establishment of a standard must be legitimised by agreement and consensus. Le Corbusier demonstrates this with the example of the Parthenon: *'The Parthenon is a product of selection applied to an established standard'*[7].

4 Gropius, Walter, *The New Architecture and the Bauhaus*, trans. by Morton Shand (Cambridge, MA: The MIT Press, 1965; repr. 1998)

5 Corbusier, Le, 'Eyes Which Do Not See III: Automobiles' in *Towards a New Architecture* (New York, Dover Book, 1986), p.85-147

6 Ibid., p.145

7 Ibid., p.133

For Corbusier, the establishment of this standard as type involves '*...exhausting every practical and reasonable possibility, and extracting from them a recognized type comfortable to its functions, with a maximum output and a minimum use of means, workmanship and material; words, forms, colours, sounds*'. [8] He also believes that when such a standard is in place, competition will ensue in the refinement and production of these perfected object types and the inevitable outcome will be progress[9]. Corbusier used the example of automobile manufacturers that compete to produce a machine that not only answers a complex functional brief but manifests itself in perfection and beauty. He urged architects to use this example to meet the challenges of designing and producing collective housing and buildings. This progress, for Corbusier, can only be achieved through a concerted collective effort, where the process of design and experimentation is governed by a set of established and agreed rules or principles, and level of quality. The final outcome of this techno-scientific positivistic outlook is the typical, as standard product or object type.

The typical thus came to provide a framework for a social and ideological agenda that informed the design and production of all artifacts to encompass life. The object type covers the entire scale of reference for living and working, from an entire city defined by a few perfected housing types, for instance Corbusier's *A Contemporary City for Three Million* (1922), with its *Redent Blocks*, *Immeubles-Villas*, to dwelling units and furniture. By setting up a relation between the singular and the collective production, type is implicit in the articulation between the individual and the collective in the social and political aspirations of Modernism. The ethical value of the Modernist type combined the ideal of architectural perfection with laws of economy and the reality of

8 Corbusier, Le, 'Eyes Which Do Not See III: Automobiles' in *Towards a New Architecture* (New York, Dover Book, 1986), p.137

9 Ibid., p.134

mass production. From this point of view, as agued by Lathouri, dwelling was no longer concerned with the domestic scale of space but with the programmatic and ideological link to mass production, culture of dwelling and ideas of the future. The consequences of this shift, she argues, are that *'the individual is rendered typical, in order to contribute to the generative and regulative operations of the city, that is, a type of development.'*

This question of what is typical in the city resurfaced for the second time in the 1950s and 60s. For Lathouri, it emerged out of the tension between the sequence of unitary elements and the synthetic instant of a more complex and ambiguous figure of the existing historical city. Centred around the critique of the city of architectural modernism as 'naive functionalism'[10], an alternative reading of the city was put forth by Aldo Rossi in his *L'architettura della Città* (1966). The city was read as something that constantly evolved and changed, and thus what was crucially permanent was ultimately typical. Rossi further conceives the city as a 'repository of history'[11] that serves as a kind of collective memory to the city's citizens. I would argue that the recourse to the city as a project to revalidate the works of architecture is underpinned by the redefinition of what constitutes the idea of what is common. In other words, what will be the *idea of the city* that architecture must again respond to? In light of this, the paradigmatic projects of the city of OMA alongside Rem Koolhaas' 'Culture of Congestion' as expounded in *Delirious New York* (1978) must be included. To my best knowledge, the works of Rossi and Koolhaas have not been brought together and discussed through the notion type; but it is my argument that in both cases, the dominant type features prominently in their efforts to redefine the idea of the city that can no longer be

10 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.46

11 Ibid., p.127

sustained as a homogeneous and uniform totality. For that, we must first discuss the city as a pluralistic space.

3. The Idea of the City

The Greek word for city is *polis*, the word that gives the English word politics. In the opening of Aristotle's *Politics*, he defines the city as a partnership (*koinōnia*) or species of association:

> *'Observations shows us, first, that every city (polis) is a species of association, and secondly, that all associations come into being for the sake of some good – for all men do all their acts with a view to achieving something which is, in their view, good.' (1252a1)*

For Aristotle, the purpose of the city is for the individual to live a fulfilled life. The city-state, or *polis* in Greece during Aristotle's time, was not subordinate to a state or nation, it existed as a sovereign entity and controlled the surrounding territories that were farmed. Aristotle defines the political community as a partnership pursuing a common good. The highest good for him is the virtue and happiness of its citizens, and the purpose of the city is to allow the attainment of this common good. Thus the city in essence is the shared pursuit of virtue for Aristotle. This teleological view is linked to Aristotle's belief that every human being has a *telos* - the concept that links Aristotle's *Ethics and Politics* - which means purpose, goal or final end. Everything for Aristotle has a final end. For instance, an oak tree produces an acorn and the acorn has a natural tendency to grow into a tree. However, not all acorns will grow into trees. It must first encounter the right conditions (soil, nutrients and the absence of predators) to grow into a tree. Thus the *telos* for the acorn is to become a tree and to fully understand what an acorn is we must see this goal

or end. Aristotle believed that human beings too have a *telos*, and that human beings are meant to be happy. To be happy, man has to lead a virtuous life. To do this, an individual requires the use of human capacities to their fullest, and the most important capacity is *logos*, a word which means reason and speech. An individual can only fulfil their *telos* and live a full and happy life within a well constructed political community[12], in the *polis*.

Aristotle argues that the *polis* is a compound and a whole rather than an aggregation: *'A city belongs to the order of 'compounds', just like any other thing which forms a single whole, while being composed, none the less, of a number of different parts.'* (1274b39). The *polis* is not simply a geographical location nor an aimless collection of human beings. Its identity consists in its organization (form) and structure (artifact). The concept of Form is important in understanding Aristotle's political philosophy as well as his definitions of the *polis*. To illustrate this, we can use the example of a sculptor who conceives the form in his mind before he sets to work, and the sculpture that he then produces has this form. The form then is the final goal of the effort of the sculptor that has just taken place. The same pattern of analysis applies to man, as well as other living things. From here, we can infer that the *polis* is both a physical place to live and an abstract space for politics. For Aristotle, constitution stands in the role of form to the *polis*. The *polis* requires the constitution to exist. But the *polis* can also be an artifact, like a house (i.e., the form of the house and the artifact of the house). This concept of form, as constitution and *nomos*, suggests the framework of recognition that is required for the *polis* to exist. *Nomos*, which is commonly translated as 'law', 'custom' or 'convention', for Aristotle is not a given, unlike *phusis* or 'nature'. The former requires an acceptance or subscription as common among citizens. This subscription to the common good

12 This is because the community brings about virtue through education and through laws. Thus the role of politics is to provide an environment where individuals can live a fulfilled life.

or law, is fundamental to Aristotle's first definition of the *polis* as a partnership or *koinōnia*. The word *koinōnia* is in fact connected to the idea of sharing or holding something in common. Indeed, Aristotle sees the *polis* as a shared enterprise in which citizens or participants pool their resources and efforts towards a common goal, the good life.

Aristotle accounts for the various formations of partnerships to show how the city comes into being. He begins with the partnership between male and female for the sake of reproduction. The other partnership, between master and slave, is for preservation. For Aristotle, the master and slave mutually benefit from this relationship. These two relationships comes together to form a household for the purpose of meeting the daily needs of life. As these families expand, they come into contact with one another and form villages. As villages expand, a number of villages then form a city. It is not the size of these villages that makes it a city according to Aristotle, but its self-sufficiency, through the pooling of resources for the pursuit of shared virtue and happiness and thus the fulfilment of their *telos*. Thus, Aristotle introduces to us the nature of city as one that is based on partnership; a space of coexistence. Aristotle states that the city is clearly a unity, a unity that must derive from a multitude. The fact that human beings are inherently different and it is from this difference that partnerships are formed, means that the city must allow for specialization and greater self-sufficiency. Cities for Aristotle are preserved not by complete unity and similarity but by 'reciprocal equality'. Here, I would like to draw upon Aristotle's identification of the importance of coexistence, the common good, and the conflicts that accompany his conception of the *polis*. This understanding of the city as a pluralistic construct will go towards my redefinition of the idea of the city. Granted, the citizens of Aristotle's *polis* constitute a relatively

homogeneous[13] *demos* compared to most of today's cities, but it is precisely because cities today are more heterogeneous and pluralistic, that this definition of the city as a partnership, a space of coexistence, becomes more urgent.

In 'Individuality of the Urban Artifact'[14], Rossi can be said to have similarly drawn upon this idea of commonality that defines the partnership, but recast it as the city with a 'collective memory', history and myth. He uses Athens as the paradigmatic example of his 'Individuality of the Urban Artifact' as a 'Locus'. The former can be understood as the primary elements that generate the city, namely the temple and the organs of political and social life, which are nested in and in continuous evolution within residential areas as the Locus. Thus for Rossi, the house does in fact participate actively in the formation of the Greek city and constitutes a basic design through which we can account for the city's principal artifacts.

Rossi claims that any western city has its origins in Greece; Rome supplies the general principles of urbanism, whereas the constitution of the city and its urban beauty lies in Greece. Rossi makes a distinction between the Greek *polis* and those of the Orient, in its absence of a city wall in the beginning. He elaborated that the citizens were scattered over a reasonably large region and thus intuits that the city, above all, is formed by choice, something prior and independent of the physical structure of the city wall:

> *'(...) the Greek city was characterized by a development from the interior toward the exterior; its constituting elements were its temples and its housing. Only after the archaic period, for purely defensive reasons, were the Greek cities encircled by walls, and in no case were*

13 In Aristotle's *polis*, not all individuals are citizens who have the privilege to enjoy this freedom to pursue the good life, in fact Aristotle's conception of this common undertaking depends on the servitude of slaves and resident foreigners.

14 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.103

these the original elements of the polis. In contrast, the cities of the Orient made walls and gates their res sacra, the constituting and primary elements of the city; the palaces and temples within the city walls were in turn encircled by other walls, like a series of successive enclosures and fortifications.[15]

Rossi further quotes Poète's *Introduction à l'Urbanisme* that drew on the double meaning of the *polis*. That is the conception of the city-state. The city refers more to the Acropolis –the primitive site of refuge, worship and governance - and the state refers to the extended territory where the citizens lived, scattered. Therefore the *polis* originally meant the Acropolis and the word *astu* more generally refers to the inhabited area. Thus what links Athenians to the city was essentially political and not residential. As Roland Martin pointed out, what was more significant for the Athenians were the ties to the abstract idea of the city than to a physical space, they were more interested in the form of the city as the political organization most favourable to the moral development of the citizens. From this, Rossi speculates that:

'In this ancient organization it seemed that the physical aspect of the city was secondary, almost as if the city were a purely mental place. Perhaps the architecture of Greek cities owes its extraordinary beauty to this intellectual character.[16]

Pier Vittorio Aureli, in his *'Towards an Archipelago'*[17], on the other hand conflates *nomos* with the existence of the wall, following Hannah Arendt's account of the political constitution of the

15 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.136

16 Ibid., p.137

17 Aureli, Pier Vittorio, *The Possibility of An Absolute Architecture* (Cambridge, Massachusetts: MIT Press, 2011)

polis[18]. This should be considered within Aureli's larger attempt to reconstruct an architecture of the city as an absolute architecture, which is underpinned by a critique of capitalism. For Aureli, the logic of urbanization is the apotheosis of capitalism as the sole instigator of development, other than the city. As such, Aureli makes a clear and unequivocal distinction between the concept of the city and the concept of urbanization by drawing upon the distinction that Aristotle makes between *technè politikè* and *technè oikonomikè*: the former being the faculty of decision making in the public interest and thus politics, residing in the sphere of the *polis*, and the latter concerning the administration of private space, the house or *oikos* - the Greek word that gives the word *oikonomeia*, or economy in English. Aureli sets up the next binary opposition, following Cerda's definition of 'urbanization' from the 'urbs' to replace 'ciudad' (city) in *The General Theory of Urbanization* (1867). From this point of view, urbanization is the expansion of human settlement driven primarily by economics, the city on the other hand is the consolidated, concentrated settlement that precedes the space of urbanization. It is usually bounded by a city wall (now breached in most instances) and is a point of concentration of people and activities from surrounding countryside, compressed into small spaces, resulting in a stratified society that is functionally differentiated and politically divided (a tension that makes politics necessary). Thus the city is historically constituted and concerns itself with the civic and symbolic function of human settlements and coexistence. For Aureli, the city is (and should be) concerned with politics, whereas the space of urbanization is concerned with economics.

An absolute architecture is to Aureli, political and as outlined above, it must concern itself with the city and is against urbanization. For him, the political is analogous to the formal

18 Aureli, Pier Vittorio, *The Possibility of An Absolute Architecture* (Cambridge, Massachusetts: MIT Press, 2011), p.5

and manifests itself as the idea of a Limit. Aureli's dialectics and definition of the political is based on Carl Schmitt's definition of the friend/enemy opposition and he extends this concept into action:

> *'In the dual terms of Carl Schmitt, the space between is formed by the decision of who is a friend and who is an enemy. This decision does not exist "as found" in between the parts, but arises from the position taken by the parts that form this space. The word decision derives from Latin caedere: to cut the links. To decide one's own counterpart means to consciously struggle for autonomy, but in a way in which, through this gesture of cutting, one also realises an inner belonging to what one is detaching from.* [19]

It is through this severance, Aureli argues, that it is possible to make a collective claim of political autonomy. Returning to Arendt's exhortation that '*Politics arises in what lies between men* ...'[20] Aureli takes this space as analogous to the formal, where the understanding of the formal transcends the abstract/visible dichotomy. The formal here is the experience of Limit, as inside and outside. The inside is understood as a position of the acting subject (Schmitt's 'us/friend') and the outside as a datum or situation (Schmitt's 'them/enemy'). The formal also involves an act of spatial definition and is relational, rather than relative. The formal is against totality and generic conception of multiplicity. It is a partisan idea; is against urban space, urban landscape, network that implies integration and dissolution of difference. At this point Aureli's dialectics as binary opposition becomes clear; the political is analogous to the formal and manifests itself as a limit

19 Aureli, Pier Vittorio, *The Possibility of An Absolute Architecture* (Cambridge, Massachusetts: MIT Press, 2011) p.28

20 Arendt, Hannah, 'Introduction into Politics', in Arendt, *The Promise of Politics*, ed. Jerome Kohn (New York: Schocken Books, 2005), p.95

(or border) and locates itself crucially between the oppositions of friend/enemy, us/them, politics/economy, city/urbanization and inside/outside.

Returning to the possibility of an absolute architecture, as an architecture of the city, is for Aureli a confrontation with the present day realism and post-criticality that has surrendered to the totality of urbanization. Like Unger's idea of the Archipelago, it will be the city that is within urbanization but also critical of it. Aureli offers the form of the plinth, that can be found in all of Mies van der Rohe's projects as a 'city project' that was not considered as such. Aureli proposes that the plinth of Mies' Seagram Building inevitably makes the site a limit for what it contains. Upon climbing Mies' plinth, the experience of turning one's back to look at the city is the moment of severance from the surroundings that Aureli has been arguing thus far. In this way, Mies' plinth reinvents urban spaces as an archipelago of limited urban artifacts. It is this emphasis on finiteness and separateness that emanates from the intense manifestation of the political in the city.

With this example, the idea of the Limit and the Political hover between the desire to create the effect of contrast and the proposition of a plausible architecture against urbanization, neoliberal capitalism and the relativity of politically correct pluralism. The most crucial contribution here to the discussion of the idea of the city, offered by Aureli, is the introduction of the problem of the city as a political choice and for the clarity and lucidity in which these problems are articulated. By taking on Schmitt's friend/enemy construct, Aureli highlights the challenge to one of the fundamental tenets of the city, that it is a partnership based on human plurality. For Schmitt, his preferred outcome would be for the defeat and elimination of the other for a democracy to be legitimate and to deny the enemy equal rights. I would argue, this is not tenable or sustainable given the

increasingly pluralistic nature of cities today. But we can also not reject the challenge posed by Schmitt as highlighted by Aureli, and to expand the understanding of this crisis of democracy inherent in a pluralistic city, we can turn to Chantal Mouffe.

4. The Political and Agonistic Pluralism

Whilst agreeing with Schmitt's friend/enemy criteria for the political to be possible, Mouffe does not accept his conclusions that call for homogeneity, and, if required, the elimination of heterogeneity. For Mouffe, political theory must have a practical role in shaping public culture and must contribute to the creation of democratic political identities. She acknowledges, however, that Schmitt's position in principle, challenges the fundamental tenets of liberalism. Instead of rejecting this, she proposes to confront this important paradox inscribed in the very nature of liberal democracy and in doing so, to be more able to negotiate a new position.

Schmitt's call for 'homogeneity' as a condition for the possibility of democracy can be found in his *'The Crisis of Parliamentary Democracy'* (1926), where he states:

> *'Every actual democracy rests on the principle that not only are equals equal but unequals will not be treated equally. Democracy requires, therefore, first homogeneity and second – if need arises – elimination or eradication of heterogeneity'*[21]

His argument can be understood as such: democracy requires substantive equality, not an abstract equality like the liberal one. For this to happen, i.e., for citizens to be treated as equal, they must partake in a common substance. General equality of mankind

21 Schmitt, Carl, *The Crisis of Parliamentary Democracy* (Massachusetts: MIT Press, 1988)

cannot serve as a basis for a state or any form of government because this idea of human equality – as one of the concepts of liberal individualism – has no counter position of the unequal. Therefore, the friend/enemy criterion for the political is not possible in these circumstances. Schmitt argues that modern mass democracy rests on this confused combination and further states that liberal individualism is opposed to the ideals of democracy because the latter is political and aims to create an identity based on homogeneity. Therefore, liberalism negates democracy and vice versa[22]. Schmitt makes a clear distinction between the two different ideas of equality. Liberal equality guarantees that every person is equal to every other one. Democratic equality differentiates between those who belong to the *demos* and those who do not, and therefore those who are outside are unequal, and will be treated differently. For Schmitt, the liberal claim of equality of mankind is pure abstraction as equality requires specific possible conditions – political equality, economic equality etc., and absolute human equality is meaningless. Thus a democratic concept of equality, based on the need for homogeneity, is a political one and not a liberal conception.

Mouffe highlights the fact that the nature of similarity that defines homogeneity is not of concern for Schmitt, but more the possibility to demarcate the line between those who belong to the *demos* and those who don't[23]. For Schmitt, the political *'can only be understood in the context of the ever present possibility of the friend-and-enemy grouping.*[24] Mouffe thinks that by focusing too much on 'them', Schmitt forgets about how to define 'us' and what binds 'us' together beyond its counter position. Liberal

22 And Schmitt concludes here that parliamentary democracy thus is not viable.

23 This line for him is citizenship, where citizens are granted equal rights. Thus democracy can exist for a people and not for mankind. i.e., people face each other as politically interested persons not as abstraction.

24 Schmitt, Carl, *The Concept of the Political* (London: London University of Chicago Press, 1996), p.35

tradition in its defence of pluralism on the other hand, forgets to forge a commonality that is required for the political. Thus the political moment is the process of negotiation between interests, independent from their political expression. This critique of Mouffe of both Schmitt and the liberals offers a possibility for rethinking what is common beyond the act of severance and the all inclusive relativism that is apolitical.

Schmitt's false dilemma, argues Mouffe, is predicated on the way he envisages political unity and the identity of the people. The unity of the state for him is a given and is stable; the identity of the people also exists as a given. Thus his us/them opposition is not politically constructed but is merely the act of recognizing existing pre-given borders. If pluralism will lead to the dissolution of the state as Schmitt fears, it also means that pluralism is the other, the enemy and thus requires a political construction. This has no place in Schmitt's understanding of the political. Mouffe agrees with Schmitt on the necessity to constitute the people politically but this should not exclude pluralism, as it is clear now that there is no reason to reject pluralism. Mouffe instead proposes to replace Schmitt's notion of homogeneity with 'commonality': a form of commonality strong enough to institute a 'demos' but nevertheless compatible with certain forms of pluralism. This is what Mouffe calls agonistic pluralism, where the identities are always contingent and in contestation, between adversaries, rather than between enemies that have to be eliminated. In *'Hegemony and Socialist Strategy*[25], Mouffe outlines agonistic pluralism as follows: 1) that the political is the dimension of antagonism inherent in human relations; 2) politics on the other hand is the ensemble of practices and discourses that try to diffuse this potential antagonism; 3) this position maintains the us/them opposition but turns this antagonism

25 Laclau, Ernesto and Mouffe, Chantal, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (London: Verso, 1985, 2nd edition 2001)

into agonism- turning the enemy into adversary (this is the real meaning of liberal-democratic tolerance). 4) This agonism is not liberal notion of competition as this element of antagonism does not involve disinterested rationalism[26]. 5) Antagonism is a struggle between enemies, while agonism is a struggle between adversaries; 6) therefore democratic politics is not to eliminate conflict as its final goal, but to turn antagonism to agonism.

Following Mouffe's arguments, I would like to propose that the city is the common space par excellence. It is a space where agonistic confrontation takes place in a discursive common framework as borders and spaces of containment. Like Mouffe, I insist that this is not the postmodernist's version of fragmented heterogeneous spaces of relativism, nor a Deleuzian 'smooth space'[27]. It is always demarcated and hegemonically structured with this discursive deep structure as a framework of recognition that displays the depth of typicalities as the common. As such, what is common cannot be universal as in an agonistic pluralism, there can only be a contingently dominant idea of what is common. Thus, this commonality is discursive and this unresolved but productive tension manifests itself and is reified in the deep structure of the city – its dominant type. The city as an idea of agonistic pluralism is one that discursively strives for heterogeneous containments that make possible the articulation of difference.

26 Mouffe, Chantal, *The Democratic Paradox* (London: Verso, 2005), p.45. This position is in contrast to Habermas's deliberative democracy that insists on an 'ideal discourse' through 'ideal speech', with reason and rational argumentation as its central tenets.

27 Architecture's response to the problem of pluralism is often manifested in the production of formal difference that is then appropriated by capital as commodities of novelty. These architectures of 'competition' are different to the spaces or architectures of agonistic pluralism. See Mouffe, Chantal, 'Artistic Activism and Agonistic Spaces' in *Art & Research: A Journal of Ideas, Contexts and Methods*. Volume 1 No. 2 Summer 2007.

5. Aldo Rossi's Collective Memory

Returning to the writings and works of Rossi, I would argue that it is here that we can discuss the dominant type as a discursive common framework of borders and spaces of containment, and as a framework of recognition that displays the depth typicalities. The dominant type in this case will be Rossi's urban artifact as *the repository of history and the collective memory of the city.* What is common in this instance is the permanence afforded by the urban artifact, for what is permanent and unchanging is inherited through use as custom, conventions and rule; it is experienced and lodge itself in the memory of the city as a lived and common space. The context for Rossi's efforts to recuperate the historical city as propelling artifact for the process of urbanization is based on the realization that the city can no longer be conceived and constructed through a unitary plan. The city can no longer be an abstract pristine whole, instead it is fragmented, more nuanced and complex in its constitution. Rossi's critique of modernism's naïve functionalism begins with his observation that the explanation through functionalism must be rejected, as it impedes the understanding of forms. And that the study of the city must accept more complex relations of functions, and that functions do not lead to form. Furthermore, function, when applied to definition of cities, is very reductive – i.e., cultural cities, industrial cities etc. Despite this rejection, Rossi attempts to continue the project of the Modern Movement to give the city an overall coherence. This overall coherence or what I argue as the typical defining what is common, is now discussed and proposed through history and collective memory. This history and collective memory, for Rossi, is to be found in the individuality of the urban artifact, as the architecture that is considered to be the city.

All the concepts and terms used by Rossi, except the concept of the analogical, were proposed in *'L'Architettura della Città* (1966)'. The English translation, titled *'Architecture of the City'* only appeared 16 years later in 1982, published by Opposition Books with an introduction from Peter Eisenman. I will first clarify these concepts before discussing the two paradigmatic projects of the city as dominant types. They are City as History, Primary Elements, Urban Artifact, Locus and Collective Memory, Permanence, Type and Choice.

5.1. City as History

The first premise that underlines all of Rossi's concepts is that the city is understood as architecture. Here architecture is understood as the visible image of the city, a sum of different architectures, and as constructions of the city over time[28]. Rossi sees architecture as a creation inseparable from civilized life and society and by nature it is collective, it came into being with the first traces of civilization and is a permanent, universal and necessary artifact.

The growth of the city accumulates memories and although this growth is inscribed by its architecture, the universality of this experience cannot explain the city's precise form as an object. The city's architecture embodies the tension between particular and universal, public and private spheres and buildings, rational design of urban architecture and the values of locus (place).

28 *'The city, which is the subject of this book, is to be understood here as architecture. By architecture I mean not only the visible image of the city and the sum of its different architectures, but architecture as construction, the construction of the city over time. I believe that this point of view, objectively speaking, constitutes the most comprehensive way of analyzing the city; it addresses the ultimate and definitive fact in the life of the collective, the creation of the environment in which it lives.'* Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.21:

The city for Rossi, as a man-made object, as total architecture, is based on three distinct propositions. The first is permanence, and states that urban development has a temporal dimension, with a condition of before and after. As the city evolves with a variable rate of change, the permanence of the city is what remains constant in this process. The second proposition is continuity, and states that all elements of the city are homogeneous and without discontinuities if viewed through the first concept of permanence. The third is the existence of primary elements that retard or accelerate urban processes. Rossi's theory is drawn from two over-riding frameworks that study the city: it considers the city as a product of the generative-functional systems of its architecture and thus urban space. This is derived from analysis of its political, social and economic systems. The second, considers the city as a spatial structure and is derived from its architecture and geography. Rossi proposes to treat the City as History: *'The study of history seems to offer the best verification of certain hypotheses about the city, for the city is in itself a repository of history.'*[29] History here is taken as the study of the actual formation and structure of the urban artifact. Fundamentally, the idea of the city as a synthesis of a series of values concerns itself with the collective imagination.

5.2. Primary Elements

Primary elements for Rossi are dominant in nature and they participate in the evolution of the city over time in a permanent way. They are involved in the construction

29 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.127

of the city, are permanent and constitute a whole which is the physical structure of the city. They can be divided according to three principal functions: housing, fixed activities (public buildings and amenities) and circulation.[30] For Rossi, monuments are undoubtedly primary elements or urban artifacts:

'... historical building can be understood as a primary urban artifact; it may be disconnected from its original function, or over time take on functions different from those for which it was designed, but its quality as an urban artifact, as a generator of a form for the city, remains constant. In this sense, monuments are always primary elements.[31]

However, primary elements are not only monuments but also elements that can accelerate the process of urbanization as a catalyst. They can be identified by function and activities that are important to this process and not only limited to a physical structure. Rossi argues that an event of significant importance can also be characterised as a primary element as it transforms a site into a locus. For Rossi, when the primary element involves itself with the transformation of the city, it acquires the quality of the urban artifact.

Confusion often arises between the definition of the primary element and the urban artifact. For a more precise understanding of the difference, we can simply refer to the urban artifact as embodying something more than the primary elements, as not all primary elements (eventually) become an urban artifact. The term primary element

30 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.86

31 Ibid., p.87

was also used as Rossi needed to describe and define the study[32] area that he would undertake in his analysis of the city - as a whole composed of different parts. The primary elements which constitute the study area are therefore one specific fragment of the city.

5.3. Urban Artifact

Rossi proposes the *theory of urban artifacts* as an analytical method susceptible to quantitative evaluation, capable of collecting the material to be studied under unified criteria, that the city itself is an artifact, divided into individual buildings and dwelling areas. For Rossi, '*... the urban artifact and its architecture are one and the same, together constituting a work of art.*'[33] The urban artifact should be understood as *fatto urbano* or *faite urbaine*, it is not just a physical thing in the city, but imbued with all of its history, geography, structure and connection with the general life of the city, as noted by Peter Eisenman[34]. The ambiguity of the urban artifact is also due to the above definitions: that the city itself is an artifact, that it is divided into individual buildings and dwelling areas. Following this, it would mean that every physical structure in the city is potentially an urban artifact. Thus for Rossi, the differentiating factor would have to be its individuality which comes from its quality, uniqueness and definition.[35] This individuality depends more on its form than material, its complex entity that developed over space and time, its historical richness, its original values and functions that persist (which are for Rossi of spiritual

32 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.63

33 Ibid., p.87

34 Ibid., p.22

35 Ibid., p.29

value), and its sum of all experiences and memories (ominous or auspicious).

The most significant urban artifacts for Rossi are housing and monuments. This is because the changes in housing and the imprints left on them become the signs of daily life, a collective memory of the city. Urban monuments owe their singularity to their quality of permanence, and are primary elements acting as fixed points in the urban dynamics. According to Rossi, the urban artifact, besides being housing and monuments, could also be a street or a district. He further admits the difficulty in studying urban artifacts as the experience of the artifact varies from person to person and is ultimately subjective. It is precisely this ambiguity that removes the way in which Rossi views the city from that of the modern movement, as it corresponds with the multiple nature of the urban artifacts as opposed to the understanding of the city through a unitary masterplan, with a single authority as conceiver and implementer, a singular vision with typified individuals. Furthermore, this understanding of the city is first stated through its architecture, as an urban artifact which is not only a building type, but can be seen as a fragment of the city, as involved fragments that contribute to the overall structure of the city.

Rossi cites many examples throughout *Architecture of the City* that would qualify as the urban artifact. The first example is Palazzo della Ragione, Padua. According to Rossi, the multiplicity of functions that the palazzo has contained over time, shows its indifference to distributive function and thus functions (building use or programme) are entirely independent of the concrete and definite form. He uses this example as a critique of the naïve

functionalism of the modern movement that insisted upon drawing a direct cause-effect relationship between form and function, and claiming that form can be arrived through a techno-scientific determination. Rossi does make a distinction between distributive indifference versus typological indifference, this point was made later in the article *'Due Progetti'* (1970)[36] which will be discussed below.

For Rossi, monuments qualify themselves as an urban artifact when they are continuously transformed over time. They are closed and stable forms that nevertheless allow transformation of the city. This statement stands in contrast to the architecture of the present, where 'smooth' spaces, open structures, formal redundancy, networks etc., are some of the concepts that promise flexibility and adaptability. To further articulate these monuments as closed and stable forms that nevertheless evolve, Rossi uses the examples of the viaduct of Segovia, the Roman Forum and the Pantheon as examples of urban artifacts that had their function transformed. He also cites Sixtus V's project for the transformation of the Coliseum into a wool factory, with laboratory below and housing on the upper floor, and the transformation of various Roman amphitheatres to housing, in Arles and Nimes, France, and the Santa Croce district of Florence, Italy. The conclusion that Rossi draws from these is that, the monument stands in the centre of the site and is surrounded by other buildings that owe their characteristics and form to the permanence of the monument. Thus for Rossi, monuments like these are propelling elements of the city, and contribute to its urban development.

36 Rossi, Aldo, *'Due Progetti'* in *Lotus International* (Milan: Alfieri, 1970).

5.4. Locus and Collective Memory

Rossi defines locus as such: *'The locus is a relationship between a certain specific location and the buildings that are in it. It is at once singular and universal.*[37] Each part of the city thus can be a singular place, a locus solus. This statement introduces an urban fragment as an autonomous artifact and through it, we can understand the city. For Rossi, it is through these singular urban artifacts - the particular, irregular and most interesting - that the construction of theories that are not artificial and useless can be developed.

Here, Rossi briefly introduced the term 'genius loci' and the notion that a site is governed by this 'spirit of the place'. This spirit of the place for Rossi is the collective memory and meaning that is embodied in the urban artifact that constitutes the locus. The making of this 'place' with its 'spirit' is defined as a single unique moment of creation. He cites the example of the importance of architectural elements like the obelisk, a column or a tombstone; that the singularity of the urban artifact: *'... begins in the event and in the sign that has marked the event.*[38] Rossi elaborates that this always happens in art, where the artist strives to perfect a form, and eliminate the contingency of form, and hence arrives at the type as the first ideal. Note that this is the reverse of Argan's type, where type is detected through analysis, whereas for Rossi, in describing the singularity of the urban artifact, type is arrived at through distillation down to its first principles, when it is typical; that is the moment when it is common to all.

The locus, for Rossi, is the mnemonic structure of the city, where history is experienced as memory. This

37 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.103

38 Ibid., p.106

memory is embodied in the urban artifact in a specific location and can only be experienced through its specific articulation, precise form and relation to its geographical setting.[39] This memory ultimately is collective in nature as it pertains to the city, and thus to its collective citizenry. As Eisenman has noted, for Rossi, *'when history ends, memory begins'*[40] which means that when the relation of form and function are severed, form remains vital and history shifts into the realm of memory.

Rossi further elaborates that the collective urban artifact can be understood through the study of the technics by which they are manifested. Technics here refers to the Italian *'tecnica'* which means *'the study of principles of an art or the arts in general, especially practical arts.'* For Rossi these principles are at once collective and individual because the city shares these principles but it is individuals who carry out the works that create the urban artifact.[41] This can be understood better in terms of typicalities, that there is a recognized principle by which the city is constructed but these principles find their specific reification through the individual. The outcome of this process of reification thus, still displays the typical, i.e., the principles that are common to the city. One example in which Rossi cites to illustrate this point is the Roman Forum, for him, it is the

39 *'They (the singularity of monuments, of the city and of the buildings) trace the relation of architecture to its location – the place of art – and thereby its connections to, and the precise articulation of, the locus itself as a singular artifact determined by its space and time, by its topographical dimensions and its form, by its being the seat of succession of ancient and recent events, by its memory.'* Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.107

40 Ibid., p.8

41 *'In speaking of the constitution of an artifact and its memory, I am thinking of these problems largely in terms of their collective nature; they pertain to the city, and thus to its collective citizenry. I maintain that in an art or a science the principles and means of action are elaborated collectively or transmitted through a tradition in which all the sciences and arts are operating as collective phenomena. But at the same time they are not collective in all their essential parts; individuals carry them out. This relationship between a collective artifact, which is necessarily an urban artifact, and the individual who proposes and single-handedly realizes it can only be understood through a study of the technics by which the artifact is manifested.'* Ibid., p133

urban artifact par excellence, for it shows how the urban artifact is tied to the locus and can also be itself the locus. *'The Forum epitomizes Rome and is part of Rome and is the sum of its monuments; at the same time its uniqueness is stronger than its single monuments.'* More importantly, history in this example is also lived memory.

As discussed above, the collective memory is embodied in the locus, experienced through the individuality of the urban artifact. For Rossi, the unity that coheres the different readings of the city is history. The unity of parts is supplied by history, the city's memory:

'One can say that the city itself is the collective memory of its people, and like memory it is associated with objects and places. The city is the locus of the collective memory. The relationship between locus and citizenry then becomes the city's predominant image, both of architecture and of landscape, and as certain artifacts become part of its memory, new ones emerge.'[42]

This is how for Rossi, history is seen as collective memory, as a relationship of the notion of the collective to its place, where the individuality of urban structure is connected to the original artifact.

5.5. Permanence

Rossi's concept of permanence affects the collective and individual artifacts in different ways. They manifest themselves in the city as housing and monuments. Housing, as opposed to a single house, is permanent as it persists in time whilst a house is easier to remove. This view is

42 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.130

informed by the way Rossi draws from urban geography and has to do with the collective ownership of housing rather than private ownership of a house. Monuments of course persist in the city and serve a symbolic function rather than the function of use. The monument is unlike the house as it is an individual element. The monument has a dialectical relationship with the city. It sets up a before and after, growth and permanence. For Rossi, a monument that retards the growth of a city is pathological, an embalmed body like a dead museum piece, apparently alive but devoid of the life of the city, exemplified by the Alhambra. For Rossi, the concept of permanence can also be propelling – i.e., like the example of Palazzo della Ragione in Padua discussed above. The past therefore can be experienced in the present through this form that is independent of use. For Eisenman, this shows that only its form remains intact, and the propelling permanence continues to function as a record of time.[43] I propose that it is more accurate to understand this permanent form as the deep structure of the city. This irreducible structure, rather than form, holds the potential of organization of a precise type and can be used as a propelling device.

5.6. Type

As discussed in Chapter 1, Rossi draws his definition of type from Quatremère through Argan's *'On the Typology of Architecture.'* He makes a first reference to type by stating, *'I would define the concept of type as something that is permanent and complex, a logical principle that is prior to form and that constitutes*

43 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.6

it[44]. Thus, Rossi agrees with Quatremère's distinction between type and model and draws a conclusion that this rule is the structuring principle of architecture and that this principle is constant. Rossi crucially introduces the concept of a constant principle, or permanence, of the urban artifact to Quatremère's type. Thus, Quatremère's idea is no longer the principle deduced from nature but is now transposed as the individuality of the urban artifact; that is, what is constant and permanent is the history of the city as the collective memory of its citizens:

'Such an argument presupposes that the architectural artifact is conceived as a structure and that this structure is revealed and can be recognized in the artifact itself. As a constant, this principle, which we can call the typical element, or simply the type, is to be found in all architectural artifacts. It is also then a cultural element and as such can be investigated in different architectural artifacts; typology becomes in this way the analytical moment of architecture, and it becomes readily identifiable at the level of urban artifacts.'[45]

5.7. Choice

For Rossi, the first act of the *polis* is politics, so this cannot be absent from the construction of the city: *'...if the architecture of the urban artifact is the construction of the city, how can politics, which constitutes the decisive moment, be absent from this construction?'* Politics as outlined in the final chapter of the 'Architecture of the City' is the problem of choice by which a city realizes itself through its own idea of the city. He cites exemplary cities like Athens, Rome and Paris

44 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.40

45 Ibid., p.41

as cities that embody the collective will and in which the image of the city is one that arises out of a deliberative choice, but always through its political institutions[46]. Rossi acknowledges that the history of architecture and built urban artifacts is always the history of the ruling class.[47] He goes so far as to say that architecture cannot exist as opposition, but only when it shows reconciliation with opposing needs[48]. Drawing upon the works of Maurice Halbwachs, Rossi points out the different consequences of land ownership that is intimately tied together with the way housing is conceived and its affect on the way in which the city evolves and stagnate. According to Rossi, the breaking up of land and allocation of it in the private domain promotes development but lead to degeneration of the city. These private developments to Rossi are speculative in nature and are concerned with profit rather than with the overall interest of the city. He further mounts a critique of the recent process of urbanization, stating that they are distortions that disable a real study of the urban artifact, because the over importance placed on industrialization alongside certain moralistic attitudes have obscured the opportunity to study the urban artifacts effectively. Its physical and political homogenization is the result of industrialization and this can be characterised by

46 Rossi, Aldo, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge: MIT Press, 1982), p.162

47 *'I maintain that the history of architecture and built urban artifacts is always the history of the architecture of the ruling classes; it remains to be seen within what limits and with what concrete success eras of revolution have imposed their own alternative proposals for organizing the city.'* Ibid., p.23

48 *'The relationship in architecture between the collective urban artifact and the individual is unique with respect to the other technics and arts. In fact, architecture presents itself as a vast cultural movement: it is discussed and criticized well beyond the narrow circles of specialists; it needs to be realised to become part of the city, to become "the city". In a certain sense, there is no such thing as buildings that are politically "opposed", since the ones that are realised are always those of the dominant class, or at least those which express a possibility of reconciling certain new needs with a specific urban condition. Thus there is a direct relationship between the formulation of certain proposals and the buildings that arise in the city.'* p.113

three phases. The first phase involves the destruction of the fundamental structure of the medieval city, which was based on an absolute identity between the place of work and residence. This marked the end of domestic economy as a unified entity of production and consumption – and the rise of mass housing, workers housing, rental housing. The second phase is characterized by the progressive expansion of industrialization; creating the downtown or centre of commerce and work. And the third is followed by the development of mass public transport alongside individual transport. Choice of residence became separate from place of work. Most importantly, Rossi disagrees with this argument of how the process of urbanization unfolds because it assumes a certain 'naturalism', as if there the political choice is involuntary. The choice of course for Rossi, is for an architecture that is of the city.

6. The Borders of Containment and the Common in Rossi's Four Projects

In the article *'Due Progetti'* (1970), which appeared only in Italian, Rossi presents in considerable length two housing projects that were undertaken in collaboration with Carlo Aymonino and Giorgio Grassi. I consider this writing as a crucial text that puts forth in clearer terms the relation between Rossi's architectural projects and the research he was conducting in Milan Polytechnique and in the IUAV. The two projects that Rossi presented here are two housing projects: the first is San Rocco, a competition submission for a '167' project in Monza (Fig. 3.1), designed in 1966 (the same year as the publication of *L'architettura della città*) with Grassi and the second is a 'Slab House' within a larger architectural scheme, designed by Aymonino for Gallaratese district in Milan (1969-73)

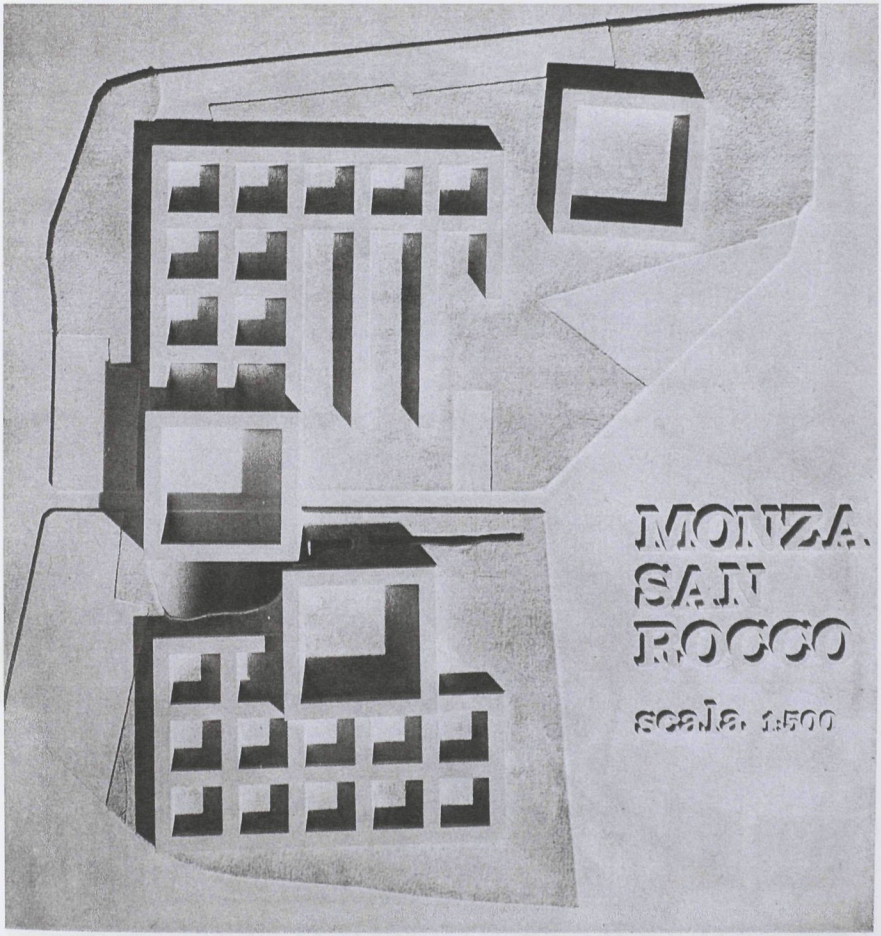


Fig. 3.1 Aldo Rossi, Unità residenziale S. Rocco:
Top view of physical model, *Due progetti*

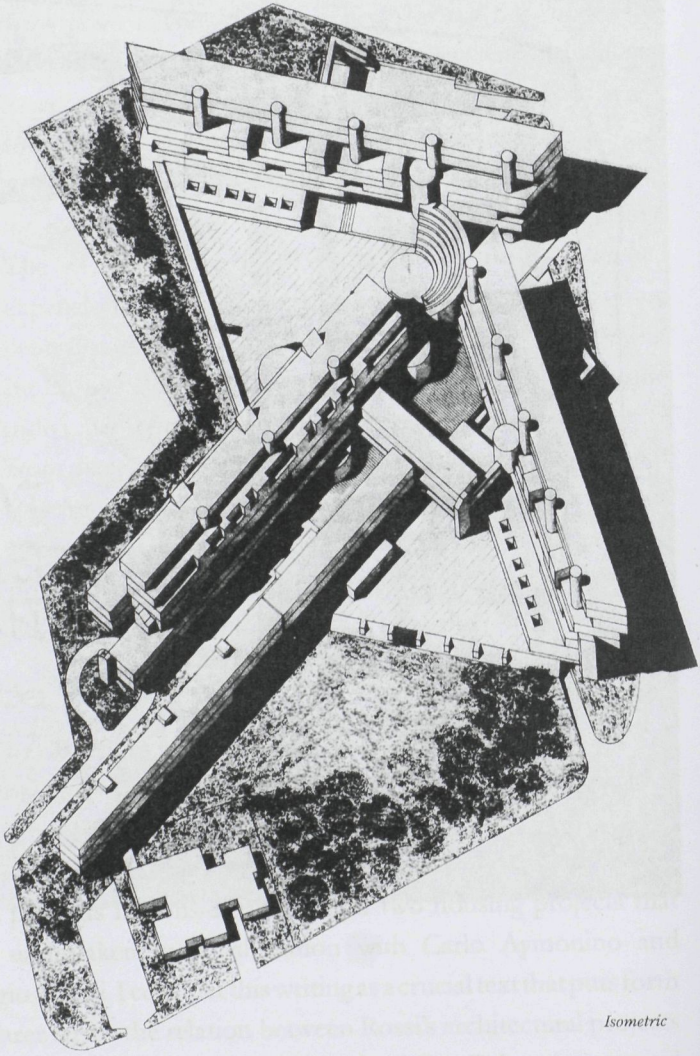


Fig. 3.2 Aldo Rossi, Housing Complex at the Gallaratese Quarter(1974): Isometric, *GA45* (1981)

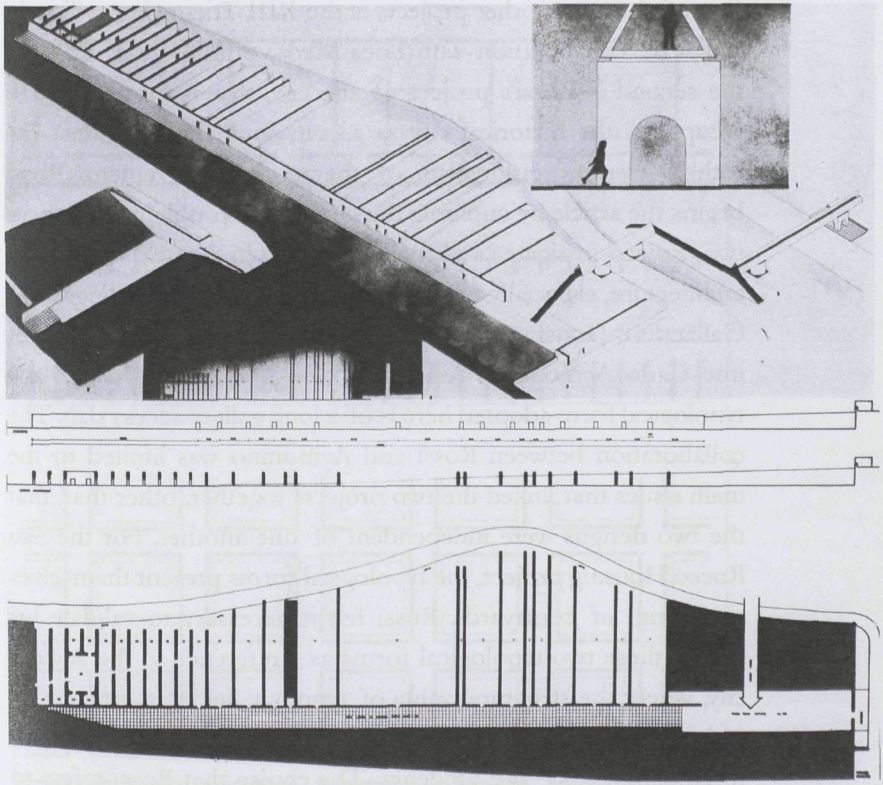


Fig. 3.3 Aldo Rossi, XIII Triennale di Milano 1964: Layout of park, *Due progetti*

(Fig. 3.2).

This article titled 'two projects' could have carried the title 'four projects' as there are two other equally important projects that form a sequential progression, one affecting the other. The first of these two other projects is the XIII Triennale pavilion in Milan (in collaboration with Luca Meda) in 1964 (Fig. 3.3) and the second is Rossi's project of the city, that is his attempt to recuperate the historical city as a conscious choice against the techno-scientific rationalism of the modern movement. Rossi begins the article by outlining the typological problems that these two projects instigate as a broader research in the field of form in architecture, especially in the typological form of dwellings. The Gallaratese Housing is an autonomous building that penetrates into Carlo Aymonino's residential blocks. In Rossi's terms, the typological form adopted here is of a long gallery access slab. The collaboration between Rossi and Aymonino was limited to the main issues that linked the two projects together, other than that the two designs were independent of one another. For the San Rocco Housing project, the typological forms present themselves as a series of courtyards. Rossi felt it necessary to validate his use of these two typological forms as a reference to the ancient city, where the structural value of typology lies in its primacy in architecture as a matter of composition, which entails first and foremost a choice and tendency. The choice that Rossi refers to as outlined in the last chapter of *Architecture of the City* is political, it stands as an alternative to the 'naturalism' of the process of urbanization driven by industrialization. Rossi believes that there are likely no alternatives to the courtyard type or the gallery type in the typology of urban dwelling. For him, everything else is a deformation of these types and that the solutions they offer are distributive rather than typological. In making a typological choice for Rossi, it is necessary to provide references, which are a part of the choice or tendency. The courtyards and slabs

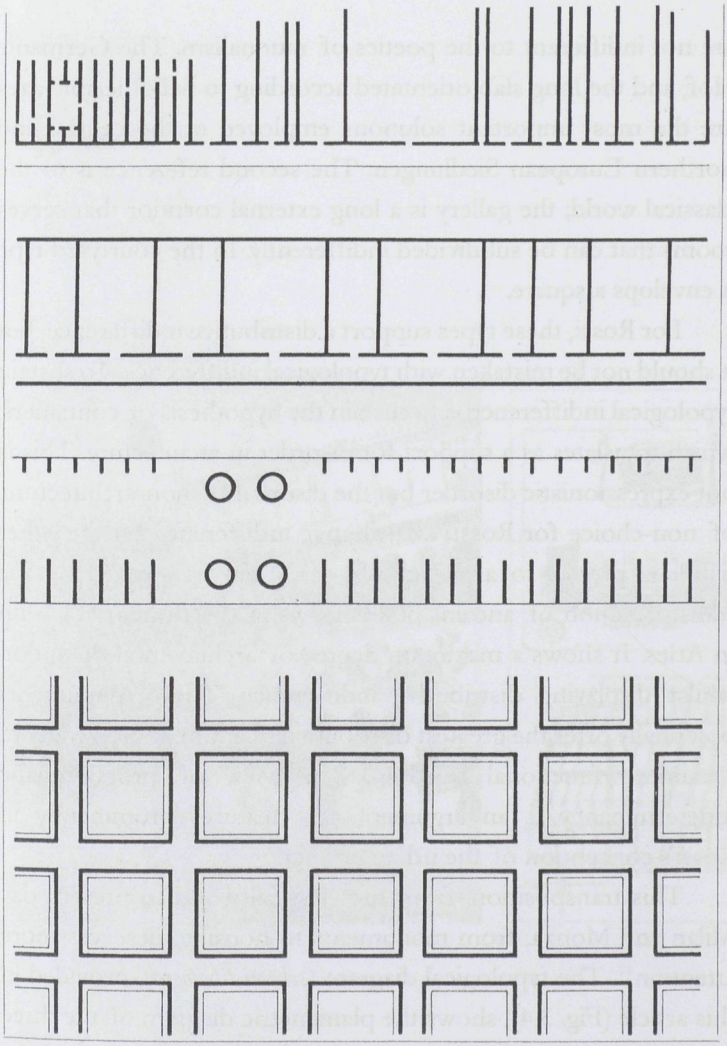


Fig. 3.4 Aldo Rossi, Schemi tipologici; dall'alto:
XIII Triennale, *Due progetti*

are not indifferent to the poetics of rationalism. The Germanic Hof, and the long slab orientated according to heliothermic axes are the most important solutions employed in the central and northern European Siedlungen. The second reference is to the classical world; the gallery is a long external corridor that serves rooms that can be subdivided indifferently. In the courtyard type it envelops a square.

For Rossi, these types support a distributive indifference, but it should not be mistaken with typological indifference. To sustain typological indifference is to sustain the hypothesis of containers, which translates as a support for disorder in architecture. This is not expressionistic disorder but the disorder of non-architecture, of non-choice for Rossi. Distributive indifference on the other hand, is proper to architecture – this can be proved by the transformation of ancient buildings, as in the Roman coliseum in Arles. It shows a maximum degree of architectural definition whilst displaying distributive indifference. These monuments potentially offer the greatest distributive freedom, more generally, maximum functional freedom. This view of programmatic indeterminancy is an argument that features prominently in Rossi's conception of the urban artifact.

This transposition, from the classical world to present day Milan and Monza, from monuments to housing, deserves more attention[49]. The typological diagram (*schemi tipologici*), provided in this article (Fig. 3.4), shows the planametric diagram of the three projects reduced to their most distributive description. They show

49 *'The site plan of the Milan project summarises the form of every rectilinear, continuous pathway, every street or boulevard. Windows and doors of the dwellings (locali) face one side of the gallery; on the other side the gallery is open as a loggia. The layout of this street, strictly as a result of architecture, was already attempted in my project for the pavilion of the XIII Triennale. In this project (in collaboration with Luca Meda) we saw the possibility to build this street, on which other streets and spaces [locali] converged. The street was identified with the wall and the internal divisions of the pavilions, seen as parts of a city, sectioned through its exteriors and interiors. This 1963 project is very important to me, and it is a formal scheme which I have always referred to; for example, it is present in the ground plan of the Milan project published here. It has the power of a scheme, of an idea, of a reference.'* - Rossi, Aldo, *'Due Progetti'* in *Lotus International* Vol.7 (Milan: Alfieri, 1970).

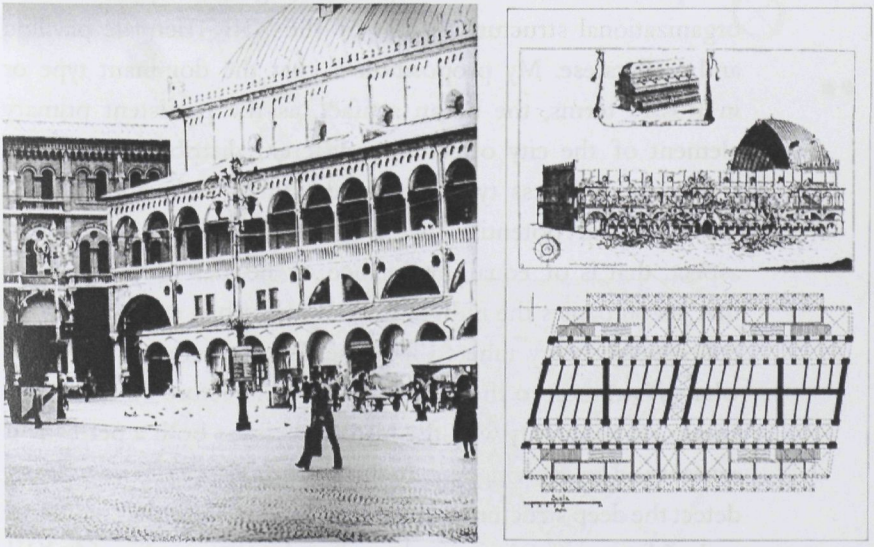


Fig. 3.5 Palazzo dellla Ragione, Padua, Italy.
Rossi, Aldo, *Architecture of the City* (Massachusetts:
MIT Press, 1982)

the irreducible structures that denote a specific organization of the gallery and the courtyard. The top three diagrams are the XIII Triennale pavilion of Milan, followed by the upper floor plan and the ground floor of Gallaratese respectively and the bottom most diagram is San Rocco. To these four diagrams, I would argue, Rossi should have included one more, the plan of Palazzo della Ragione, Padua. He used this paradigmatic example many times in the *Architecture of the City* as an urban artifact that is functionally transparent. The walls of the palazzo (Fig. 3.5) display the same organizational structure as that of the XIII Triennale pavilion and Gallaratese. My proposition is that the dominant type or in Rossi's terms, the urban artifact, as the persistent primary element of the city offers an indifferent distributive structure that is nevertheless typologically definitive. It is not only the organizational potential that is transposed here; the second aspect, that is of equal importance, is the idea of permanence that accompanies the individuality of the urban artifact, it is the collective memory inhered in these deep structures that offers what is common to the project, as an architecture of the city. It speaks of continuity with the historical city as both a permanent artifact and an evolving one. In these diagrams we can now clearly detect the deep structure of the urban artifact, not solely or limited to building types: they are the gallery/street coupling for XIII Triennale pavilion and Gallaratese and the grid/courtyard for San Rocco. All three projects demonstrate a primary element from the city and a building type encapsulated in one deep structure.

Thus Gallaratese is a 'slab house' or housing slab block that is also a street (Fig. 3.6). The same can be said of the Triennale pavilion, as rooms of varying sizes fronting a street; or a pavilion in the form of a gallery/street. The defining element in the deep structure of the gallery/street is a series of parallel walls that are varied in their distance from one parallel wall to another, of

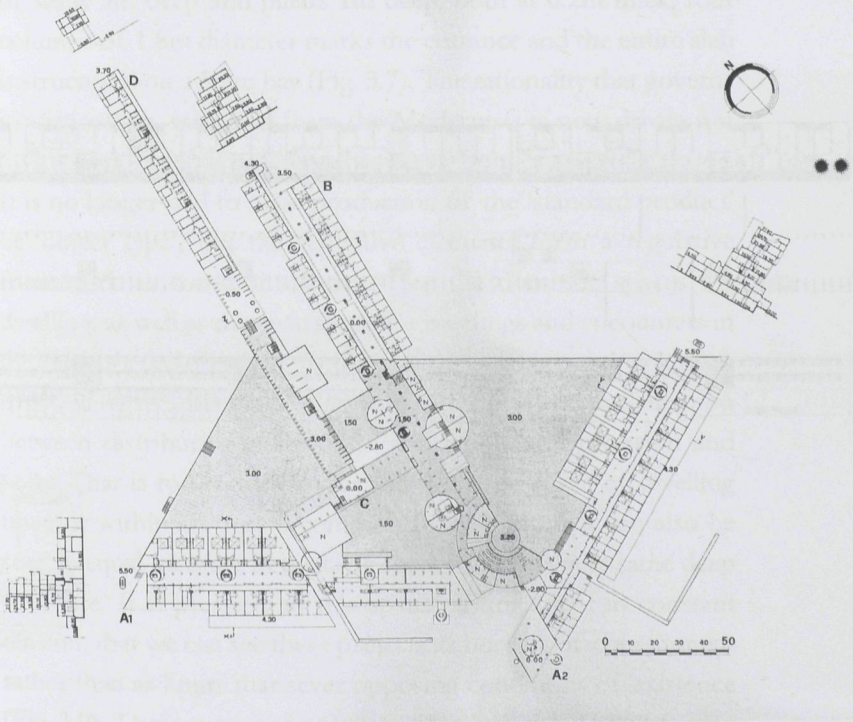


Fig. 3.6 Aldo Rossi, Housing Complex: Lower level floor plan, *GA45* (1981)

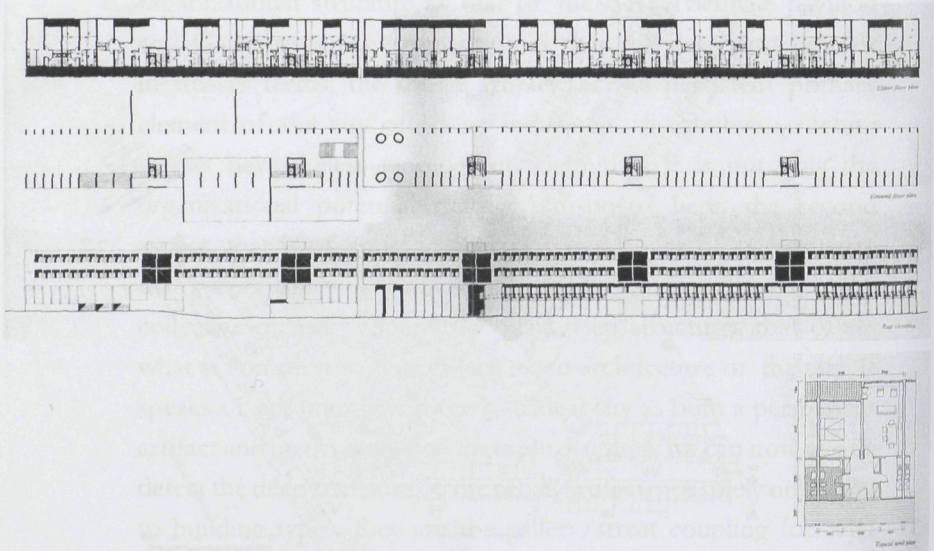


Fig. 3.7 Aldo Rossi, Housing Complex: Plans and Elevation, *GA45* (1981)

varying lengths that create differential depths. They also vary in length to create two rows of pilotis-walls. The pliability of the deep structure demonstrates a potential for different degrees of containment, i.e., from full enclosures to partial and implied enclosures. The Gallaratese is a slab of 182 m long, and 12m deep, with a portico on the ground floor at two height levels and connected to an upper gallery by a staircase. The portico is made of walls 3m deep and pillars 1m deep, both at 0.2m thick, four columns of 1.8m diameter marks the entrance and the entire slab is structured on a 3.5m bay (Fig. 3.7). The rationality that governs its disposition, inherited from the Modernists is now driven not by a techno-scientific determinism but from an analogical one. It is no longer tied to mass production of the 'standard product' or 'object type', but the repetitive elements form a regulative framework as common elements for the domestic spaces for dwelling, as well as the civic space for meetings and encounters in the giant portico (Fig. 3.8). Although Rossi recognizes the plurality of dwelling requirements[50], he deliberately makes this distinction between distributive indifference and typological precision and fixity. That is to say, the private and domestic space of dwelling must fit within an overall common framework, that can also be seen in equal measure in the civic spaces with the very same deep structure. It is precisely in this spatial arrangement in constant tension, that we can see these projects as borders of containment rather than as limits that sever opposing conditions of existence (Fig. 3.9). These spaces of agonistic pluralism that I am referring to should not be taken literally or naively as the spaces of a G8 protest, where the city is turned into a battle-zone[51]. Architecture has the potential to stage these confrontations but it can never instigate such confrontations, these happen through political institutions, as Rossi has soberly highlighted.

50 As argued in the *Architecture of the City*. p.70

51 Although it can be a valid one for Mouffe as the space for direct action in the context of political activism.

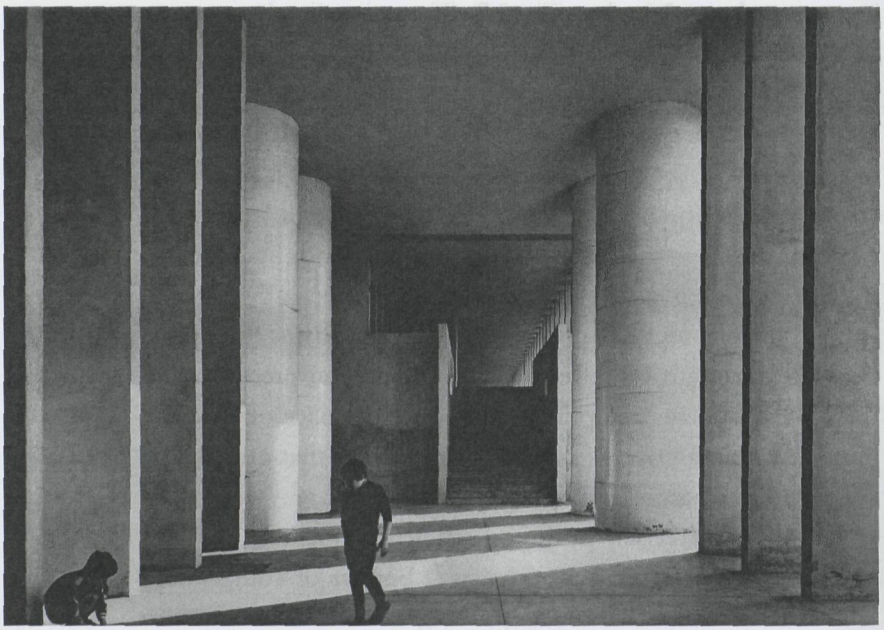


Fig. 3.8 Aldo Rossi, Housing Complex: Portico of D block seen from north, *GA45* (1981)

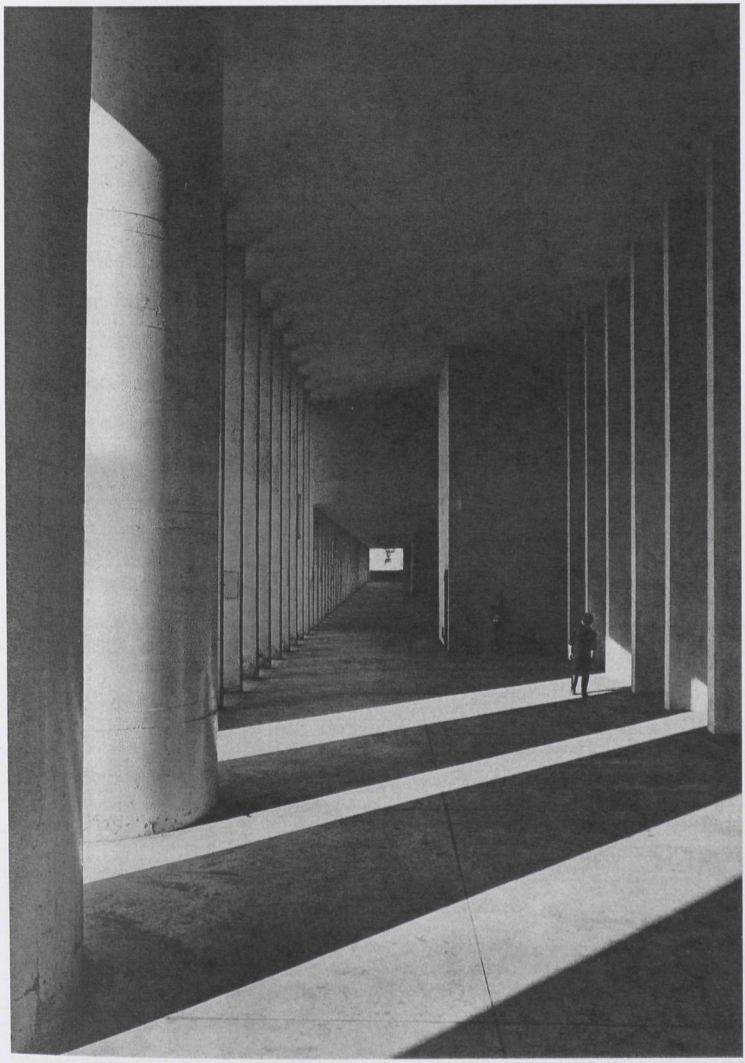


Fig. 3.9 Aldo Rossi, Housing Complex: Portico of D block seen from south, *GA45* (1981)

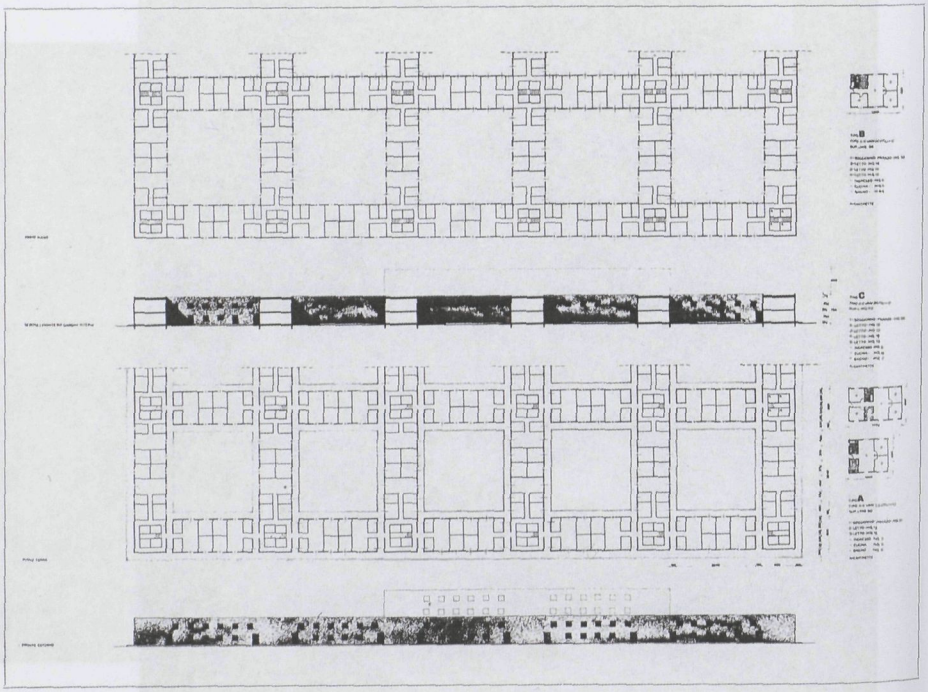


Fig. 3.10 Aldo Rossi, Unità residenziale S. Rocco: plan and section, *Due progetti*

The site for the project of San Rocco is a conurbation, which refers to the set of residential and industrial areas, interposed between more or less important urban cores. The intention was to build a socially and spatially continuous environment and any intervention according to Rossi must accept the urban artifact as the chosen element of urbanization. The artifact that is of the courtyard type, is a closed and well defined form. Like Gallaratese, the courtyard type is also simultaneously a primary element of the city, here being the grid of the city. When the grid presents itself conventionally as a void, a space of infrastructure, these *'collective equipments and circulation infrastructures'* allow the maximum degrees of freedom in a homogeneously organized society. A bourgeois city, according to Rossi, like Paris where *'the layout of the dominant infrastructure produced by the interests and the representations of the dominant class allows the unity on an equipotential line of the main architectural artifacts, including housing. But in San Rocco, the grid is not a void. The grid is made possible when multiple courtyards are brought together, reversing the void of 'collective equipment and circulation infrastructures'* to mass (Fig.3.10). This reversal enables a continuous fabric that dominates the entire site, turning it into an enclosed territory under collective use[52]. The other important consideration that shaped the project of San Rocco is the nature of the peripheral residential unit and the concept of district. When designing the residential unit, Rossi considered the concept of district as it is concretely found in the experience of today's European cities - based on the individuation of the district as a separated artefact inside the city, as a constitutive and easily recognisable element of the city. It does not refer to the alternative between city and countryside, or to the theoretical alternative between Garden City and Ville Radieuse; that is the contra position between private and public held land for housing projects. The proposal recognizes that the periphery cannot be turned into an urban core or into

52 Ibid., p.12

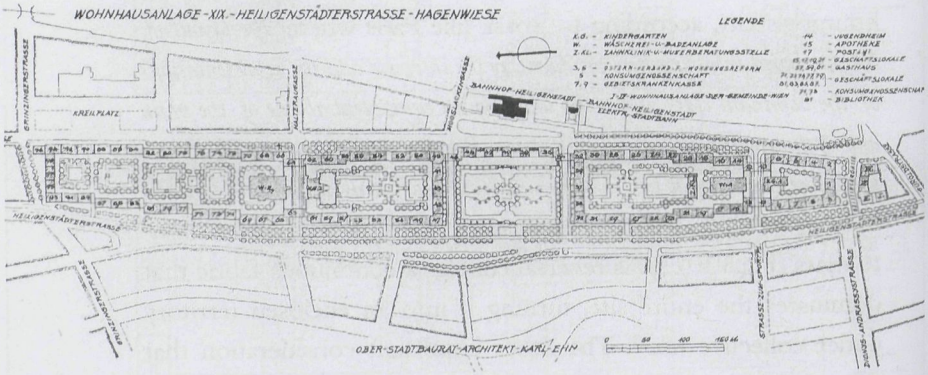


Fig. 3.11 Aldo Rossi, Karl Marx Hof – Plan, *Due progetti*

the garden city. Instead it is designed as an autonomous urban artifact stranded between urban cores and countryside. Thus the proposal is considerably closed as a response to the highly degraded surroundings, with the intention to create an experience complete in itself. For Rossi, the law that governs the design must be clearly readable, simple and unequivocal. It becomes an architecture of the city when there is a concrete moment to speak of. The adopted type can be defined as courtyard house, a type that has contributed to the formation of the city. The courtyard house represents the most characteristic type of community experience, as social segregation in the Karl Marx Hoff (Fig. 3.11), a workers stronghold. On the level of the city, the courtyard house stands in between public space, private space and buildings, a space that is 'relatively public', and 'a true island of silence and rest'. It refers to a community experience. Like Gallaratese, the deep structure of the courtyard house is interchangeable as the grid of the city. It presents itself as borders of containment, enclosing spaces that are at once domestic and civic, rooms as enclosures as well as corridors as passages. It demonstrates a common framework that is rational and immediately recognizable as belonging to the city and to history as collective memory.

7. Koolhaas' Metropolis of Dispositifs

Whereas Rossi looked to the historical city to revalidate the discipline of architecture, Koolhaas looked to the metropolis, to Manhattan. In "*'Life in the Metropolis' or the 'Culture of Congestion'*", that accompanied OMA's first monograph by *Architectural Design* in 1977 (Fig. 3.12), and a year prior to the publication of *Delirious New York*, Koolhaas outlines succinctly the metropolitan themes that would preoccupy OMA for the coming years. For him, the metropolis *'invalidates all the previous systems of articulation and*

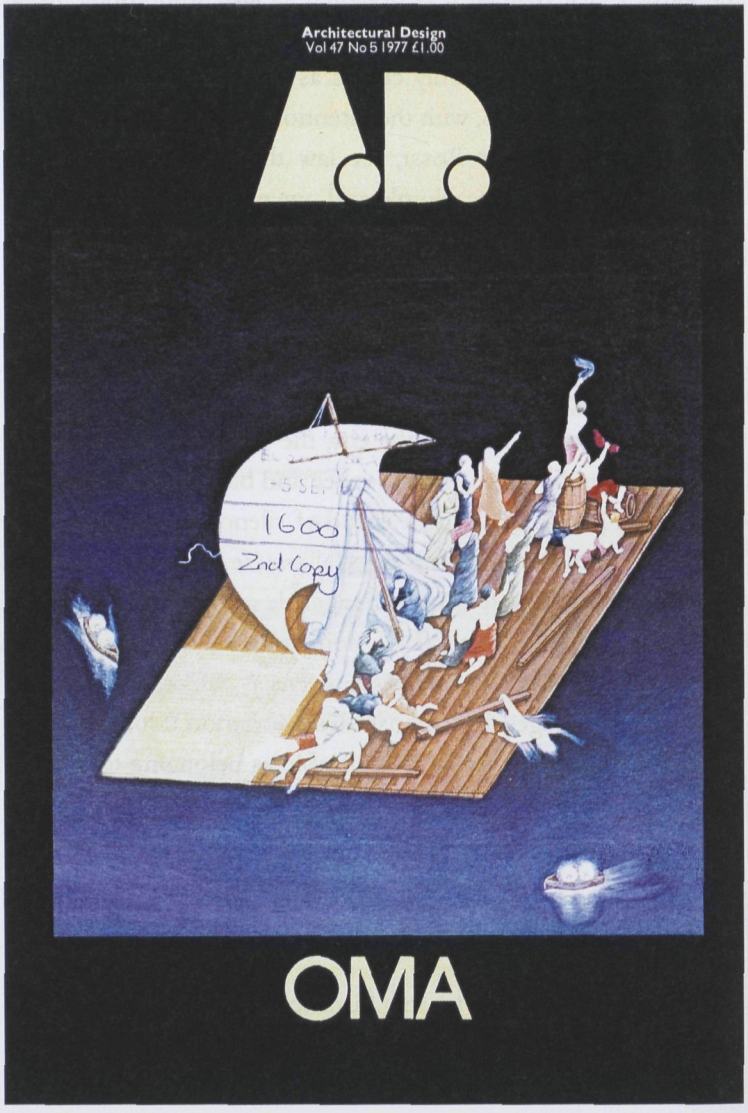
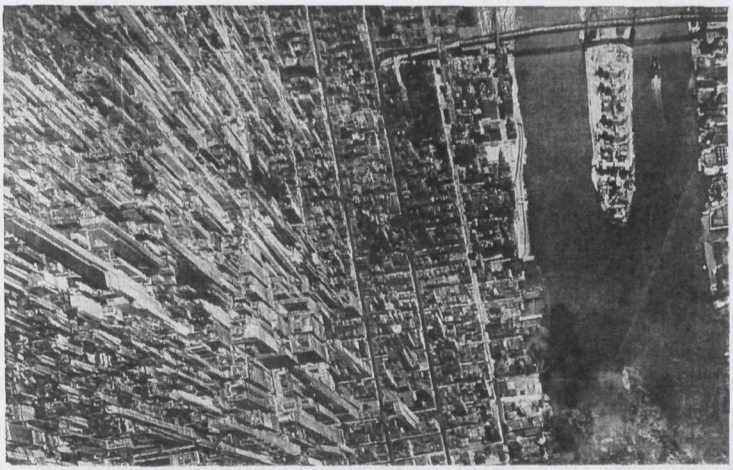


Fig. 3.12 Cover, *Architectural Design* Vol. 47 No.5 (1977)

REM KOOLHAAS
'Life in the Metropolis' or 'The Culture of Congestion'



1 Manhattan – the archetype of the Metropolitan Condition – looking down into the East River, Roosevelt Island and the territories of OMA's own explorations.

REM KOOLHAAS uses Manhattan as a model to outline fundamental attributes of high-density, high-rise, urbanity. He shows Coney Island as the test-bed for Manhattanism – a surreal environment to which New Yorkers escaped from the congestion of their city to experiment with alternative life-styles within the same context of congestion. Entrepreneurs rapidly implemented these experiments: skyscrapers became multi-layered shells with each layer providing the opportunity for living out independent – even opposed – life-styles. This promise of metropolitanism – a totally fabricated world within which any number of opposing views could co-exist – needlessly failed, he observes, due to a profound lack of nerve. The work of OMA attempts a recovery of that nerve.

'Why do we have a mind, if not to get our own way?'
Dostoevsky

Somewhere in the 19th century certain parts of the globe – negligible in terms of surface – developed an unprecedented condition: through the simultaneous explosion of modern technologies and human population on their limited territories, they found themselves supporting the mutant form of human coexistence that is known as Metropolis.

The Metropolis invalidates all the previous systems of articulation and differentiation that have traditionally guided the design of cities. The Metropolis annuls the previous history of architecture.

But if the Metropolis is a true mutation, it can be assumed that it has also generated its own Urbanism: an architecture that is exclusively concerned with the 'splendeurs et misères' of the Metropolitan Condition; an architecture with its own theorems, laws, methods, breakthroughs and achievements that has remained largely outside the field of vision of official architecture and criticism, both unable to admit a fundamental rupture that would make their own existence precarious.

Manhattan

By an unspoken consensus, Manhattan, (1), is considered the archetype of the Metropolitan Condition, to the point where the two are often interchangeable. Manhattan's spectacular growth coincided exactly with the definition of the

Fig. 3.13 OMA, Manhattan-the Archetype of the Metropolitan Condition, *Architectural Design* Vol. 47 No.5 (1977)

differentiation that have traditionally guided the design of cities. The Metropolis annuls the previous history of architecture. [53] Manhattan, for Koolhaas is the archetype of the Metropolitan Condition. Manhattan as this architecture of the metropolitan condition is the outcome of the density per se, of population and of infrastructure. This architecture promotes a state of congestion on all possible levels, and exploits this congestion to inspire and support particular forms of social intercourse that together form a unique culture of congestion[54] (Fig. 3.13). Manhattan demonstrates what is possible when the simultaneous exploitation of modern technologies and human population is carried out on a limited territory.

Koolhaas makes three propositions in three episodes, in what he terms a provisional triangulation of a truly metropolitan architecture. The three episodes involve the systematic exploitation of density, technology and programme: a metropolitan counterpart to Vitruvius' 'Commodity, Firmness and Delight'. Koolhaas' 'Culture of Congestion' and metropolitan architecture were also directed as a challenge to the architectural profession's refusal to admit that a fundamental break had occurred between tradition and modern urbanism. It implies a two-fold polemic, against those who believe they can undo the damage of the modern age, i.e, the metropolitan itself, and therefore concentrate their efforts to recreate or return to the historical European city. Secondly, it is against those who insist upon the continuation of that modern architecture that tries to suppress chaos, fetishises the objective, disperses bulk, isolates components, quantifies functions and makes everything predictable.

Nevertheless, Koolhaas proposes to continue aspects of the modern project through these three 'stories' that to him, describes *'...a tradition of modernity that insists on systematically*

53 Koolhaas, Rem, 'Life in the Metropolis or The Culture of Congestion' in *Architecture Design* Vol.47 No.5 (London: Wiley Academy, 1977)

54 Ibid., p.320

exploiting all available apparatus and all the fresh infrastructures of the age to establish fantasies as realities of the world.[55] The responsibility of a metropolitan architecture according to Koolhaas is to design hermetic enclaves – bloated private realms – that comprise the metropolis. It creates a 'set' of everyday life through the magical arrangement of human activities on all possible levels. Like Rossi, he acknowledged that the city can never be whole and that the total design of modernism is no longer possible. Thus metropolitan architecture for Koolhaas is megalomania on a modest scale because its expressions are always localised and address only part of the total audience, never the whole.

In the first episode, Koolhaas proposed that the metropolis replace all natural elements into an intricate simulacrum of nature with new kinds of machinery. This condition arises out of the sheer depletion of natural reality because of the sheer density of human consumers. Koolhaas uses the transformation of Coney Island, from a small island with natural attractions to one that increases its attractions exponentially by artificial constructions of the real. He uses the theme park attractions of Coney Island - the Inexhaustible Cow, Electric Bathing, Mechanical Horses and Barrels of Love – as examples of the transformation of the natural to a hyper-simulated nature for an insatiable crowd arising out of population density. The metropolis is the product of its own insatiable desires.

Koolhaas' second proposition focuses on the skyscraper. Through the skyscraper, each site in the metropolis can accommodate an unstable and unforeseeable combination of superimposed and simultaneous activities, its configuration beyond the control of the architect or planner. Here, function is no longer tied to place, and everything is possible, and the incessant process of adaptation does not even affect the framework of

55 Koolhaas, Rem, 'Life in the Metropolis or The Culture of Congestion' in *Architecture Design* Vol.47 No.5 (London: Wiley Academy, 1977), p.77

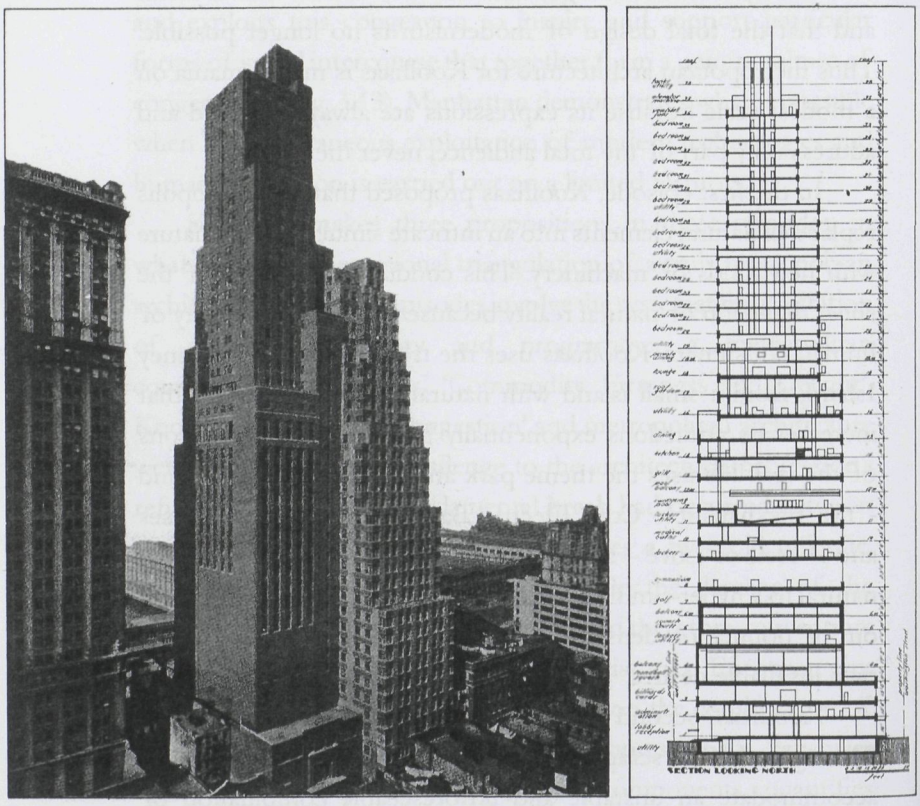


Fig. 3.14 Starrett & Van Vleck, Downtown Athletic Club (1931): Exterior and Section, *Architectural Design* Vol. 47 No.5 (1977)

the building. The skyscraper creates two moments of autonomy, between floors and between exterior and interior. They all belong to different kinds of architecture. These conditions, for Koolhaas, are made possible by the introduction of the elevator, the steel frame building, and 100-storey building - a proposal for the multiplication of buildings and spaces of the ground over 100 storeys. The invention and introduction of the elevator - from the 1870s onwards, as the great emancipator of all floors above the ground - transformed each floor plate to a potential plot, both as a site and as an autonomous frame for the staging of fantasies. The elevator for Koolhaas is the prime instrument of density. Within 20 years of the promise of the 100-storey building, the Downtown Athletic Club (1931) (Fig. 3.14) presents itself as the paradigmatic example of Koolhaas' metropolitan architecture. The Downtown Athletic Club, as dominant type, demonstrates *'All the latent potential of the skyscraper as a type is exploited in a masterpiece of the Culture of Congestion, a Constructivist Social Condenser materialised in Manhattan.*[56] Located on the Hudson, near Battery Park, on a lot 23 metres wide and 54 metres deep, each plan serves as a collage of function, each rectangle a suggestive abstract plot and each plan and plot is randomly sequenced (Fig. 3.15). Thus each floor is programmatically autonomous within the skyscraper; its proliferation, and connection to other floors and to the ground only made possible by the elevator (Fig. 3.16).

The final proposition involves the potentials of metaphoric planning, unique to Manhattan, where islands of metaphoric archipelago are created through the provision of the Manhattan grid as infrastructure that nourishes each plot with equal potential. The grid allows the enclaves to be self-contained, ideal worlds removed from time and space, protected from the corrosion of everyday reality. The Radio City Music Hall, a theatre within the

56 Koolhaas, Rem, 'Life in the Metropolis or The Culture of Congestion' in *Architecture Design* Vol.47 No.5 (London: Wiley Academy, 1977), p.322

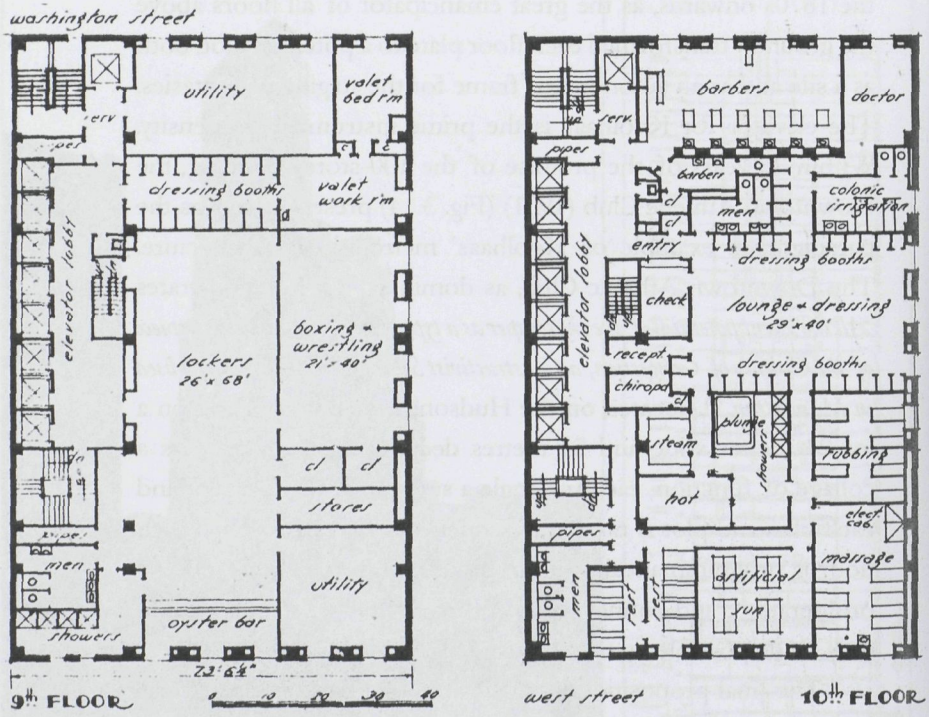


Fig. 3.15 Downtown Athletic Club: 9th and 10th floor plans, *Architectural Design* Vol. 47 No.5 (1977)

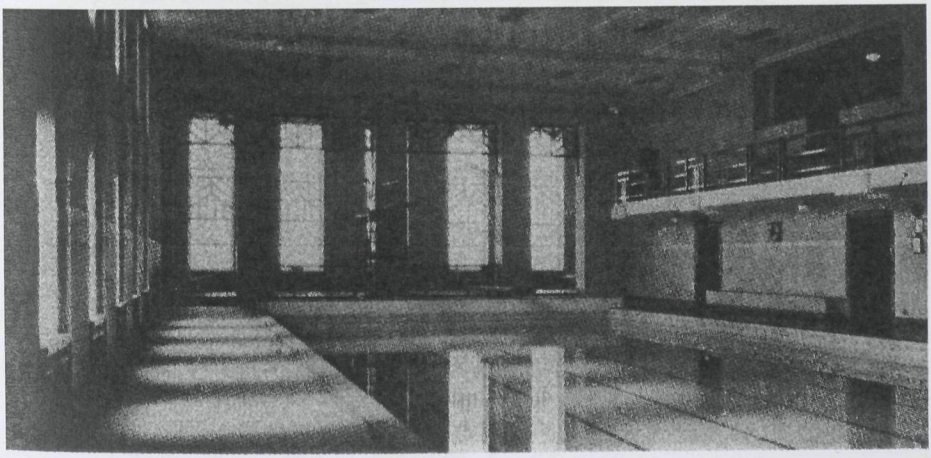


Fig. 3.16 Downtown Athletic Club: 12th floor pool, *Architectural Design* Vol. 47 No.5 (1977)

Rockerfellar Centre, sealed from the 'disappointments' of the outside world creates its own universe, where the sun never sets in an all day long staging of fantasies. These artificial mini utopias within the grided plots of Manhattan are to Koolhaas the product of this metaphoric planning.

Eight years later, in his article 'New York/La Villette', Koolhaas would declare that:

> *'If the essence of Delirious New York was found in the section of the Downtown Athletic Club - a turbulent stacking of metropolitan life in ever-changing configurations – a machine that offered redemption through a surfeit of hedonism, a conventional, even boring skyscraper, and a program as daring as ever imagined in this century, La Villette could be still more radical by reducing the three dimensional aspect almost entirely, proposing instead pure program, unfettered by any constraints. In this analogy, the bands across the site were like the floors of the tower, each program different and autonomous, but modified and 'polluted' by the proximity of the others (...) What La Villette finally suggested was the pure exploitation of the metropolitan condition: density without architecture, and a culture of 'invisible' congestion.* [57]

The Downtown Athletic Club as the dominant type, embodying the very essence of 'the culture of congestion' is flattened onto an expanded territory as a re-enactment of a metropolitan architecture. Parc de la Villette (1982) (Fig. 3.17), OMA's competition proposal for a park in a 550,000sqm former slaughter house grounds in Paris, according to Koolhaas, is recast as a project of 'congestion without matter'. This possibility of retroactively conceptualising and theorising a city through a dominant type and to transpose both its idea and deep structure

57 Jacques Lucan, *OMA. Rem Koolhaas. Architecture 1970-1990* (Electa France, Milan-Paris: 1990; Electa, Milan 1991). p.161



Fig. 3.17 OMA, Parc de la Villette: Plan of functional bands, *OMA-Rem Koolhaas* (1991)

onto another site, mirrors the analogical method of Rossi. I would therefore argue that the dominant type is critical in both Rossi's and Koolhaas' project of the city, despite their different preferences for what constitutes an exemplary city.

This transposition of the idea of the city from a skyscraper to a park, has prompted Eisenman to pose the Downtown Athletic Club as the didactic diagram that sets off an architectural theme that find its different sequential variations and development in OMA's tableaux projects. For Eisenman, the sequence of projects that brings OMA from Très Grande Bibliothèque (1989), to Agadir Convention Centre (1990) to Jussieu Library (1992), is a sequential and incremental development of the idea of architecturalizing the problem of 'contiguous continuity'[58]. In the first project, the voids suspended within the tableaux are all independent of one another, accessible only by isotropic lift cores. The second project begins to show the early signs of diagonal connections between floors through sectional perturbations. The third project sees a continuous *'promenade architecturale'*, where there is only one single floor in the form of a ramp. However, what remains constant in these three projects, is the idea that the architectural project brings forth the idea of the city - from the 'city within a building' to 'city into a building'. These readings offer another way to read the project of Parc de la Villette, often obscured by the poetic phrase *'congestion without matter'*. Despite the image conjured up with this phrase, of the freedom afforded by the elimination of matter, physical structure or architecture itself, the proposal as a park is regimented very precisely by a common framework, the deep structure of Manhattan, the grid in plan and the stacked autonomous plots in section. These two deep structures, the irreducible structure that organizes, manifest themselves as the thematic bands of landscape and the point grids of pavilions and amenities.

58 Eisenman, Peter, *Ten Canonical Buildings* (New York: Rizzoli, 2008)

Koolhaas' intended effect of programmatic congestion and friction, from the use of the bands, is in fact an example of the use of borders as containment. The bands separate and articulate difference through porous enclosures rather than severance.

Agamben, in his article 'Metropolis'[59] has remarked that the metropolis is an apolitical space:

> *'Undoubtedly one of its (metropolis) main traits is that there is a shift from the model of the polis founded on a centre, that is, a public centre or agora, to a new metropolitan specialization that is certainly invested in a process of de-politicisation, which results in a strange zone where it is impossible to decide what is private and what is public.* [60]

Agamben proposes that we understand the metropolis through the convergence of two paradigms or urban spaces offered by Foucault: leprosy and plague. The paradigm of leprosy was clearly based on exclusion: that lepers are placed outside the city and the 'pure' city keeps outsiders out. The lepers are rejected by an apparatus of exclusion. The paradigm of the plague is completely different to that of leprosy, for it is impossible to move the plague victims outside the city. Instead the creation of surveillance, control and articulation of urban space is required. The plague victims are encased, surveilled, controlled and cured through a complex web of dispositif (apparatus) that *'individualise, and in so doing articulates the efficiency of control and of power'*. Thus, according to Agamben, leprosy is a paradigm of exclusive society and plague is a paradigm of disciplinary techniques, a transition from ancient regime to the disciplinary paradigm. The metropolis is a condition where these two paradigms overlap. Thus it is

59 Giorgio, Agamben, 'Metropolis' trans. By Arianna Bove (http://www.generation-online.org/p/fpagamben4.htm) (accessed 20 June 2011)

60 Ibid., p.1

impossible, according to Agamben, to univocally define borders, walls, and spaces because they result from the action of this different paradigm: no longer a simple binary division but the projection on this division of a complex series of articulating and individuating processes and technologies. Agamben sees the metropolis as an apparatus of oppression in the way it uses dispositif for governing every aspect of life. The product of this governance to him is subjectification. Where subjectification can be understood as an imposed identity, that is, when every time one takes on an identity, one is subjugated, and modern dispositif creates not only subjectivity but also the process of de-subjectification.

Returning to a lesser known project of OMA, the Universal Exposition 1989 Paris (1983) is a proposal to stage the Universal Exposition on the river Seine. Tasked with an open brief and to create a proposal that would house different nations with varying financial means to stage their own pavilions, OMA opted for a proposal based on *'minimum number of rules – and thus the maximum amount of freedom – sufficient to achieve the most daring expression of the initial idea.'*[61] Thus the project is presented as a matrix of possibilities governed by a grid superimposed on the site[62] (Fig. 3.18). The matrix consists of an array of different interpretations of an isotropic grid to perform all the functions of hosting the exposition. The tasks that the grid takes up are all organizational, from the placement of national and individual pavilions, to the distribution of information, roof, walls and pathways (Fig. 3.19). The grid oscillates between an abstract organizational framework – as merely an implied outline of a site – to its

61 Jacques Lucan, *OMA. Rem Koolhaas. Architecture 1970-1990* (Electa France, Milan-Paris: 1990; Electa, Milan 1991). p.96

62 *'…the entire site would be divided by a grid; each country would get a square; on its square it could do whatever it wanted. If it was poor, the country would turn its site into a desert. (…) There would be no public circulation, no hierarchy of accommodation, no investment for the French state. Visiting the fair would involve navigation from plot to plot in a completely random and individual sequence.'*

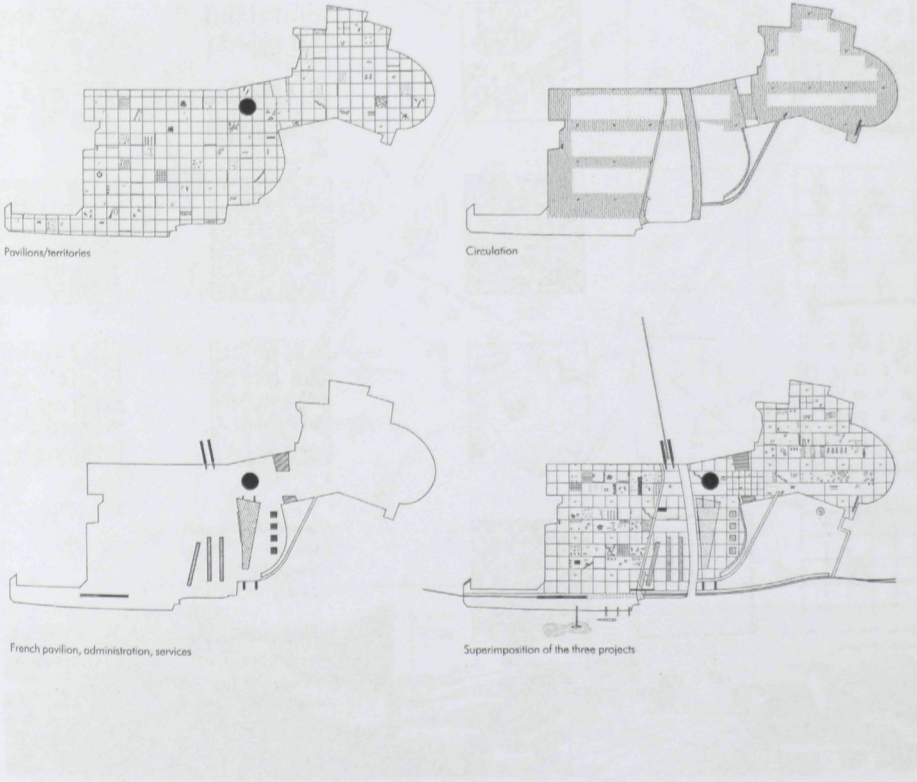


Fig. 3.18 OMA, Universal Exposition of 1989, West Site: the three autonomous projects and their superimposition, *OMA-Rem Koolhaas* (1991)

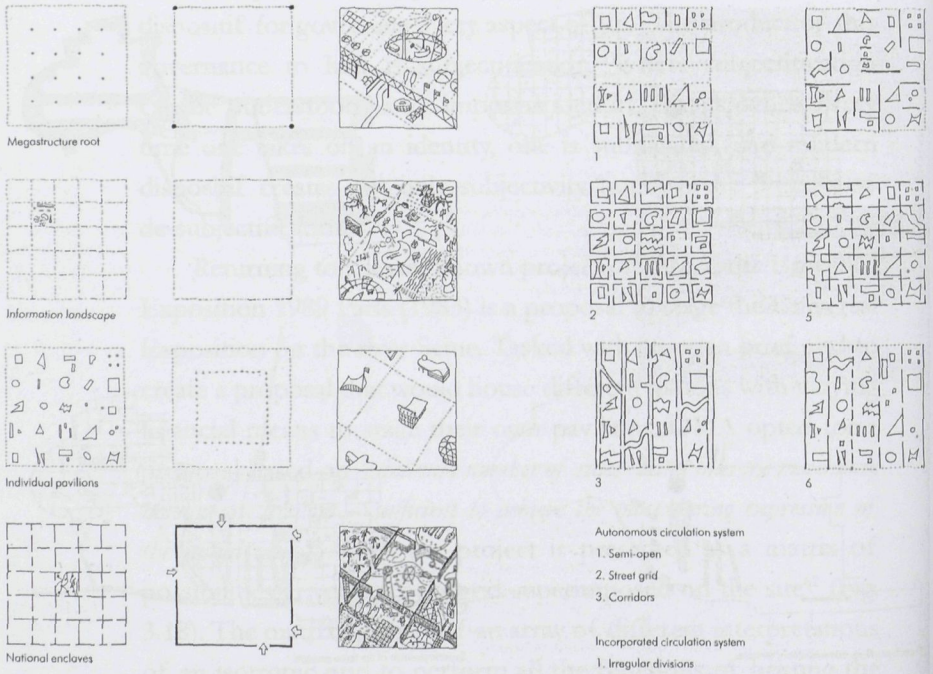


Fig. 3.19 OMA, Universal Exposition of 1989, West Site: Models of territorial organisation; variations on the system of distributing pavilions, *OMA-Rem Koolhaas* (1991)

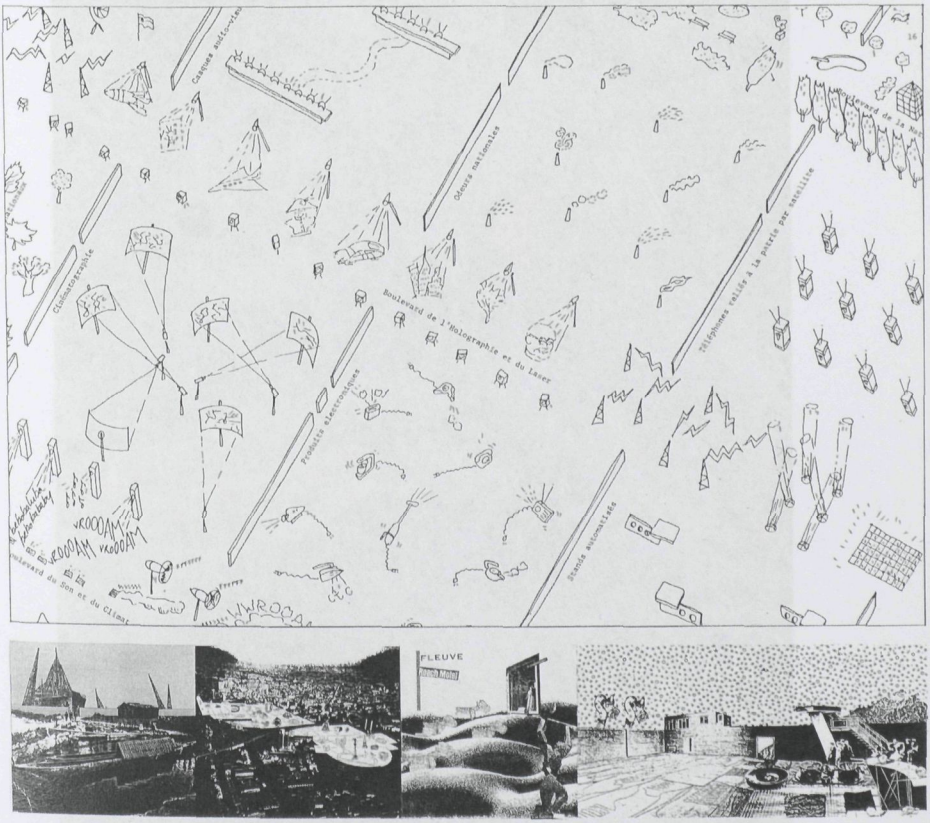
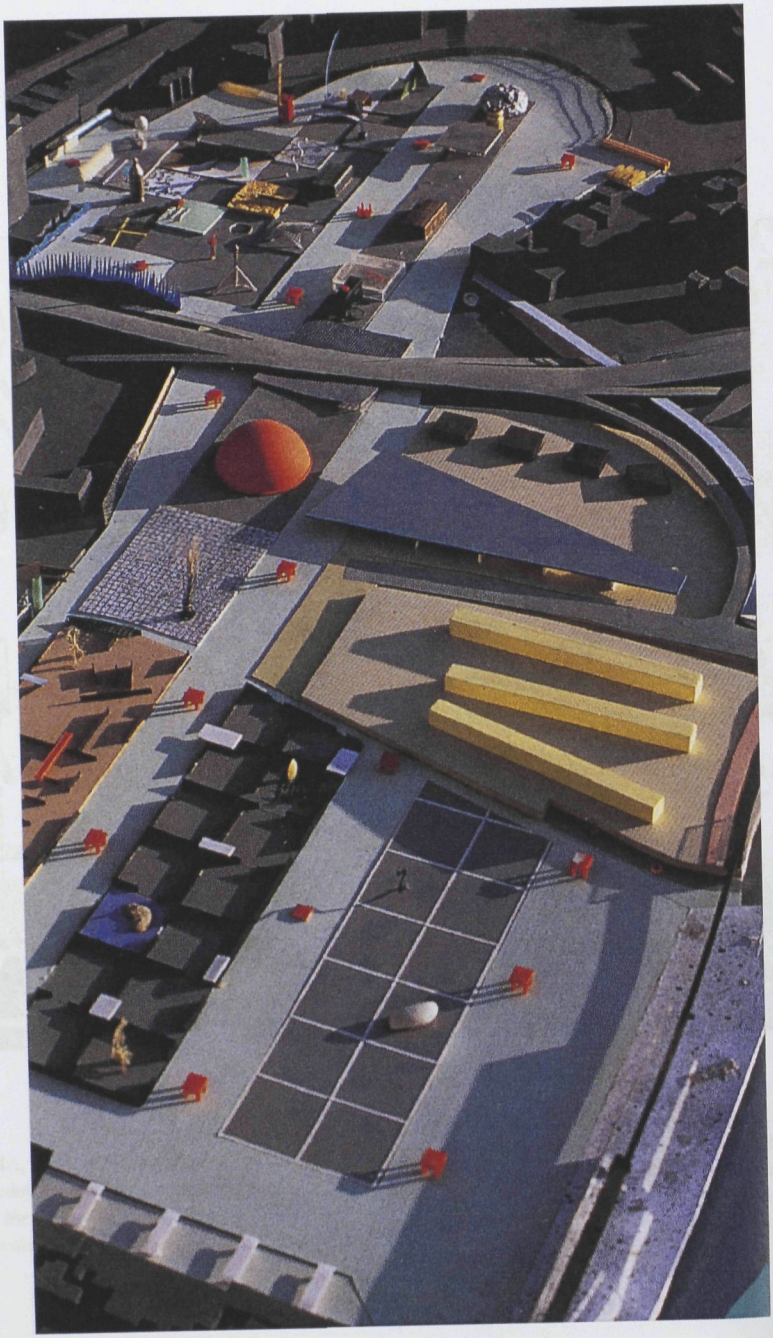


Fig. 3.20 OMA, Universal Exposition of 1989, West Site: Fabric of the Exposition, and photo-montage of the Exposition landscape, *OMA-Rem Koolhaas* (1991)



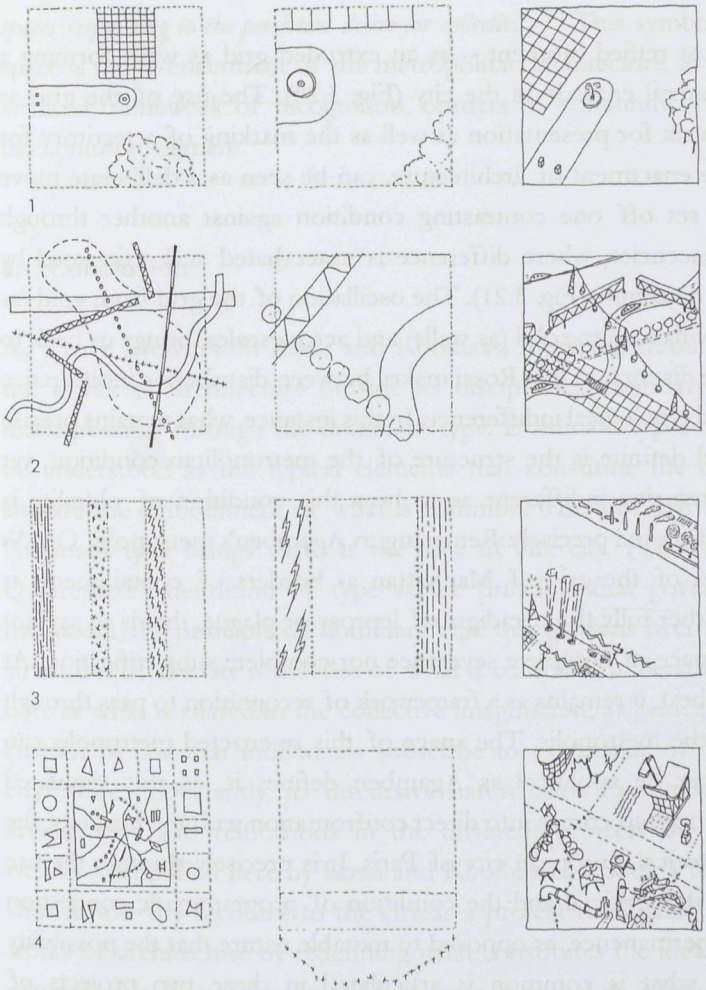


Fig. 3.21 OMA, Universal Exposition of 1989, West Site: View of model and examples of compositional elements, *OMA-Rem Koolhaas* (1991)

most reified moment – as an extruded grid as walls forming a bilateral enfilade in the city (Fig. 3.20). The use of the grid as matrix for presentation as well as the marking of a territory for the enactment of architecture, can be seen as a deliberate move to set off one contrasting condition against another through adjacencies, where difference is exacerbated and articulated by its proximity (Fig. 3.21). The oscillation of the grid from void (as circulation) to solid (as walls) and across scales, brings us back to the distinction that Rossi makes between distributive indifference and typological indifference. In this instance, what remains precise and definite is the structure of the metropolitan condition, yet it remains indifferent as to how this condition of plurality is distributed precisely. Returning to Agamben's metropolis, OMA's idea of the grid of Manhattan as borders of containments is neither fully the paradigm of leprosy or plague, that is to say not a space of complete severance nor complete subjectification. At its best, it remains as a framework of recognition to pass through in the metropolis. The space of this re-enacted metropolis can never be apolitical as Agamben defines it, as this simulated metropolis comes into direct confrontation with the host city, the historical European city of Paris. It is precisely through the use of the artificial and the condition of programmatic congestion as permanence, as opposed to mutable nature that the possibility of what is common is articulated in these two projects of OMA. This construction of the metropolis as a fictional and an artificial architecture, is one that will outlast man himself; as Elia Zhengelis remarked: *'Everything relating to nature, essentially, is doomed to disappearance. We are born, we die, we disappear, only ideas, art, the artificial seem to offer some promise of permanence.*[63] And Koolhaas reaffirms *'The final function of architecture will be to create symbolic*

63 Jacques Lucan, *OMA. Rem Koolhaas. Architecture 1970-1990* (Electa France, Milan-Paris: 1990; Electa, Milan 1991). p.40

spaces responding to the persistent desire for collectivity.[64] This symbolic space is the re-enactment of the metropolitan architecture, as an artificial framework of recognition, borders of containment as the common element.

8. Conclusion

As I have shown with Rossi and Koolhaas, the revalidation of the works of architecture outside its disciplinary boundary is made possible through the dominant type. Dominant types can be understood as the typical elements that constitute the city and are the embodiment of what is common. The idea that the dominant type brings forth is the idea of the city. Following Quatremère's definition of type as the principle that governs the model, the principle of dominant type that governs over the structures of the city is the idea of what is common, understood here as what is shared in the collective imagination, as principle, custom or law that individuals subscribe to as citizens of the city. More importantly, its discursive nature allows its various articulations and reifications in the different projects of the city, as exemplified here by Rossi and Koolhaas. In both, I have shown how the recourse to the city as a project revalidates the works of architecture by redefining what constitutes the idea of commonality that architecture must again respond to. Through the understanding of typicalities I have advanced the conception of the dominant type to mean more than a building type and its variation in the city; for it oscillates between both ends of the depth of typicalities – both as a common framework and as reified typical architectural objects.

I have defined through Aristotle that the city is a partnership

64 Jacques Lucan, *OMA. Rem Koolhaas. Architecture 1970-1990* (Electa France, Milan-Paris: 1990; Electa, Milan 1991). p.40

and following Mouffe's idea of agonistic pluralism, I have proposed that the city is the common space par excellence, where agonistic confrontation takes place in a discursive framework of recognition as borders and spaces of containments. It is always demarcated and hegemonically structured with this discursive deep structure as a common framework that displays the depth of typicalities. As such, what is common cannot be universal; for in an agonistic pluralism, any dominant discourse of this idea is always discursively and contingently formed. Thus, this unresolved but productive tension manifests itself and is reified in the deep structure of the city – its dominant type. The idea of the city as agonistic pluralism is one that discursively strives for heterogeneous containments that make possible the articulation of difference that typifies our cities today.

4 DOMINANT TYPE AND THE DEVELOPMENTAL CITY STATE

1. Introduction

The city of Singapore will be used here as a paradigmatic 'developmental city' to further the discussion of the dominant type and its relation to the idea of the city in three propositions. The first proposes the dominant type as a diagnostic and prognostic device for the contemporary city – that is, a city that is still largely under construction and is in a state of becoming. As Singapore is a city largely built from a blank slate, it allows the discussion on the instrumentality of the dominant type to move beyond that of found artifacts in a historical city. Thus, the understanding of the dominant type here is different from that of Rossi's. This inevitably raises the question of the Generic City as put forth by Koolhaas[1], both in his reference to the contemporary city in general and Singapore in particular. Tied to this first proposition, the word 'Generic' in the term 'Generic City' should be understood as the typical or what is most common, and as a latent characteristic that is becoming. As such, the Generic City can and should be understood through its dominant type, its most prevailing and most typical element that constitutes the city in the making. The two dominant types that will be discussed here arose from the conditions of tabula rasa, and have no overt link to history, precedent or context. The first is the high-rise, high-density tower and slab block (Fig. 4.1) that makes up Singapore's public housing project, and houses 85 percent of the nation's population. The second is the podium block (Fig. 4.2), a Metabolist invention unique to Asia, with shopping as it primary programmatic instigator.

The second proposition is that these dominant types figure forth the idea of the city of Singapore as a 'developmental city state'. This idea of the city is not fixed nor is it an ideal (as discussed in Chapter 3) but is necessarily contingent, allowing

1 Koolhaas, Rem, *SML XL* (New York: Monacelli Press, 1995), pp.1239-57

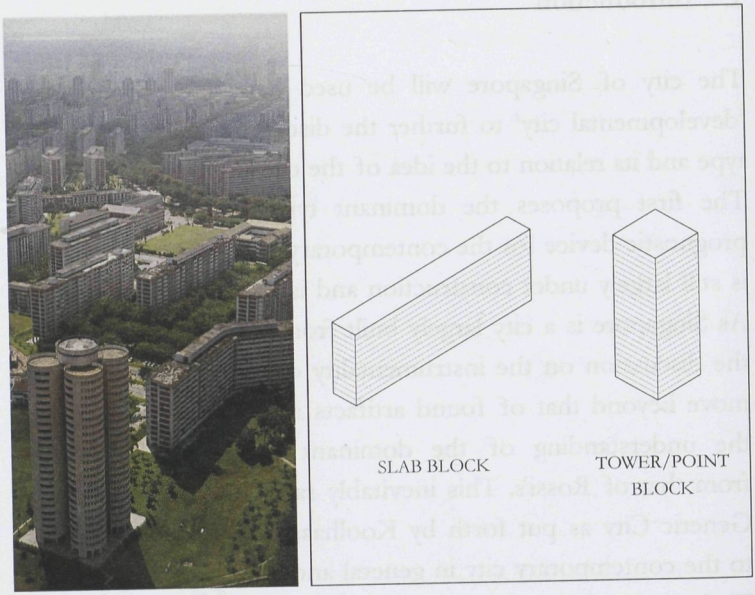


Fig. 4.1 Dominant Type of the Tower and Slab Block - HDB High-rise high-density housing

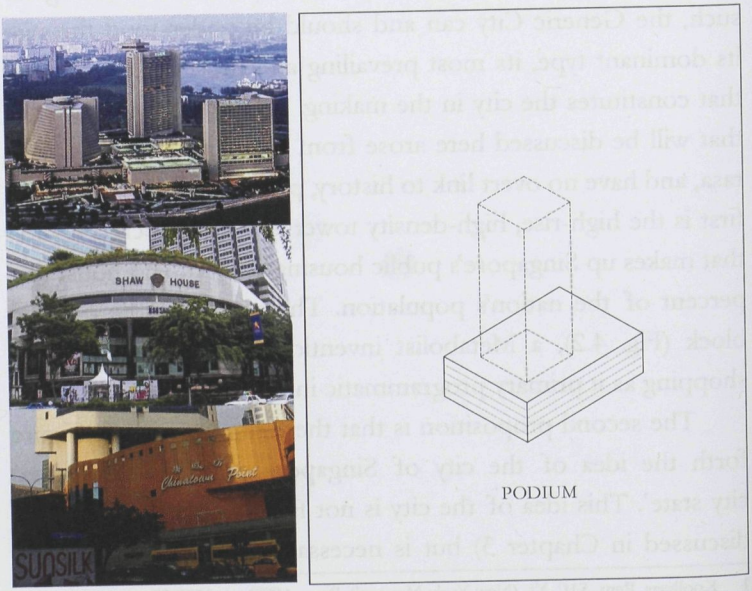


Fig. 4.2 Dominant type of the 'Podium Block'

it to evolve with the regimes of power. This idea is reified in the dominant types above as an evolving political project, as a manifestation of political might. The city state of Singapore will exemplify this use of the city and its architecture by the ruling party to legitimize its political hegemony.

The third proposes that the idea and deep structure of the dominant type share a reciprocal relationship, and evolve to mutually reinforce one another. Central to this proposition is the pliability of the deep structure of the dominant type as an organizational framework that is involved in the social, economic and political processes directed by the state. This in turn produces a specific common disciplinary knowledge, shared by those involved in the production of architecture and the city, that allows the dominant type to proliferate with ease. Tied to this third proposition, the dominant types are being exported from Singapore and implemented in China, India and other South East Asian cities. This owes to the 'success' of Singapore as an epitome of what can be achieved through *'authority, instrumentality and vision'*[2]. This proliferation of knowledge of the dominant types that are unique to Singapore, and now Asia, has seen Singaporean designers and former state architects using specific knowledge culled from the typological evolution of the dominant types as commercial ventures. This is further reinforced by the politicization and commodification of knowledge and experience of statutory boards and authorities in Singapore, exemplified by the formation of the Centre of Liveable Cities in the year 2010 with Singapore's Urban Redevelopment Authority, Housing Development Board and Economic Development Board as stake holders. One of its stated aims is to share with *'City leaders, either elected or appointed, at the level of mayors, governors, and head of metropolitan areas, local or provincial governments with executive responsibilities in urban development and management'* worldwide, *'... the*

2 Koolhaas, Rem, SMLXL (New York: Monacelli Press, 1995), pp.1087

guiding principles behind Singapore's whole-of government approach towards overcoming urban management challenges.' and where these leaders in urban governance can *'Learn Singapore's development strategies to building liveable, sustainable and economically competitive high-density city from the urban pioneers that transformed the city'*[3].

Through the reading of the dominant types in the developmental city state, I will propose a possible fourth typology, as distinct from Vidler's other three typologies that preceded it but nevertheless reliant on them for its definition. It is an emerging typology that is not only peculiar to Singapore, but is also common in other developmental cities, China in particular. This fourth typology will be recast as a shared knowledge; expanding upon Durand's rationalization of architectural knowledge to include the notion of *'the common'* as the product of immaterial labour of Michael Hardt. At its core, the fourth typology is a proposition for the possibility of architecture utilizing its shared disciplinary knowledge as a means of emancipation from within.

2. Generic or the Typical

> *'Is the contemporary city like the contemporary airport - "all the same"? Is it possible to theorize this convergence? And if so, to what ultimate configuration is it aspiring? Convergence is possible only at the price of shedding identity. That is usually seen as a loss. But at a scale at which it occurs, it must mean something. What are the disadvantages of identity, and conversely, what are the advantages of blankness? What if this seemingly accidental - and usually regretted - homogenization were an intentional process, a conscious movement away from difference toward similarity? What is we are witnessing a global liberation movement: "down with*

3 Centre for Liveable Cities, *'Leader in Urban Governance Programme'*, <http://clc.org.sg/index.php?q=leaders-urban-governance-program> (accessed 15 January 2012).

character!" What is left after identity is stripped? The Generic?[4]

For Koolhaas, the Generic City is a city without character; stripped of any identity. He refers to this identity as something derived from physical substance, the historical, a context and the real; it is a finite resource that is continuously depleted by the masses desire for 'character'; and its authenticity is inversely proportional to its rate of replication. Singapore, according to Koolhaas, is a Generic City[5]. He writes, *'The Generic City's aspiration toward tropicality automatically implies the rejection of any lingering reference to the city as fortress, as citadel; it is open and accommodating like a mangrove forest.'*[6] This description of the generic city - as something 'other'[7] than the (western) citadel and untamed like the mangrove forest - can be seen as a tendency to structure any discourse on the east through a fabrication of its 'exoticism' as an aberrant phenomenon. To move this argument away from the fascination and abhorrence of the 'other', and the unproductive debate about

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4 Koolhaas, Rem, SMLXL (New York: Monacelli Press, 1995), pp. 1248

5 Koolhaas did not explicitly name Singapore or any city in particular as a Generic City. However, a series of photographs that preceded the chapter 'The Generic City' in *SMLXL* and the written statements that followed made this clear. It is discernable from the blurred photographs that the city depicted is Singapore. In one of the photographs the tip of Kenzo Tange's UOB Plaza Towers (located at Boat Quay) peeks out of some lush greenery. He then defines the Generic City as such, *'The Generic City is on its way from horizontal to vertical. The skyscraper looks as if it will be the final, definitive typology. It has swallowed everything else. It can exist everywhere: in a rice field, or downtown - it makes no difference anymore. (...) All Generic Cities issue from the tabula rasa: if there was nothing, now they are there; if there was something, they have replaced it. (...) The Generic City's aspiration toward tropicality automatically implies the rejection of any lingering reference to the city as fortress, as citadel; it is open and accommodating like a mangrove forest. (...) The Generic City has a (sometime distant) relationship with a more or less authoritarian regime - local or national. (...) Each Generic City is a petri dish - or an infinitely patient blackboard on which almost any hypothesis can be "proven" and then erased, never again to reverberate in the minds of its authors or its audience.'* See Koolhaas, Rem, *SMLXL* (New York: Monacelli Press, 1995), pp. 1250-53

6 Ibid., pp.1253

7 Edward Said defines this as 'Orientalism, *'a way of coming to terms with the Orient that is based on the Orient's special place in European Western experience. (...), the Orient has helped to define Europe (or the West) as its contrasting image, idea, personality, experience.'* Said later argues that 'Orientalism' is a discourse conjured up by the West to rationalise its domination over the East. See Said, Edward W., *Orientalism* (London: Penguin Books, 1978), pp. 1-24.

difference versus sameness as visible form in the urban context[8], it must be first prequalified by a different understanding of the generic.

The word generic derives from the Greek word *'genos'* meaning 'race, kind'. As such, the generic refers to something that is common in a class, a group of individuals or species of individuals. That is to say, what is most typical among different individuals. As a verb, generic derives from the word *'gener-'*, which is synonymous with 'generating' and in the biological sense, *'gonos'* meaning 'birth, offspring, stock'. Therefore, generic can also be understood as the capacity to change and transform through its shared commonality. The generic is thus the typical with the potential for transformation[9]. This categorization concurs with Quatremère's understanding of type and character as discussed in Chapter 1, for type bears the irreducible *general* or essential character that serves as the rule for further generation with distinctive and relative character. This also mirrors the notion of the irreducible structure as the shared trait of a detectable series with the potential for recombination, as set out by Durand and furthered by Argan. Following this definition, it is thus logical to understand the Generic City through its dominant type as the most typical element that constitutes the city, both concretely and in abstraction. To interrogate the city this way is to go beyond the characterization of the generic city through its (or lack of) identity

8 Koolhaas' polemical and in some instances exaggerated account of the short history of Singapore in 'Singapore Songlines: Portrait of a Potemkim Metropolis or Thirty Years of Tabula Rasa' is critical of its authoritarian regime, and yet he displays a conspicuous fascination for the regime's promethean endeavours. See Koolhaas, Rem, *SMLXL* (New York: Monacelli Press, 1995), pp. 1009-89.

9 Pier Vittorio Aureli also accounts for the etymology of the word generic in this two category. He however uses the generic as a fundamental category of capitalist production. For Aureli, the generic becomes explicit through its abstraction and finds its spatial and architectural correspondence in the 'typical plan' - an architecture reduced to its most essential and universal structural system. See Aureli, Pier Vittorio, 'Architecture for Barbarians: Ludwig Hilberseimer and the Rise of the Generic City' in *AA Files 63* (London: The Architectural Association, 2011), pp.3-18 and for the 'Typical Plan', see Marullo, Francesco, 'Generic and Typical Plan', <http://thecityasaproject.org/2011/04/generic/> (accessed 15 January 2011)

as visible form or image. As these dominant types arose from a blank slate, its ideas are not historically constituted. Furthermore, its deep structures are not abstracted from historical architectural precedents as perfectible models. Instead the deep structure of these dominant types exists as the irreducible structure that organizes. It is deployed and evaluated for its instrumentality to accomplish pragmatic concerns that nevertheless are deeply politicized.

The pragmatic considerations of the deep structure of type can be informed by Alejandro Zaera Polo's article *'High-rise Phylum 2007'*[10]. Although, in this article or elsewhere, Zaera Polo did not make a distinction between type and model, made no mention of Quatremère or Durand and did not use the term deep structure, the contribution of this article, I would argue, revalidates the possibility of undertaking a comparative analysis of a building type on a global scale, emancipated from the customary twin considerations of contextual (immediate) and historical continuity, with the pragmatic performance of the building type as primary concern. This undertaking is similar to that of Durand's *Recueil* with the exception of his closer examination of the globalised context of architectural production that affects the transformation of this building type.

Zaera Polo declares unequivocally that one particular type - the high-rise - due to its pervasiveness, popularity and ubiquity today should be understood and discussed more methodically and with a new set of criteria. He argues that the current understanding of the high-rise offers no typological knowledge that enables the discrimination between novelty and innovation as they are driven by either the economy of efficiencies or economies of brand image. The former subjects the contemporary high-rise to ruthless efficiencies that constrain possibilities to the repetition

10 Zaera Polo, Alejandro, 'High Rise Phylum 2007', *Harvard Design Magazine*, 26 (2007), p.15-29

of verified models. This form of production remains in the hands of large commercial practices because speculative practices either ignore these constraints or are unaware of the underlying economies at play in this typology. The latter, in pursuit of the brand image in which everything is possible, contributes nothing to the typological phylum[11] of the high-rise as each design is seen as a work of singularity.

Zaera Polo observes that the expansion of the middle class in many developed or developing cities has turned the high-rise into a vernacular[12] typology exemplified by cities like Manhattan, Hong Kong and Singapore. The realization of the development potential of the high-rise and its innate ability to generate a high quantum of floor area has made it into a serious investment and development vehicle for cities like London, Madrid, Dubai, Kuala Lumpur and Moscow. Thus the high-rise is no longer solely associated at one end to social housing projects - developed by the state - or at the other end as the preserve of the rich. The high-rise is produced now for the mass market. It is however inaccurate for Zaera Polo to propose that the high-rise as a vernacular type in Singapore and Hong Kong arose out of the expansion of the middle class. Its development in these cities owes more to the extreme caution practised by technocratic policy makers in conserving scarce land for development, forged in the climate of national existential threat in the 1960s, but I will return to these examples later.

Having set out the social and cultural factors that popularized the high-rise, Zaera Polo contends that technical innovations[13] not

11 Phylum is a term borrowed from biology to mean a group of organism sharing a certain degree of evolutionary relatedness. It also refers to Zaera Polo's and Moussavi's practice as a phylogenesis, first outlined in *Phlogenesis: Foa's Ark* (Actar & ICA, 2004), p.6-17

12 Zaera Polo's choice of word to mean a building type specific to a geographical location and its attendant social and cultural norms, thus making it unique.

13 The improvements in technologies include the use of higher strength materials especially steel and concrete, faster construction technologies, high efficiency curtain walling systems with high-performance insulation and solar filtration and the development of intelligent vertical

only democratized the height, increased the speed and volume of construction but more importantly, affected profoundly the way in which high-rises are made. The soaring height, compressed design and construction time and the large investments needed for the delivery of the high-rise have increased the complexity and specialization of this process. This condition gave rise to the involvement of other experts, often marginalizing the role of the architect as image maker and skeletal dresser. The design of the high-rise is then seen as a problem that is broken down and addressed by these experts, consisting of real-estate specialist, vertical transportation consultants, mechanical and electrical engineers, structural engineers and contractors. The real-estate specialist for instance is involved in the process far in advance of the architect. This specialist sets out the population ratios, façade-to-core depth, floor-plate sizes, planning grids, floor-to-floor height, net-to-gross ratios and façade ratios. Although it might seem as a design brief, its specific articulation via stringent developmental parameters often predetermines the overall form and envelope of the high-rise[14].

To update the knowledge of the high-rise and identify new tendencies and opportunities, Zaera Polo chose to frame his observations in practice in three dialectical categories. The first discusses the impact of the high-rise type in its urban context through issues of regulation, location and monuments. Planning and building controls in Asian cities rely on the parameters of FAR, set-backs and height limits to regulate all developments. Thus the high-rises in Asia are more of a vernacular type, a norm rather than an exception in Asia. In historical European cities

transportation systems.

14 Zaera Polo cites the example of the contribution of each expert, which although technical in nature is reflected in the commercial impact of the decisions and innovations they bring. For instance, the vertical transportation consultant in determining the vertical transportation load will find the optimal numbers of elevators as each elevator core can be equivalent to a market value of $337,500 per year - calculated as nine sqm per elevator core multiplied by say 50 storeys of a typical high-rise in a typical global city with a rentable rate of $750 per sqm per year.

like London however, where the planning principles works via precedence, that is to say any new insertion in the urban context has to do more with maintaining coherence in urban massing, height, frontage and façade treatment and to be 'in keeping with the surrounding', the regulation of high-rises is problematic because of its exceptional character. Thus zones of exception are carved out via view corridors, ensuring that the clusters of towers do not dwarf or obstruct the historical image of the city. The location of high-rise types also differs from city to city. This is evident for example in the iconic values placed on towers in the square mile of London[15] as opposed to the towers of straight extrusions of orthogonal plans in Canary Wharf (Fig. 4.3). Here, the iconic tower and its novelty factor are used by architects and developers to convince planning committees to grant planning permission. The high-rises in these instances are treated more like monuments and landmarks. This exception is also evident in Asian cities, where towers of exceptional height and iconographic in their cultural associations are used to create brand value in city centres where land price is highest[16] (Fig. 4.4). The second category sets the dialectical relationship between type and icon understood through the economies of expression vs. efficiency. In Asia and the US, the design of the skin of the high-rise is often the only contribution of the architect because that is the only element left for design, following the efficient extrusion of the plans, dictated by the stringent development parameters set by real estate consultants. However, in Europe, and increasingly in the US and Asia, developers will no longer present an extrusion without formal complexity for fear of tenants and planners rejecting its banality. By proposing an iconic

15 This is exemplified by the towers that are instantly nicknamed, like Norman Foster's Gherkin (Swiss Re Tower), Kohn Pederson Fox's Helter-Skelter (Bishopsgate Tower), Rafael Vinoly's Handset (20 Fenchurch) and Richard Rogers' Cheese Grater (122 Leadenhall)

16 Examples include the Petronas Tower in Kuala Lumpur, Taipei 101 and Jinmao Tower in Shanghai.





Fig 4.3 Canary Wharf (above) & City of London (below), 2008



Fig 4.4 Hong Kong, 2008

tower, developers hope to gain higher FAR in exchange for a memorable skyline and the unique identity a tower can bestow on the city[17]. The third and final category posits the high-rise in the struggle between local sensibilities and global trends. Given that a high-rise project requires a large amount of investments, its development is inevitably linked to global economic processes. The design responses are often caught between local practices and the demands of global trends. This could affect planning grids for office floor plans, where for instance in the US, a grid of 3.3 metres is preferred, whereas in London that is considered unnecessarily wide. In the design of residential towers, the cultural nuances are more pronounced. For example, Koreans residential towers consist of large units, Japanese apartments are smaller and adopt the divisions and measurements of the tatami. Residential towers in China, Hong Kong and Singapore (Fig. 4.5) require all rooms to be naturally ventilated giving rise to highly inflected plans. This is very different, for instance, with more compact residential towers in the US and the UAE where bathrooms are mechanically ventilated and hence the services can be grouped close to the core[18] (Fig. 4.6).

For Zaera Polo, a comparative, quantitative and typological analysis of different parameters of residential organizations can enable a better understanding of the simultaneous 'vernacularization' and hybridization of the high-rise and, as land and resources are scarce, the high-rise type must be judged not for its iconicity but for its response to climate, topography, and cultural protocols. Accordingly, he proposes that a systematic process is required to generate a typological knowledge of the

17 In London for example, Foster's iconic and uniquely contoured tower, the Gherkin, is the first building to obtain planning permission for decades. It generated a lot of attention and publicity for its owner but ultimately its office space failed to find any tenant due to its irregular floor plates. But the entire tower will be sold for a profit of £250M solely due to its iconicity.

18 It is worth noting according to Zaera Polo that some condos in Seattle, Miami, and London Docklands are increasing their façade ratios to adopt the natural ventilated strategy to target Asian investors.

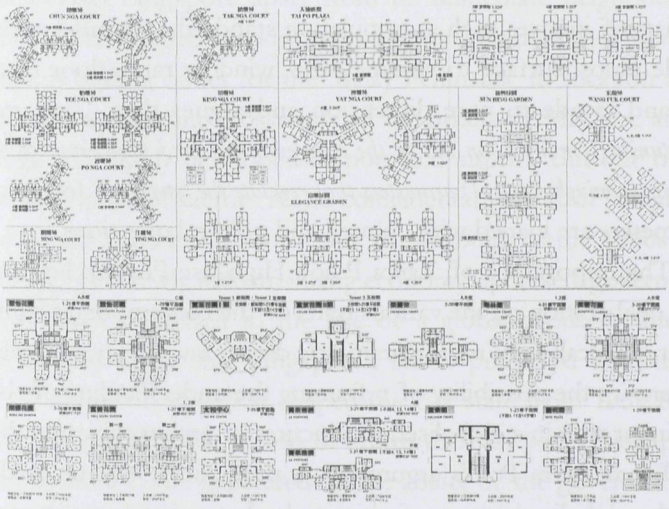

Fig 4.5 Tower plans with naturally ventilated services, Hong Kong (circa 2006)

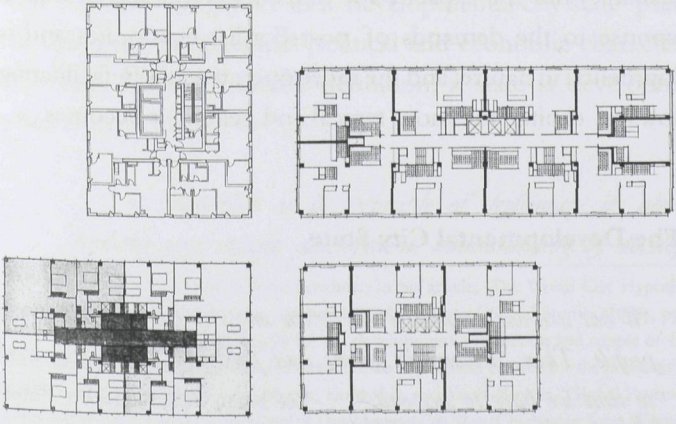

Fig 4.6 Tower plans with mechanically ventilated services

high-rise. This taxonomy, which he terms the high-rise phylum, consists of indexes such as population standards, planning grids, façade ratios, surface to volume ratio, window ratio, floor plate size and façade to core dimension and argues that: '.. *the real opportunities for invention lies in the engagement of and problematization of those seemingly neutral parameters that regulate the typology*'[19] for these parameters are loaded with cultural and political questions.

The importance of Zaera Polo's High-rise Phylum lies less in its deliberation on the various traits of the contemporary high-rise and his call for a more parametric driven investigation, rather it opens up the possibility of reframing the understanding of the dominant type in a globalised production of architecture and the city. From Zaera Polo's arguments, a proposition can be made that the globalised nature of cities today has a significant impact on the way dominant types are produced: they gravitate towards and aggregate within a specific location further reinforcing their dominance. Following this, a further argument can be made here, that is, the deep structure of the dominant type (the high-rise in this instance) has the capacity for transformation and evolution in response to the demands of post-Fordist economies and is developmental in nature; and the more operative it is in facilitating the flows of capital, the more typical and generic it becomes.

3. The Developmental City State

> *"What are our priorities? First, the welfare, the survival of the people. Then, democratic norms and processes which from time to time we have to suspend."* - Lee Kuan Yew, Singapore Prime Minister (1959-1988), National Day Rally Speech 1986

From its inception as an independent city state in 1959, Singapore

19 Zaera Polo, Alejandro, 'High Rise Phylum 2007', *Harvard Design Magazine*, 26 (2007), p.18

can be considered as an aspiring second tier world city.[20] Many factors set Singapore apart from its immediate neighbours to give it this status, among them are its inherited status as the British trading outlet for the Malay Peninsula, its location along the major maritime crossroads of the Straits of Malacca, and its large and highly developed seaport and airport. But one of the most important factors is the coincidental period of expansion of world trade in the late 1950s and through to the 1960s with Singapore's newly industrializing economy upon self-governance. It is this connection to the rise of a global economy and the existential threat that Singapore's rulers perceived immediately after independence, that shaped the city state from 1959 to the mid-1990s.[21] In this period of more than 30 years, Singapore's economic success depended on the ability of the government to exercise a tight control over society, with the acceptance of the governed population of its political programme. Its mandate was galvanized through its administrative ability to deliver economic growth, even through means that were authoritarian. As such, Perry, Kong & Yeoh, in their *Singapore: A Developmental City State*[22], defined Singapore as a 'developmental city state' precisely for this most fundamental political and economic characteristic. Following Manuel Castell's definition, a state is developmental when:

> *'... it establishes as its principle of legitimacy its ability to promote and sustain development, understanding by development*

20 World cities, according to John Friedman in his article, 'The World City Hypothesis' in *Development and Change, Vol.17 Issue 1* (The Hague: Institute of Social Studies, 1986), pp.69-83, are generally defined as sites primarily for the development, production and supply of financial and business services to global markets, rather than as business centres for the domestic market and its hinterland. See also, Perry, Martin, Kong, Lily and Yeoh, Brenda, 'Global Processes and a developmental city state' in *Singapore: A Developmental City State* (Chichester: John Wiley & Sons Ltd., 1997), p.12

21 Ibid., p.5

22 Perry, Martin, Kong, Lily and Yeoh, Brenda, 'Global Processes and a developmental city state' in *Singapore: A Developmental City State* (Chichester: John Wiley & Sons Ltd., 1997)

> *the combination of steady high rates of economic growth and structural change in a productive system, both domestically and in its relationship to the international economy*[23],

The state can achieve such economic success due to the ability of the government to exercise tight control of society and the acceptance of the population of such measures; and is dependent on the state's cultivation of a climate of continual crisis and urgency. This is driven by two important ideas: first is that the state prioritizes the transformation of economic conditions above everything else. Second, is that economic development attains a high status as a means to larger goals and as an end in itself. Such measures were framed by the exigent task to ensure the survival of the country that followed the severing of dependency on former colonial authorities. To meet this existential challenge the developmental city state is engaged in a two stage project:

> *'The first is to marshall resources and societal cohesion around the pursuit of survival. The second is to gradually assert its own cultural and political identity, so as to confirm its break from dependency and to affirm national confidence in its political direction.*[24]

Following Perry, Kong & Yeoh's elaborations, the events that surrounded the independence of Singapore played a large role in the way Singapore emerged as a developmental city state. They did so from the conditions posed by three challenges. The first was a sense of *regional isolation* experienced with the watershed moment of the ejection of Singapore from the Federation of Malaysia (Fig.

23 Castells, Manuel, 'Four Asian Tigers with a Dragon Head: A Comparative Analysis of the State, Economy, and Society in the Asian Pacific Rim', in Appelbaum, R. and Henderson, J. (eds) *States and Development in the Asian Pacific Rim* (Newburry Park: Sage, 1992), pp.33-70, first cited by Perry, Martin, Kong, Lily and Yeoh, Brenda, 'Global Processes and a developmental city state' in *Singapore: A Developmental City State* (Chichester: John Wiley & Sons Ltd., 1997), pp.7

24 Ibid., p.7

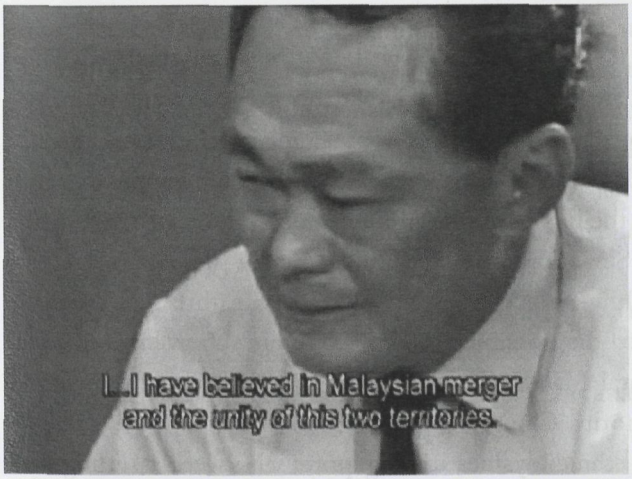

Fig 4.7 PM Lee Kuan Yew, announcing the demerger with the Federation of Malaysia (1965)



Fig 4.8 People's Action Party (PAP), 1960s-2000

4.7). The People's Action Party (PAP) (Fig. 4.8), the party which had ruled Singapore since 1959 with an overwhelming majority[25], invested a considerable effort in obtaining support for joining the Malaysia Federation in the belief that the only viable economic future of the tiny island lay in the larger territory of what is now Malaysia. Singapore, with a majority Chinese population and with their wealthy trading houses, was seen as a threat by Malaysia, who feared the possibility of an economic subordination of the largely rural Malays. This was compounded with the presence of a minority Chinese population in Malaysia with ancestral links and ethnic loyalties to Singapore; who were asserting their political influence in the newly formed federation. This was further exacerbated by PAP's campaign for 'Malaysian Malaysia', a call for equality, meritocracy and an end to racial politics. This appeared as a direct confrontation to the hegemony of the ethnic Malays, whose political leaders campaigned for the formation of a state around Malay culture and language and a constitution that enshrines the special rights of the Malays and their status as 'Bumiputras'[26]. The second involves the issues surrounding the formation of a *national identity*; being an island of immigrants, the majority Chinese and the smaller Indian and Malay, the task of building a new nation lay in uniting the different ethnic groups under the majority rule of the Chinese. This involved the shifting of ethnic solidarity among the Chinese - loyalty to family, clan and

25 From 1968 to 2011, PAP has won all parliamentary elections decisively. In four occasions, from 1968-1980, winning all contested seats; and from 1984-2011 winning more than 63%, with the exception of 1991 and 2011 where they won 61% and 60.1% respectively.

26 In Malay, it literally means 'son of the soil'. The status of the 'Bumiputra' recognises the special status of ethnic Malays and is enshrined in the Federal Constitution of Malaysia. This special status allows among others, preferential access to public housing, subsidies, business loans, government contracts, scholarships, and appointments to positions in the civil service, army, police and all government linked companies and corporations. It was set up as an affirmative action policy, after the May 13 1969 race riots (between Malays and Chinese), to close the economic gap between rural Malays and the urban Chinese minority, is nothing but a 'racially discriminatory' policy. This special right still stands enshrined in the country's constitution and its attendant policy is still actively implemented after more than 40 years.

dialect - to an abstract shared commitment, that of nationhood. The third involved the crisis of *political division* when the ruling party PAP was split in 1962, with its socialist wing forming a new party, Barisan Socialis, now defunct. This faction campaigned against the merger with the Federation of Malaysia[27] and was opposed to the more conservative and dominant faction of the party, led by Lee Kuan Yew, who saw in the socialists a serious threat of communist insurrection from within the party itself, and from the Barisan Socialis after the split.

To meet these challenges that were perceived as an existential threat,

> *'... PAP constructed a strong state apparatus and put it to work through the implementation of a new policy agenda, in which economic development was given highest priority. This has been referred to as the 'ideology of survival' in which economic and political survival were seen as inseparable with all other considerations secondary.* [28]

The government took direct control of all systems of administration, eliminating municipal administration and transferring it under one-tier parliamentary control. It also effectively eliminated all forms of opposition and threats from unions.[29] Economic development is, of course, crucial to any

27 Chua, Beng Huat, 'Arrested Development: Democratisation in Singapore' in *Third World Quarterly, Vol. 15, No. 4* (London: Taylor & Francis Ltd, 1994), p.656

28 Chan, Heng Chee, *Singapore: The Politics of Survival* (Singapore: Oxford University Press, 1971), first cited by Perry, Martin, Kong, Lily and Yeoh, Brenda, 'Global Processes and a developmental city state' in *Singapore: A Developmental City State* (Chichester: John Wiley & Sons Ltd., 1997), p.9

29 The demerger with Malaysia left Singapore with a single party, the PAP. Although the PAP eventually split in 1962, with the Barisan Socialis winning 35% of vote and 18 parliamentary seats in the 1963 General Elections, Barisan Socialis boycotted parliament and took the political struggle 'to the streets', crucially doing the same in the 1968 elections, leaving all seats to the PAP. This eliminated the likelihood of a two-party political system with any subsequent opposition having to start from zero. Indeed, these events set PAP off on its domination over Singapore's political arena. Other measures that discourage and forms of dissent and opposition are the use of the Internal Security Act, that enables the state to imprison without trial anyone

country and an important factor in electoral politics. However, the developmental state is distinguished *through '... the absolute prioritization of economic growth and its use as a prime indicator of government performance.* [30] In Singapore, as highlighted by Perry, Kong & Yeoh, this is translated in the reallocation and appropriation of land that allows maximum economic development flexibility and returns, minimizing development control, the direct involvement of the highest members of parliament in state planning and economic agencies, the continuous fine tuning and multiplication of incentives and economic programmes.

Rapid economic growth and visible improvements in the standards of living within a short time in Singapore ensured the acceptance of this political programme by the population. As Chua's succinct appraisal for PAP's political hegemony:

> *'That it is popularly elected, financially uncorrupt, manages the economy well, has improved the population's standard of living and governs through due parliamentary process, all with a dash of self-sacrifice on the part of its leaders and members adds to a very powerful set of legitimatising elements for the PAP "regime". These elements constitute, for the PAP, the character of 'good' government as reflected in the recent self-characterization of its leaders as Confucian "jin tzu", loosely translated as "moral individuals". Significantly, these moral claims are commonly accepted by Singaporeans, including members of opposition parties. The PAP has thus appropriated for itself the moral high-road and established the ideological hegemonic terms of political discourse beyond direct*

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who is deemed to pose a threat to national security. There is also no press freedom in Singapore, with the main newspaper *The Straits Times* acting merely as a government mouthpiece. The use of defamation suits against political opponents often results in putative damages, either bankrupting any political opponent or acting as a strong deterrent for fear of financial ruin. See Chua, Beng Huat, 'Arrested Development: Democratisation in Singapore' in *Third World Quarterly, Vol. 15, No. 4* (London: Taylor & Francis Ltd, 1994), p.655-668

30 Ibid., p.10

interventions.[31]

Three of the most important components by which PAP sustained its political legitimacy and hegemony are through an ambitious and close to universal public housing programme, para-political institutions, and public campaigns and programmes. The first saw the improvement of the living conditions of the population in a very conspicuous way and provided home ownership to 80 percent of its population in the 1990s, an increase from 9.1 percent in 1960. The second worked as the ear-piece of PAP, consisting of networks of grassroot leaders, paid by the government to channel communities' views back to the government and to influence the debate at grassroots level, in the HDB heartland. The third was designed to change behaviour en masse, this included issues such as productivity, courtesy, public hygiene, personal health, speaking Mandarin, moral values, family planning, energy use and looking after elderly parents.

4. High-rise Tower and Slab Block: Housing a Nation

In the tumultuous years of 1959-1965, the twin problem of housing crisis and unemployment was the top priority that the Lee government set out to tackle and the Housing and Development Board (HDB) was created in 1960 to confront this crisis. The two over-riding considerations that shaped physical planning and design in the HDB context were the need to optimise scarce land resources (Fig. 4.9, Fig. 4.10) and to provide better living conditions for the residents. This led to the decision to build high-rise, high-density public housing, a modus operandi that still persists today.

31 Chua, Beng Huat, 'Arrested Development: Democratisation in Singapore' in *Third World Quarterly, Vol. 15, No. 4* (London: Taylor & Francis Ltd, 1994), p.657

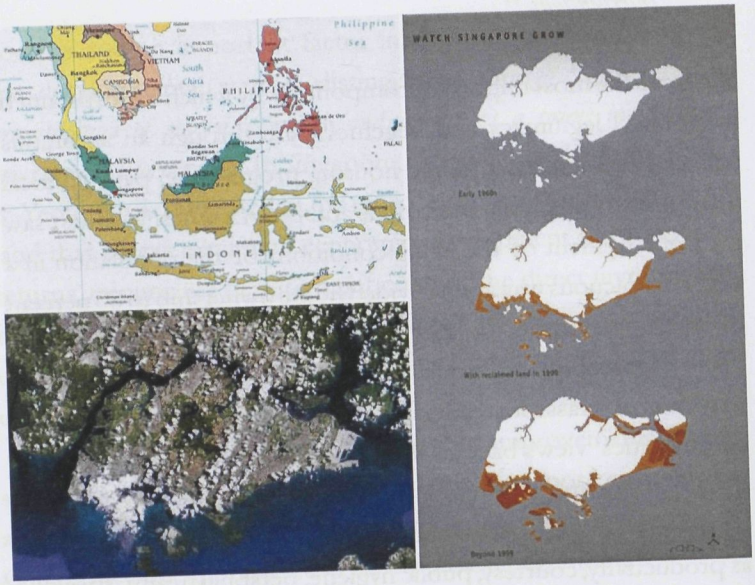

Fig 4.9 Singapore, land reclamations (1960s-present)



Fig 4.10 'Reclaimed land on the eastern coast of Singapore

At the inception of HDB in 1960, taking over the Singapore Improvement Trust, its role, borne out of a national crisis was utilitarian, technocratic and Spartan:

> *'During the early period of severe housing shortage, the emphasis was on finding a viable and expeditious alternative to the slums and squatter housing. With only very limited resources available, the first building programmes had to concentrate on Spartan low-cost units that could be constructed quickly'*[32]

The Koenigsberger Master Plan of 1963 (also known as the UN Report) outlined a few key strategies to cater for a population of 4 million (Fig. 4.11). They included the proposal for a Ring City and the clearance of slums in the central area for redevelopment. The first phase of the making of the city state was based on the tabula rasa, sanctioned by the UN and enabled by the Land Acquisition Act. The majority of the razed areas were dilapidated shop houses or 'attap'[33] houses with poor living conditions (Fig. 4.12).

The first site for the public housing programme was Queenstown (Fig. 4.13). Unlike the subsequent new towns, the first HDB project was smaller and more piecemeal in its design. Small, - compared to Singapore public housing standards - isolated public housing estates were built on vacant land close to the central area to ease the severe housing shortage where land was very limited due to the vast slums and squatter land. Predominantly built as 6 to 20-storey slab blocks, a total of 19,372 flats were built. Within only two years, from 1962 – 1964 alone, 2,528 flats were designed and built. The whole development, designed and

32 Tony Tan Keng Joo, Loh Choon Tong, Tan Sioc An and Lau Who Cheong, Kenson Kwok in 'Physical Planning and Design' in *Housing a Nation: 25 Years of Public Housing in Singapore*, edt. Wang, L.H & Yeh, Stephen H.K, Maruzen Asia for Housing Development Board, 1985.

33 Make-shift settlements with straws roofs which were prone to fires in the hot and humid climate of Singapore.

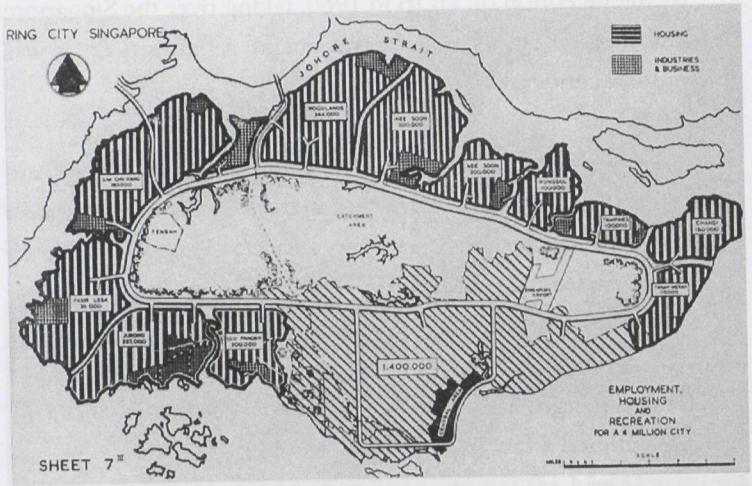

Fig 4.11 Koenigsberger Masterplan (1963)



Fig 4.12 'Attap' Huts in Singapore (1960s)



Fig 4.13 Queenstown, new HDB slab blocks next to razed 'attap huts' (1963-68)

built hastily for 150,000 people, is made up of predominantly 12-storey slab blocks, all orientated north-south to avoid the east-west sun (Fig. 4.14, Fig. 4.15). The influence of Le Corbusier's *'The Contemporary City for Three Million'* (1922) is considerable, as a whole, three of its four principles were adopted: *'1.) We must decongest the centres of our cities, 2.) We must augment their density. 3.) We must increase the means of getting about. 4.) We must increase parks and open spaces'*[34]. However, Queenstown differs from the *'Contemporary City for Three Million'* in that the former is made up largely of housing blocks without the latter's functional zoning, centring of high-rise towers and setting-back of mid-rise blocks to create a recognizable centre, with the grand axes and vast open spaces between building blocks. Thus, Queenstown adopted the most technocratic aspect, without the pleasure that accompanied the plans of Le Corbusier - the grand vistas, the compositional form afforded by prototypes and a city set within a vast green open space (Fig. 4.16).

Toa Payoh new town (Fig. 4.17), the second HDB project in 1966, on the other hand dealt with the problem of congestion through decentralization, creating new towns around the island like a necklace of self-sufficient towns on virgin land. Its programmatic composition was immediately different from that implemented in Queenstown. The whole town is conceived as a self-functioning whole. The question of what constitutes the centre of this new town was again more pragmatic in its response – shopping. This would have other consequences on the evolution of another dominant type - the podium – which I will return to later. Conceived as a new town for 180,000 people, Toa Payoh is the first among a total of 26 new towns completed to date (Fig. 4.18, Fig. 4.19, Fig. 4.20, and Fig. 4.21). As a strategy of decentralization, new towns are planned, satellite developments

34 Le Corbusier, *The City of Tomorrow and its Planning* (New York; Dover Publications, 1987), p.170

comprising of very large housing developments of more than 180,000 people. Envisioned as self-sufficient towns, they are served by schools, community centres, leisure and amenities, and light industries. Unlike satellite towns or cities with hinterland, these new towns are high-rise, high-density public housing developments that can be seen as nodes within a highly compact and interconnected urban system[35] (Fig. 4.22, Fig. 4.23, Fig. 4.24, Fig. 4.25, Fig. 4.26, and Fig. 4.27).

Following Toa Payoh, four other new towns – Ang Mo Kio, Clementi, Telok Blangah and Bedok - followed in quick succession along the same planning principles. The development of new town marked the second public housing phase of HDB and continued to the late 1970s.

With the housing problem abating in the 1980s, the third phase of development was characterised by the search for identity as a result of the developmental overdrive from the previous 20 years that created housing blocks and environments of stark uniformity. The idea of precinct was introduced to bring back character to housing estates. A precinct is a cluster of blocks surrounding an open space with associated facilities and it formed the main planning unit of new towns with an emphasis on spatial definition and enclosure of open communal space[36]. This was a departure from the loose arrangement and piecemeal housing development of the early 1960s. The precinct emphasizes the legibility afforded by scale and stresses upon boundaries and frames. An ideal precinct according to HDB, is probably one where all blocks orientate towards one open space (Fig. 4.28, Fig. 4.29, Fig. 4.30, Fig. 4.31).

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35 Tony Tan Keng Joo, Loh Choon Tong, Tan Sioe An and Lau Who Cheong, Kenson Kwok in 'Physical Planning and Design' in *Housing a Nation: 25 Years of Public Housing in Singapore*, ed. Wang, L.H & Yeh, Stephen H.K (Maruzen Asia for Housing Development Board, 1985) p.92

36 Liu Thai Ker, 'Design for Better Living Conditions', in Yeh, Stephen H.K, (ed,), *Public Housing in Singapore* (Singapore: Singapore University Press for Housing and Development Board, 1975) p.117-181.



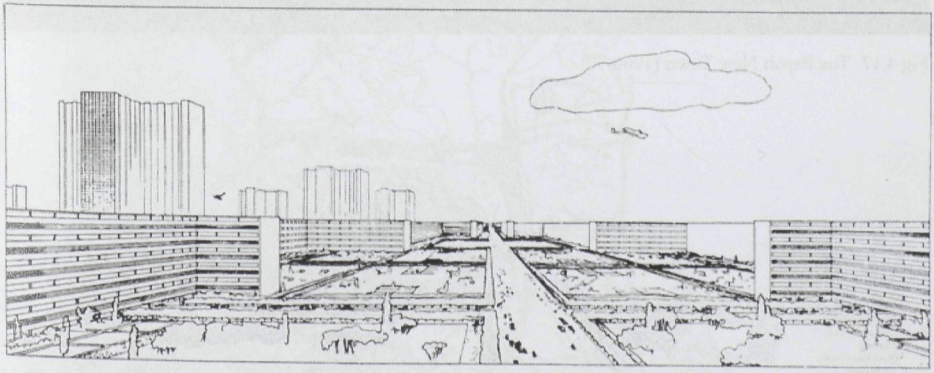
Fig 4.14 Queenstown, new HDB blocks (1963-68)



Fig 4.15 Queenstown, new HDB blocks (1963-68)



Queenstown, Singapore 1964



Le Corbusier, A Contemporary City of Three Million, 1925

Fig 4.16 The city of architectural modernism, 40 years after Le Corbusier's the Contemporary City for Three Million



Fig 4.17 Toa Payoh New Town (1966-70)



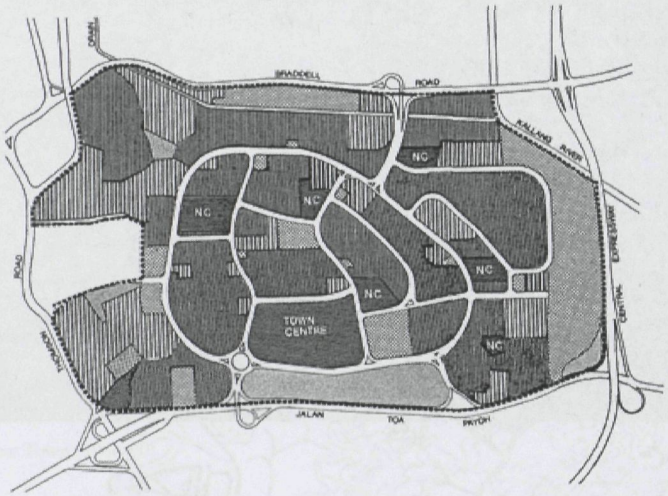
Fig 4.18 New Towns (1960s-80s)



Figure 11
OUTLINE PLANS—ANG MO KIO NEW TOWN
TOA PAYOH NEW TOWN

Fig 4.19 Toa Payoh and Ang Mo Kio, New Town Plan (1965)

MAP 4 LAND USE PLAN TOA PAYOH NEW TOWN



Legend	Land Area (ha)	Percentage
Residential	150	40
Commercial	34	9
Industrial	47	13
Open Space, Sports & Recreational	24	6
School & Institutional	69	19
Roads & Others	49	13
Town Boundary		
Total	373	100

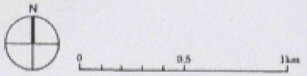


Fig 4.20 Land use plan, Toa Payoh New Town (1965)

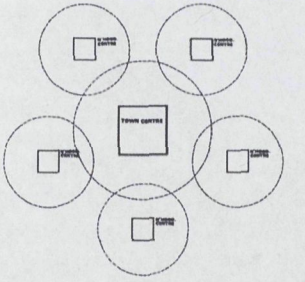


Figure 10
CONCEPTUALIZED STRUCTURE
OF NEW TOWN

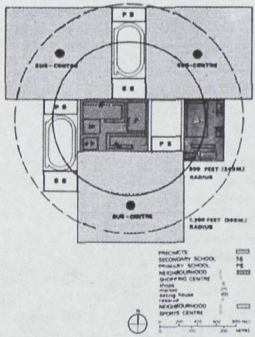


Figure 9
NEIGHBOURHOOD LAND USE MODEL
FOR HIGH RISE RESIDENTIAL DEVELOPMENT

Fig 4.21 The 'Conceptualized Structure of New Town', (1965)

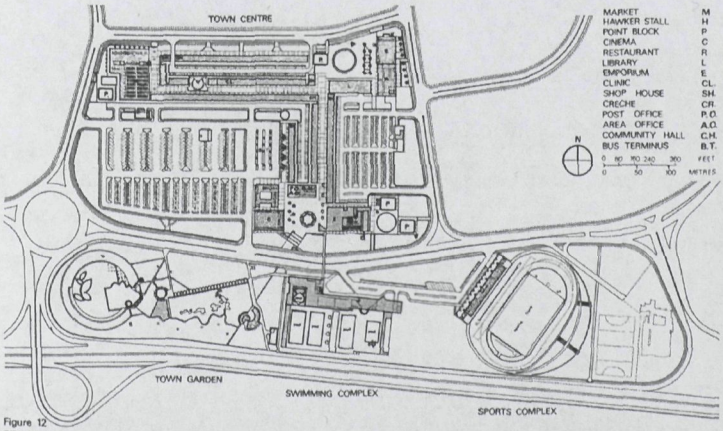


Figure 12
SITE PLAN OF TOA PAYOH TOWN CENTRE,
TOWN GARDEN AND SPORTS COMPLEX

Fig 4.22 Town Centre, Toa Payoh New Town (1965)



Fig 4.23 Town Centre, Toa Payoh New Town,
with amenities in the centre (1966-70)



Fig 4.24 Toa Payoh Neighbourhood 1, 3-Room
Improved Flat Slab Blocks (1966-70)



Fig 4.25 Toa Payoh, 10-storey slab blocks (1966-70)

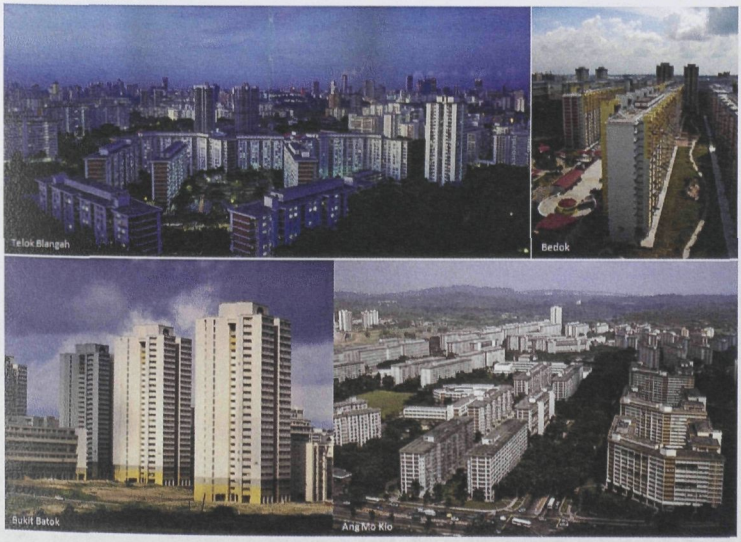


Fig 4.28 Completed New Towns, Telok Blangah, Bedok, Bukit Batok, and Ang Mo Kio (1966-85)



Fig 4.26 Toa Payoh Neighbourhood, 3-Room Improved Flat, L-shaped Slab Block (1966-70)



Fig 4.27 Toa Payoh Neighbourhood, blocks with variable heights (1966-70)



Fig 4.29 Toa Payoh, 10-storey slab blocks
(1966-70)



Fig 4.30 Roof design of Eunos tower blocks
(1980s)



Fig 4.31 P&T Consultants for HDB, Tampines New Town (1994)

5. Total Design through the Dominant Type

The 25 years that spanned the development from Queenstown to the new towns can be better understood as a total design - a total design involving the strategic aims of the prevalent masterplan and the political climate of crisis and survival of a small island state, in a hurry to seek modernization and administered by a single authority. At the heart of this total design lies the dominant type of the high-rise, high density tower and slab block. Its development and evolution not only embodies the ideas of the city of the master-plan but also the aspirations of the population.

The Design Research Unit was set up within HDB in 1969, tasked to improve the design quality of public housing alongside the expanding middle class. In a short span of 25 years, from 1960 to 1985, more than half a million flats were built, ten new towns completed and six more at various stages of construction. In this period several basic housing types were evolved, the 1-, 2-, 3-, 4- and 5- room apartments.

With 26 new towns built from scratch, each housing 180,000 population or more and comprising predominantly 90 percent housing as built matter, the making of this city state can be seen as an act of total design. The act of planning is undertaken with an emphasis on the development of standards or prototypes. This total design covers four different but intricately related scales: Flat Design, Block Design, Residential Site Planning and New Town Planning.

In the design of the units or flats, the design ethos again is simple and utilitarian as outlined by HDB's Design Research Unit's motto - 'keep the cost of the flat as low as possible'[37] to maintain affordability and keeping government subsidy to

37 Liu Thai Ker, 'Design for Better Living Conditions', in Yeh, Stephen H.K, (ed,), *Public Housing in Singapore* (Singapore: Singapore University Press for Housing and Development Board, 1975), p.58

a reasonable limit while still offering a reasonable standard of living accommodation.

In the period of 25 years, six prototypes were produced - the Emergency, Standard, Improved, New Generation, Model 'A' and Simplified, in chronological order. Each of these prototypes also varies in size (Fig. 4.32). The evolution in the size and organization of rooms of these prototypes mirrored the various national convulsions and social-political expectations of the time. The Emergency prototypes of the early 1960s measured only 23sqm and were arranged in linear slab blocks of 12 storeys. Designed and built in a short period of time to address the housing crisis and relocations from the clearance of slums in the central area, these prototypes were notorious for their dark and poorly ventilated common corridors and their uncompromising uniformity. By the late 1960s and early 1970s, with the crisis of rehousing of slums dwellers abated and the rise in expectations of the population for better living conditions, larger units were developed, growing from the 1-room to 2-room and 3-room flats. With the rising standard of living, as well as the increase in size, the layouts were 'improved' to reflect the climatic condition and the Asian lifestyle, i.e., all kitchens and bathrooms were naturally ventilated and a room-to-rooms layout was adopted as opposed to the corridor-to-rooms layout of English social housing apartments. This entails that the living and dining areas are the central space of the flat which different rooms are arranged around, and it also acts as a naturally ventilated space. As the prototypes continue to evolve, the layouts of these units create a plan of high-rise slabs and towers that has an unusually large surface area compared to its counterparts in Europe and America.

Standardization played a crucial part in the design of the flats to ensure ease and economy of construction. For speed of construction, HDB flats are prefabricated and assembled onsite. A new modular system was invented by HDB, unlike Le

Corbusier's anthropomorphic modular system, the modules here are construction based. Two basic dimensions were used, 3ms on the horizontal plane and 2ms on the vertical plane. This yields for instance, a grid of room at multiples of 3 – 3.0m, 3.3m, 3.6m or doors of 0.9m on the horizontal axis. On the vertical axis, heights in multiples of two are generated, for instance, a floor to floor height of 2.8m, a window or door height of 2.2m.

Part-to-whole relationships that govern architectural compositions and provide coherence in scalar shifts are, in the relation between flat design and block design, governed more by factors of efficiency, the environment and the social-cultural norms of South East Asians. The block designs of HDB are linked by the design of its flats as basic units and thus have evolved alongside accordingly. These high-rise blocks can be classified as predominantly two block-types – the slab block and the tower block (Fig. 4.33 and Fig. 4.34). Both these blocks are developed as elemental parts to shape the massing for the large neighbourhood site plan or precincts.

Parameters that have to be considered in understanding the evolution of these blocks are internal area to circulation area, distance between fire escapes, unit sizes, numbers of lifts and height. The evolution of the 1-Room Emergency slab block to a 2-Room Standard slab block is affected primarily by the size of units as the demand for large dwelling units increased from the mid 1960s onwards and the realization of the various shortcomings of the first Emergency prototypes. The larger 2-Room units enabled a large enough internal floor area to circulation area to justify a single loaded corridor as opposed to the smaller 1-room units. And as the units increased further to a 3-Room Standard, the single loaded corridor is further shortened and terminated on each side by a corner unit, thereby reducing the number of units sharing a common corridor and creating a gradient of privacy and thus differential desirability on each floor.

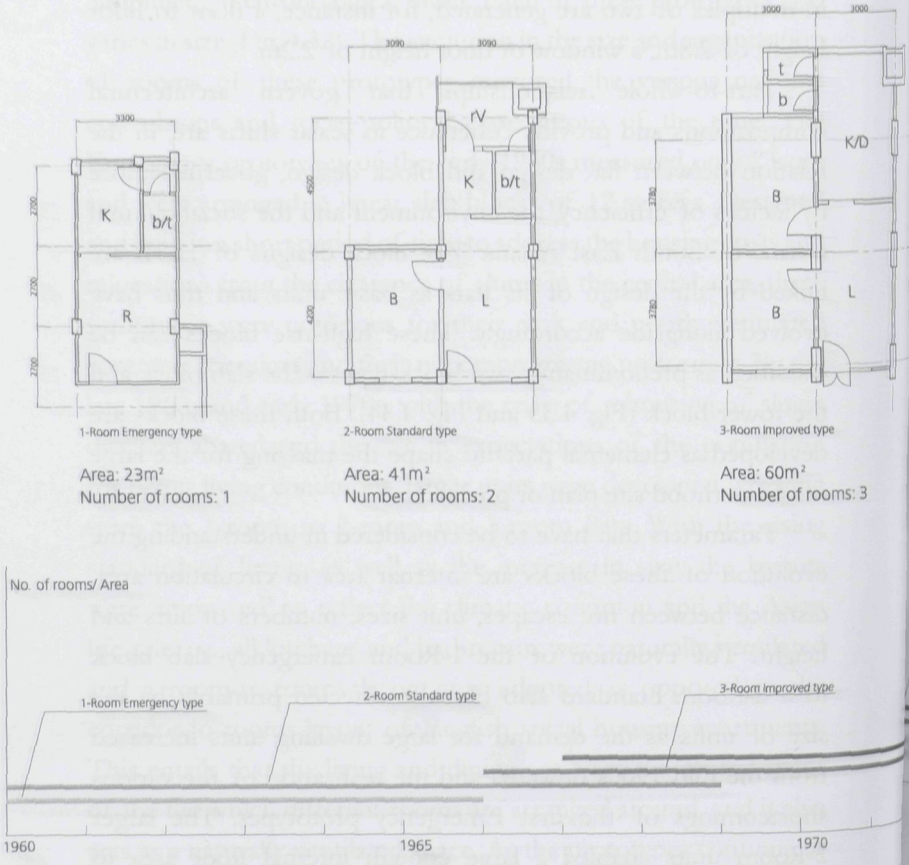
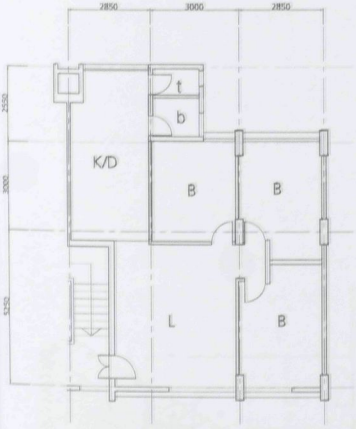


Fig 4.32 Transformation of flat prototypes, 1960s-1980s (drawing by Lee, Christopher, and Lee, Bolam)



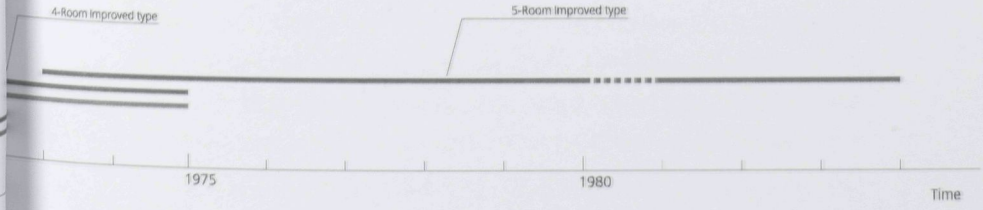
4-Room improved type

Area: 83m²
Number of rooms: 4



5-Room improved type

Area: 123m²
Number of rooms: 5



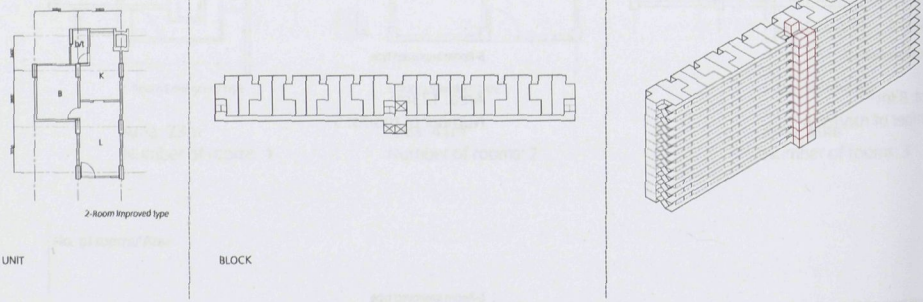
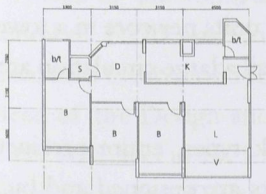


Fig 4.33 Unit to block: Slab block (drawing by Lee, Christopher, and Lee, Bolam)



5-Room Improved type

UNIT



BLOCK

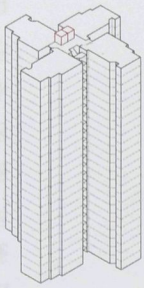


Fig 4.34 Unit to block: Tower block (drawing by Lee, Christopher, and Lee, Bolam)

This in part is achieved by centralising the fire escapes with the lifts (Fig. 4.35).

Tower blocks, on the other hand, are developed exclusively from the mid 1960s onwards for the largest units - the 5-Room variations. The tower block has a much higher efficiency (high internal area to circulation area) compared to the slab blocks, a higher lift to units ratio per floor and thus offers more privacy. Due to the requirement of ventilation for all rooms (including bathrooms and kitchens), the tower plans are highly inflected to give a high vertical surface area. The tower block would not be possible with smaller units. This is because the efficiency will drop if the tower is comprised of the same number of smaller units; to increase the number of smaller units per core in a tower block is also not possible as it would entail a large circulation area to net floor area (Fig. 4.36).

Armed with these two basic block types, entire precincts and new towns of more than 5,000 flats are designed and built with results ranging from unrelenting monotony to inchoate variation. As early as the mid 1960s, the combination of the slab and tower blocks has been utilised by HDB as elemental compositional blocks to create site plans that are definable as unique neighbourhoods. With the exception of Queenstown, where slab blocks of the same dimensions are arranged in parallel rows facing north-south to avoid the east and west sun, 12-storey slab blocks are placed along streets to define the boundaries of precincts and to create enclosures, while tower blocks are used as markers or landmarks, as evident in the precincts design of Ang Mo Kio, Bedok and Clementi.

The subsequent evolution of block designs saw the use of blocks in various combinations to create a larger super-block (Fig. 4.37). These super-blocks of towers or slabs are used to capture and define large communal open spaces or form the alignments

as accentuations of site boundaries, streets and topography (Fig. 4.38 and Fig. 4.39).

By 1989, at the end of Lee's reign, 87 percent of the total population or 2.1 million people were living in public housing, compared to 43 percent in 1974 and 9 percent in 1959. The overwhelming presence of 2.3 million completed flats housing more than 80 percent of the population is a stark reminder of the might and ability of the government (Fig. 4.40). The dominant type of high-rise, high-density public housing is ideological. It is a powerful symbol of the state's ability to fulfil its promise to improve the living conditions of the entire nation with resounding success. It is politics manifested as architecture (Fig. 4.41).

One of the important figures involved in this crucial initial period of HDB was Liu Thai Ker (1938-) (Fig. 4.42), the Chief Executive Officer of HDB from 1979-1989. He joined HDB as Head of the Design and Research Section in 1969, became the Chief Architect in 1975 and a year later was promoted to Deputy Chief Executive Officer. He oversaw the completion of more than half a million dwelling units over 20 years. Liu was trained both as an architect and planner and spent four years as an architect-planner in IM Pei and Partners, Architects and Planners before returning to join HDB[38]. He has been credited for the transformation of large utilitarian housing estates to smaller self-sufficient new towns, and for the total architectural design of HDB projects.

38 Liu Thai Ker has been credited for his considerable influence on the shaping of the city of Singapore as both Head of HDB (1979-89) and subsequently URA (1989-92). He is the son of Singapore's much celebrated artist Liu Kang. He graduated from the School of Architecture, University of New South Wales, Australia and the Architecture Graduate School, University of Yale, USA. Upon leaving URA, he joined RSP Architects Engineers and Planners (1992-), Singapore's second largest multi-disciplinary practice. He is also the Chairman of the National Arts Council Singapore. He serves as an Adjunct Professor for Lee Kuan Yew School of Public Policy, National University of Singapore. In RSP, Liu has undertaken many master planning works for Chinese cities and was the Head of the Masterplanning Advisory Board for Beijing 2008 Olympics. See, Liu Thai Ker in Singapore Pages (Singapore: National Library of Singapore, 2002) p.584

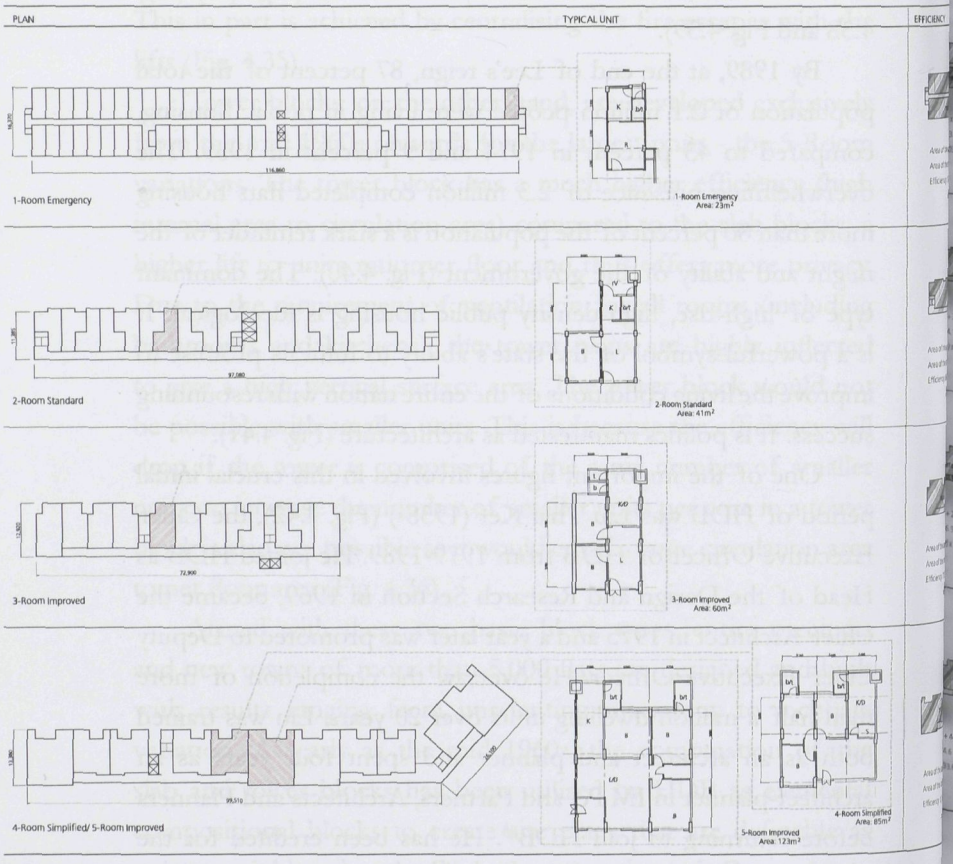
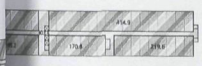
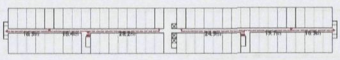
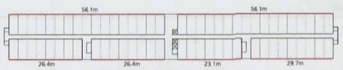
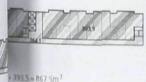
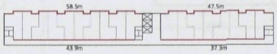
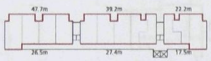
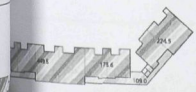
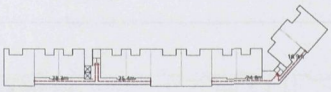
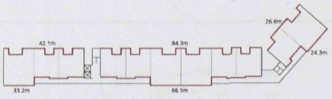


Fig. 4.35 Transformation of slab blocks, 1960s-1980s (drawing by Lee, Christopher, and Lee, Bolam)

	CORE CONFIG. FOR FIRE ESCAPE	VENTILATION
		
	Max. travel distance: 28.2m Number of lifts: 3 Number of staircases: 4 Number of units per floor: 66	Length of wall surface in contact with exterior: 56.1+56.1+29.7+23.1+26.4+26.4 =217.8m Average length per each unit: 217.8m / 66units =3.3m per unit
		
	Max. travel distance: 27.3m Number of lifts: 3 Number of staircases: 3 Number of units per floor: 18	Length of wall surface in contact with exterior: 58.5+47.5+37.3+43.9 =187.2m Average length per each unit: 187.2m / 18units =10.4m per unit
		
	Max. travel distance: 21.7m Number of lifts: 2 Number of staircases: 2 Number of units per floor: 12	Length of wall surface in contact with exterior: 47.7+39.2+22.2+17.5+27.4+26.5 =180.5m Average length per each unit: 180.5m / 12units =15.0m per unit
		
	Max. travel distance: 28.3m Number of lifts: 2 Number of staircases: 2 Number of units per floor: 11	Length of wall surface in contact with exterior: 42.1+84.3+26.6+24.3+66.5+33.2 =277m Average length per each unit: 277m / 11units =25.2m per unit

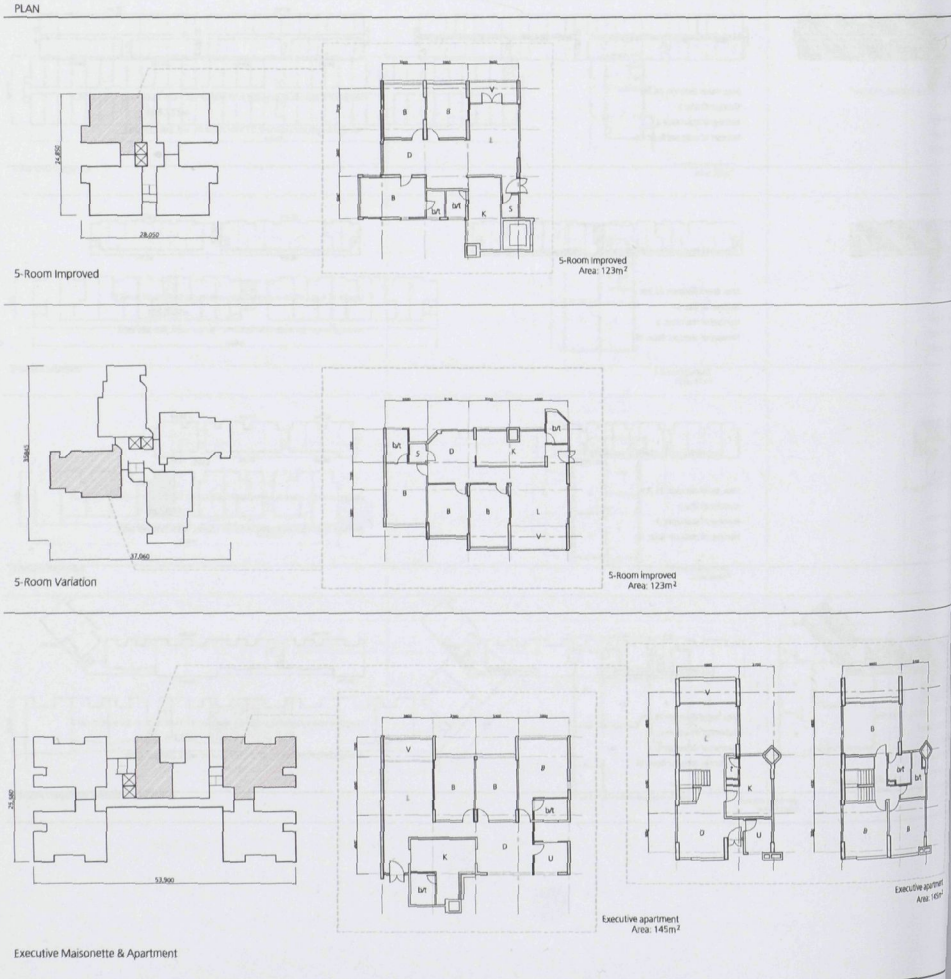
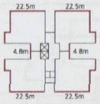
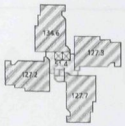
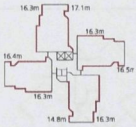
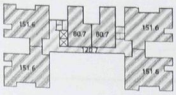
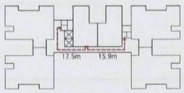
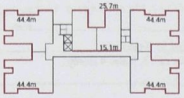


Fig. 4.36 Transformation of tower blocks, 1960s-1980s (drawing by Lee, Christopher, and Lee, Bolam)

EFFICIENCY	CORE CONFIG. FOR FIRE ESCAPE	VENTILATION
		
Area of the apartments: 121.0 x 4 = 484.0m² Area of the common space: 48.8m² Efficiency: 484.0/(484.0+48.8) x 100 **=90.9%**	Max. travel distance: 10.5m Number of lifts: 2 Number of staircases: 1 Number of units per floor: 4	Length of wall surface in contact with exterior: 22.5x4 + 4.8x2 **=99.6m** Average length per each unit: 99.6m / 4units **=24.9m per unit**
		
Area of the apartments: 134.6+127.3+127.7+127.2 = 516.8m² Area of the common space: 51.4m² Efficiency: 516.8/(516.8+51.4) x 100 **=91.0%**	Max. travel distance: 7.5m Number of lifts: 2 Number of staircases: 1 Number of units per floor: 4	Length of wall surface in contact with exterior: 16.3x4 + 17.1+16.5+14.8+16.4 **=130.0m** Average length per each unit: 130.0m / 4units **=32.5m per unit**
		
Area of the apartments: 151.6 x 4 + 80.7 x 2 = 767.8m² Area of the common space: 120.7m² Efficiency: 767.8/(767.8+120.7) x 100 **=86.4%**	Max. travel distance: 17.5m Number of lifts: 2 Number of staircases: 2 Number of units per floor: 6	Length of wall surface in contact with exterior: 44.4x4 + 25.7 + 15.1 **=218.4m** Average length per each unit: 218.4m / 6units **=36.4m per unit**

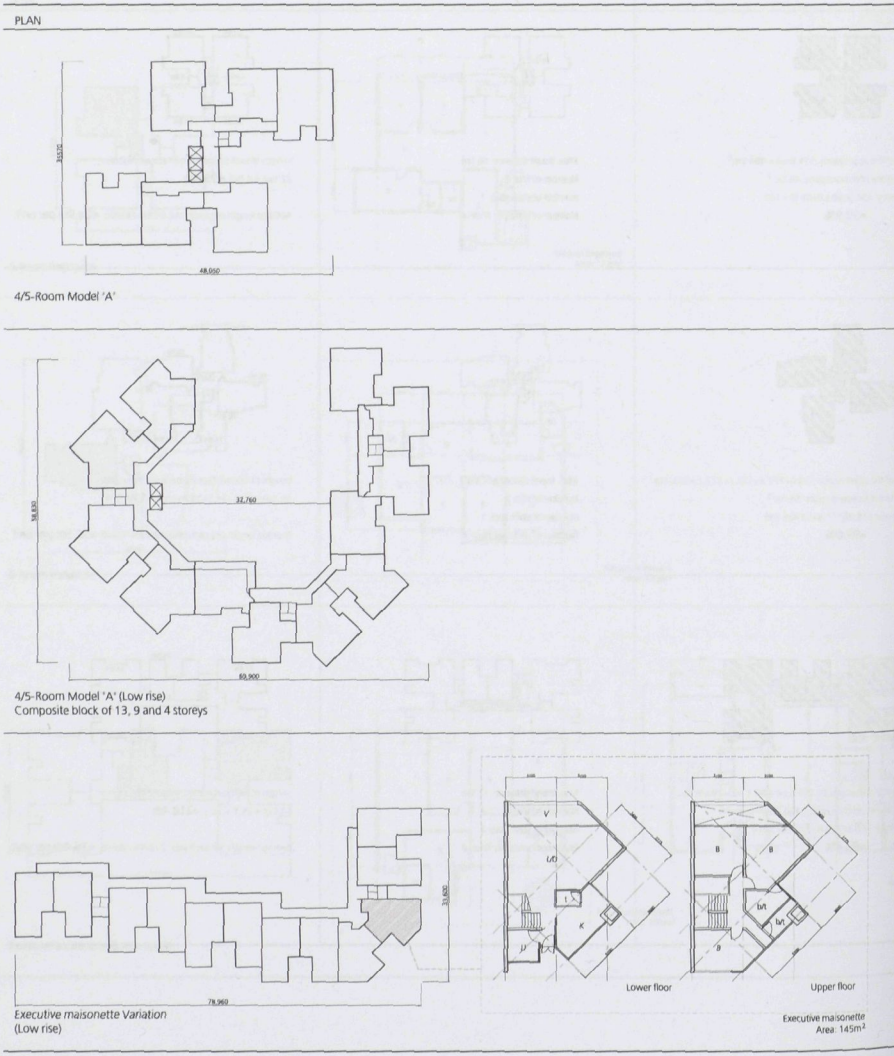


Fig. 4.37 Transformation of 'super-blocks', 1960s-1980s (drawing by Lee, Christopher, and Lee, Bolam)

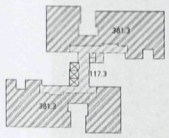
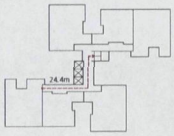
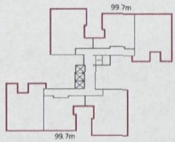
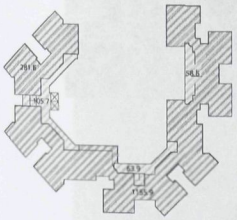
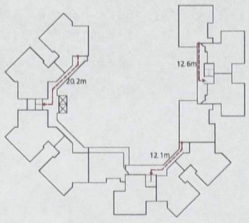
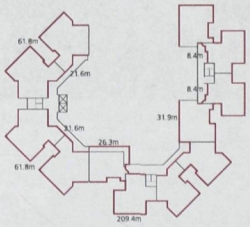
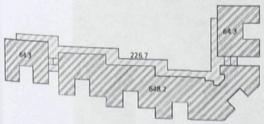
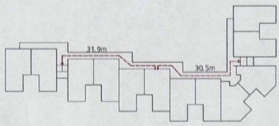
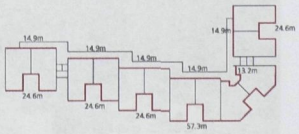
EFFICIENCY	CORE CONFIG. FOR FIRE ESCAPE	VENTILATION
		
Area of the apartments: 381.3 x 2 = 762.6m² Area of the common space:117.3m² Efficiency: 762.6/(762.6+117.3) x 100 **=86.7%**	Max. travel distance: **24.4m** Number of lifts: 3 Number of staircases: 1 Number of units per floor: 6	Length of wall surface in contact with exterior: 99.7 x 2 **=199.4m** Average length per each unit: 199.4m / 6units **=33.2m per unit**
		
Area of the apartments: 281.6+1,155.9 = 1,437.5m² Area of the common space: 105.7+63.9+58.5 = 228.1m² Efficiency: 1,437.5/(1,437.5+228.1) x 100 **=86.3%**	Max. travel distance: **20.2m** Number of lifts: 2 Number of staircases: 3 Number of units per floor: 12	Length of wall surface in contact with exterior: 61.8x2 + 21.6x2 + 26.3+31.9+8.4+8.4+209.4 **=451.2m** Average length per each unit: 451.2m / 12units **=37.6m per unit**
		
Area of the apartments: 64.3x2 + 648.2 = 776.8m² Area of the common space: 226.7m² Efficiency: 776.8/(776.8+226.7) x 100 **=77.4%**	Max. travel distance: **31.9m** Number of lifts: 0 Number of staircases: 2 Number of units per floor: 12	Length of wall surface in contact with exterior: 24.6x4 + 14.9x5 + 57.3 + 13.2 **=99.6m** Average length per each unit: 99.6m / 12units **=20.3m per unit**



Fig 4.38 The use of tower and slab block in Marine Parade (1980s)



Fig 4.39 Tower blocks as space marker and slab blocks as space definer, Bukit Batok (1985)



Fig 4.40 HDB, by 1989: 87 percent of the total population, 2.1 million people live in public housing, compared to 43 percent in 1974 and 9 percent in 1959



Fig 4.41 Lee Kuan Yew, photographed in front of completed flats in Queenstown (1965)



Fig 4.42 Liu Thai Ker (far left) and being interviewed by Rem Koolhaas (right)

The choice to adopt a high-rise, high density strategy for public housing was later accounted for by Liu in 'Design for Better Living Conditions'[39]. He admits that *'At the inception of HDB in 1960, there were virtually no census date or useful design guidelines. But, the need for shelter could not wait. Action, rather than the right answers to all the problems. was urgently required.'*[40] Liu argued for this model based on the need to conserve land and to maximise their potential, in line with government policy *'... HDB has been given the task of achieving as high residential density as possible, within the limits of social acceptability, environmental amenability and economic constraints.'*[41] Carrying out two layout exercises, between high-rise blocks (mix of 12-storey slabs and 24-storey tower blocks) and four storey blocks, Liu concluded that the latter would use up more site area and result in congestion, with no meaningful open spaces. The latter also holds a lower efficiency, that is achieving on average 118 dwelling units per hectare compared to the former with 235.84 dwelling units per hectare[42]. At that time, Singapore was only second to Hong Kong, with the highest density. However, the provision

39 Liu Thai Ker, 'Design for Better Living Conditions', in Yeh, Stephen H.K, (ed,), *Public Housing in Singapore* (Singapore: Singapore University Press for Housing and Development Board, 1975) p.117

40 Ibid., p.115

41 Ibid., p.145

42 One of the main dissenting voices, against the high-rise, high density model is William S.W. Lim (1932-), a former graduate of Architectural Association School of Architecture and the Department of City & Regional Planning, Harvard University. He referred directly to Liu's study and counter-proposed a low-rise high-density model in his article *'A Case for Low-Rise High-Density Living in Singapore'*. He did not offer any worked out scheme for his model, only offering a proposed calculation for a density of 300 ppha - compared with HDB's average of 1,300 ppha - with the assumption that the population of Singapore will stabilise to 4.0 million, based on the trend of decreasing population growth and that there is enough land in Singapore that can be dedicated to housing, at 22.3% of its total land. See Lim, William S.W., *An Alternative Urban Strategy* (Singapore: Eurasia Press, 1980) pp.81-95. Another dissenting voice is Tay Kheng Soon, who in 1975 presented a scheme at a plot ratio of 1.75 with a 4-storey high perimeter block, which was at the same plot ratio as HDB's Toa Payoh new town. His findings were published on the front page in the *Straits Times*. His proposal was brushed aside by HDB. See, *Tay Kheng Soon and SPURS: Activism in the early days of Singapore's History* (1999), <http://www.newsintercom.org/?p=18> (accessed 10 December 2011).

of floor space per person in HDB's dwelling units are more generous, on average, it measures 16.54 sqm for a 4-Room Flat, compared to the Parker-Morris's standard in the UK of 16.0 sqm. In Hong Kong it is 3.25 sqm and in the worst urban slums that the government has cleared, it was 2.07 sqm[43].

In those early years of HDB, Liu contends that '... *high-rise high-density development as concept does not necessary lead to ill effects on the people but that the challenge lies in having a better understanding of the nature of high-rise development and provision of the necessary counter measures to induce a normal way of life.*'[44] However he highlighted that the severance of direct access to open space in high-rise living is a regrettable consequence and he speculates that for the future, this can be remedied '... *by making access balconies to the flats attractive enough to function as playgrounds in the sky.*'[45] This predictive proposition would once again transform the high-rise tower and slab block from 1990 onwards, when Liu takes on the role of Chief Planner and CEO of the Urban Redevelopment Authority[46] (URA) fourteen years later.

6. The Next Lap

After 31 years, as the longest serving Prime Minister in the world, Lee Kuan Yew stepped down in November 1990 in favour of Goh Chok Tong in a smooth and orderly transition. Lee Kuan Yew still played a crucial role in Goh's cabinet in the newly and specially created post of Senior Minister. Marking

43 Liu Thai Ker, 'Design for Better Living Conditions', in Yeh, Stephen H.K, (ed,), *Public Housing in Singapore* (Singapore: Singapore University Press for Housing and Development Board, 1975), p.175

44 Ibid., p.180

45 Ibid., p.181

46 URA is the national urban planning authority of Singapore, a statutory board under the Ministry of National Development Singapore. Set up in 1974, it is tasked to oversee all aspects concerning the nation's masterplan, urban design, development controls and building conservations.

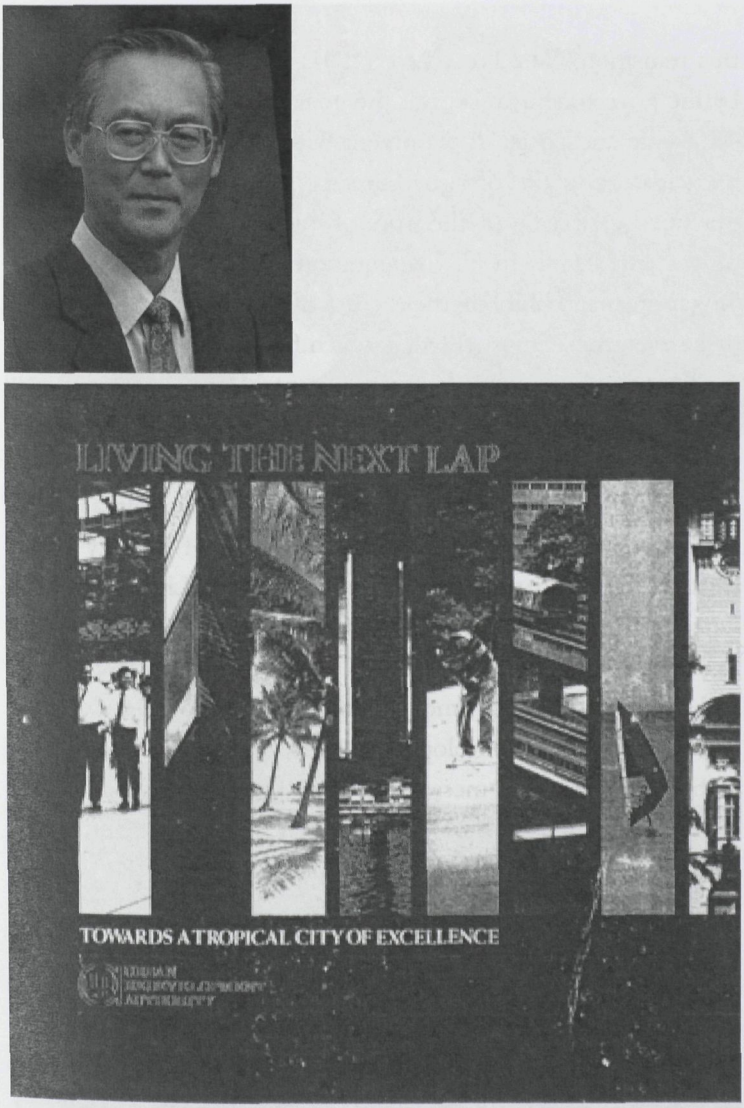


Fig 4.43 Goh Chok Tong, Prime Minister (1990-2004) and 'Living the Next Lap' manifesto

this transition, 'The Next Lap' (1991) (Fig. 4.43) was published by the government to set out the goals for Singapore's physical, economic and social development with Goh promising a more participatory style of government, a departure from past practices, especially in the area of planning and development of the city state.[47] In his inauguration speech[48] Goh compelled Singaporeans to build on the success of Lee's government and to make even more improvement, which from the point of view of the PAP government meant developmental – the city to be shaped again to suit a changing political agenda. Under Goh's reign, the political mood was softer and appealed to the 'good life', marked by the shift from the more utilitarian aspects of urbanization to a more sophisticated and softer 'leisurization' of the city[49]. This shift was accompanied by the publication of 'Living the Next Lap: Towards a Tropical City of Excellence'[50] by the Urban Redevelopment Authority, led by Liu as Chief Executive Officer and Chief Planner, who moved from the Housing Development Board to the Urban Development Authority after 20 years. In line with the government message of the pursuit of the 'good life', the vision set out by the document placed a great emphasis on Singapore's 'tropical islandness' as a natural asset:

> *'Our vision is.. an island with an increased sense of 'island-ness' – more beaches, marinas, resorts, and possibly entertainment parks*

47 Lee, Sim Loo, 'Planning the Built Environment for Now and the 21st Century' in *City & State*, (ed.), Ooi, Giok Ling, and Kwok, Kenson (Singapore: Oxford University Press, 1997), p.13

48 Goh, Chok Tong, *'To Serve, To Keep Singapore Thriving and Growing'*, Speech for the Swearing-In Ceremony of the Prime Minister, Mr. Goh Chok Tong, and his Cabinet in the City Hall Chamber on Wednesday, 28 November 1990, at 8.00pm (Singapore: National Archives of Singapore, 1990)

49 For instance, in July 1989, the government announced a $S15 billion public housing upgrading exercise which was expected to run for two decades benefitting 95% of HDB households. See, Lee, Sim Loo, 'Planning the Built Environment for Now and the 21st Century' in *City & State*, (ed.), Ooi, Giok Ling, and Kwok, Kenson (Singapore: Oxford University Press, 1997), p.21

50 Urban Redevelopment Authority of Singapore, *Living the Next Lap: Towards a Tropical City of Excellence* (Singapore: Shing Lee Publishers, 1991)



Fig 4.44 Marina Bay Singapore, reclaimed land on the right (2001)



Fig 4.45 The greening of HDB estates
(circa 1995)

as well as better access to an attractive coastline and a city that embraces the waterline more closely as a signal of its island heritage. Singapore will be cloaked in greenery, both manicured by man and protected tracts of natural growth and with water bodies woven into the landscape'.[51]

The city and its promised transformation are once again used to conjure a political manifestation in the making. Its stated strategic aims are wide, and range from the massive development of the new downtown - Marina Bay, a 690Ha reclaimed land (Fig. 4.44) – the greening of all public housing estates, developing existing water bodies for housing and leisure to small tactical developmental controls to encourage the greening of buildings (Fig. 4.45).

This drive towards the greening of existing public housing was taken up with enthusiasm and saw the planting of balconies, terraces and common corridors of housing estates (Fig. 4.46 and Fig. 4.47). To further ensure that future housing projects, both private and public fall in line with this green agenda, a new developmental control was introduced by URA. In Singapore, Development Control Parameters are used by all architects and developers to meet planning requirements towards obtaining planning approval for development in Singapore. Developmental envelopes are controlled by parameters of plot ratios, set-backs, ground coverage and height control. Therefore there is a maximum permissible gross floor area for every site (GFA). To encourage green spaces in high-rises, the new development control stipulates that any balconies or terraces that are 'open to the sky' will be exempt from the maximum permissible GFA. Areas that are considered open to sky are areas derived from a vertical projection of 45 degrees from the top edge

51 Urban Redevelopment Authority of Singapore, *Living the Next Lap: Towards a Tropical City of Excellence* (Singapore: Shing Lee Publishers, 1991), p. 4



Fig 4.46 Small garden in HDB estates



Fig 4.47 Roof gardens on car park blocks in HDB estate

of an opening to the floor, also known as 'shadow area' (Fig. 4.48). This in principle defines an open terrace or balcony that are nevertheless shaded and thus can be used for planting and as outdoor space. Thus, this small change in the rules enabled and encouraged developers to build above the permissible GFA limit and thus increase their net-saleable area. Besides balconies and terraces, other elements that promote the tropical garden agenda were also included in this exemption of GFA: pavilions, perforated structures, private enclosed spaces, roof eaves and sun shading devices, roof terraces, ornamental ponds and reflective pools. Within a decade, the design of high-rise residential blocks in Singapore is overwhelmingly driven by the language of resort and leisure, where every tower is studded by over-sized balconies and terraces (Fig. 4.49), common areas are heavily landscaped and the provision of a swimming pool and club house with a gym is mandatory (Fig. 4.50). This is, in fact, an intended outcome of Liu's planning strategies. In his article *'Towards a Tropical City of Excellence'*, he wrote: *'A combination of vision and planning skills can bring the city closer to being a vast tropical resort. Life in the city streets need not be incompatible with the serious business activities taking place inside the city's buildings.'*[52] Moreover, Liu's proposition for vertical open spaces in high-rise blocks fourteen years earlier whilst in HDB has been realised alongside his plans, with full state backing, to make Singapore an *'Asian City, Tropical Island'*[53]. Here, the dominant type

52 Liu, Thai Ker, 'Towards a Tropical City of Excellence' in Ooi, Giok Ling, and Kwok, Kenson (ed.), *City & State* (Singapore: Oxford University Press, 1997), p.40

53 In an unpublished transcript of a presentation presented by Liu at the 1991 Eastern Regional Conference of International Federation of Landscape Architects, he outlined his vision for 'Asian City, Tropical Island': *'All our efforts are marked by the desire to balance development with nature. We want to guide the bulldozers to the right places. In a tiny place like Singapore, not only do we have to stridently conserve nature and creatively select and utilise new recreational areas, we also need to create the illusion of having more green than we really have through careful juxtaposition within the city. (...) There has been keen support at the highest level for a clean and green city. Our Senior Minister Lee Kuan Yew initiated the tree planting campaign in 1963 in his early years as Prime Minister. This symbolic gesture was only the tip of an iceberg. His personal efforts towards and attention to the greening of Singapore have been considerable. Our Prime Minister Goh Chok Tong at last year's tree planting day ushered in a new era by rechristening the event Clean and Green Week. (...) Support permeates down from the Ministers throughout the entire civil*

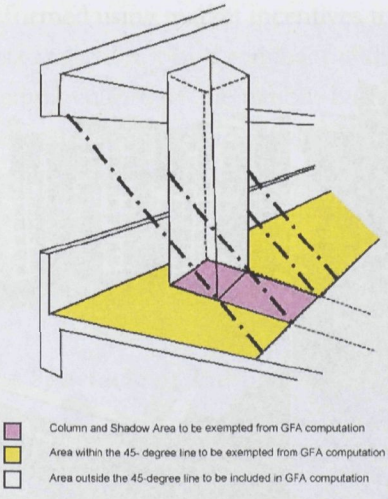


Fig 4.48 URA Development Control: Shadow area as free GFA



Fig 4.49 WoHa, Newton Suites (2007): oversized balconies as 'hanging gardens'.



Fig 4.50 The leisurization of housing, private condominiums with resort facilities (circa 2005)



Fig 4.51 Lee Hsien Loong, Prime Minister (2004 – present) in 2005 National Day Rally Speech

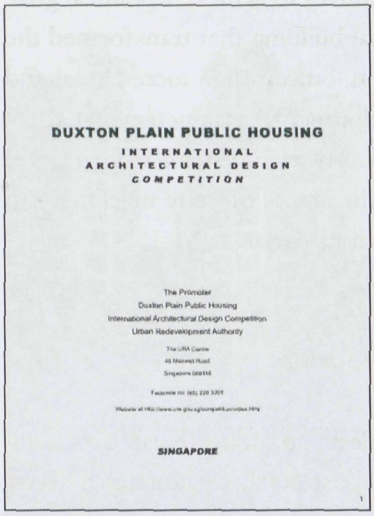
is transformed using market incentives to achieve a political goal. This was realised not by a seminal building that transformed the architectural culture of the nation, but through incremental and small tactical adjustments to developmental parameters that affect the deep structure of the dominant type, and stems from a larger vision and political agenda and the ability of state machinery to implement a whole vision through its parts.

7. The Spectacle of Public Housing

Lee Hsien Loong (1952-), the eldest son of Lee Kuan Yew, took over the reigns from Goh in August 2004. Customary by now, inauguration and rally speeches involves the next phase in the total design of the city (Fig. 4.51). This time it involves the idea of the city as a spectacle:

> *'To remake the economy and attract talent, we have also got to remake our city. This has to be a city which is full of life and energy and excitement, a place where people want to live, work and play, where they are stimulated to be active, to be creative and to enjoy life... Every major city in the world is inventing itself and reinventing itself. New York is the Big Apple, but World Trade Centre has collapsed, it has become Ground Zero. They are rebuilding the World Trade Centre, seven new iconic buildings, bringing the life and activity back to that part of Manhattan. And this is what it will look like with the tallest building called the Freedom Tower... Dubai, building the tallest building in the world, 700metres tall.*

service structure'. See Liu, Thai Ker, Landscaping Singapore, 1991 Eastern Regional Conference of International Federation of Landscape Architects (Singapore: URA Library Presentation Papers, 1991)



DUXTON PLAIN PUBLIC HOUSING

INTERNATIONAL
ARCHITECTURAL DESIGN
COMPETITION

The Promoter
Duxton Plain Public Housing
International Architectural Design Competition
Urban Redevelopment Authority

The URA Centre
45 Maxwell Road
Singapore 069118

Facsimile no: (65) 228 3301

Website at http://www.ura.gov.sg/competitions/index.html

SINGAPORE

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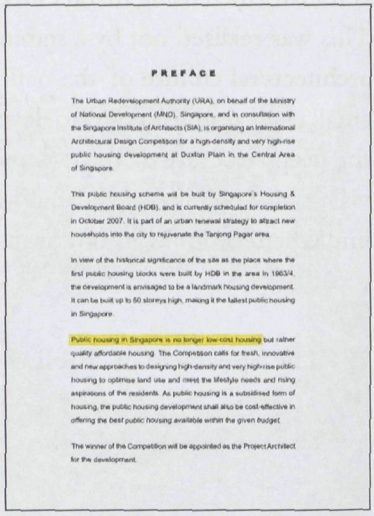
Fig 4.52 URA's Duxton Plain Public Housing International Architectural Design Competition (2000)



PREFACE

The Urban Redevelopment Authority (URA), on behalf of the Ministry of National Development (MND), Singapore, and in consultation with the Singapore Institute of Architects (SIA), is organising an International Architectural Design Competition for a high-density and very high-rise public housing development at Duxton Plain in the Central Area of Singapore.

This public housing scheme will be built by Singapore's Housing & Development Board (HDB), and is currently scheduled for completion in October 2007. It is part of an urban renewal strategy to attract new households into the city to rejuvenate the Tanjong Pagar area.

In view of the historical significance of the site as the place where the first public housing blocks were built by HDB in the area in 1963/4, the development is envisaged to be a landmark housing development. It can be built up to 50 storeys high, making it the tallest public housing in Singapore.

Public housing in Singapore is no longer low-cost housing but rather quality affordable housing. The Competition calls for fresh, innovative and new approaches to designing high-density and very high-rise public housing to optimise land use and meet the lifestyle needs and rising aspirations of the residents. As public housing is a subsidised form of housing, the public housing development shall also be cost-effective in offering the best public housing available within the given budget.

The winner of the Competition will be appointed as the Project Architect for the development.

Fig 4.53 'Public housing in Singapore is no longer low-cost housing': URA's Duxton Plain Public Housing International Architectural Design Competition (2000)



Fig 4.54 Duxton Plain, competition site (2000)

We will start with the HDB estates because this is where our people live and where we want to keep the living environment first-class and up-to-date. We are building new flats, 40-storey flats with million dollar views which people have moved in, very happy, new population. [54]

In 2001, an international competition was launched for the design of the tallest public housing project in Singapore and the world (Fig. 4.52). Initiated by no other than Senior Minister Lee Kuan Yew himself, the international competition organized by URA attracted 448 entries and was eventually won by a young local practice, Arc Studio led by Khoo Peng Beng (1968-) and Belinda Huang (1969-).

The competition brief stressed that public housing is no longer low-cost housing but rather quality affordable housing. This illustrates once again, HDB's task in managing the expectations and aspirations of an entire nation, now with 85 percent of the population living in public housing (Fig. 4.53) As the state's apparatus that works to continually legitimize its political hegemony through the programmes associated with a developmental city state, HDB must continually improve upon the provision of public housing. Now, with the quality of public housing already at a high standard, the next level of attainment had to be spectacular.

The competition site is symbolic, unlike all the new towns that were built on virgin land. Here, the first public housing blocks were built by HDB in the 1963/4 and in place of the now perceived inferior quality public housing, will see the erection of a landmark housing development, 50 storeys high, making it the tallest public housing in Singapore and the world. The site is also

54 Hsien Loong, Lee, in Transcript of Prime Minister Lee Hsien Loong's speech at the National Day Rally 2005 on 21 August 2005, at the University Cultural Centre, National University of Singapore, Prime Minister's Office Singapore.



Fig 4.55 ARC Studio, winning proposal for Duxton Plain Public Housing International Architectural Design Competition (2000)



Fig 4.56 ARC Studio, The Pinnacle, nearing completion (2009)

chosen for its deep social and political meaning; it is immediately adjacent to Tanjong Pagar Community Centre, the political spiritual home for Lee Kuan Yew since 1955. It is seen as the perfect site in staging the next challenge for HDB and the state in its administrative abilities to improve the living standards for the nation further (Fig. 4.54). For URA and HDB, The project is also seen as an experiment in super high-rise high-density public housing in the central area and will provide 1,800 new homes. The proposed plot ratio will be 8.4 compared to the standard plot ratio of 2.8 for most HDB housing.

The winning proposal, completed in 2011, consist of a string of 48-storey tower blocks (Fig. 4.55), according to Khoo[55], designed from the outset for maximum efficiency (following the norms that HDB has perfected over the years) and composed in such a way to maximize views and creating maximum distance between block; in advertently, the linked tower results in a continuous slab block of almost 300m long (Fig. 4.56). The most crucial and audacious element in the scheme was the introduction of two four hundred metres long roof garden – one on the 26th floor and another on the roof. The accidental transformation of the 40 year old common corridor of the slab block into verdure in the sky in one gesture encapsulates the states obsession with the idea of *'The Tropical City of Excellence'* and the new found affection to all buildings iconic and spectacular; which now includes public housing.

The anonymous open international competition, judged by Fumihiko Maki and Mohse Safdie, attracted many high profile architects from all over the world, including Zaha Hadid, Will Alsop and Norman Foster and it was won by a young local architectural practice. What sets the proposal apart from the other

55 Transcript of a Presentation by the ARC Studio Architecture & Urbanism, at URA Centre, 7 May 2002.

failed proposals was that Khoo and his team[56] had an intimate knowledge of the deep structures that governs this dominant type and evolved and transformed them to embody the political project of the state.

The success and failure of public housing depends considerably on its policies. Although the focus of this thesis is not on housing policies, a brief account of Singapore' approach should still be made to contextualise the dominant types in question. Chua in his *'Political Legitimacy and Housing: Stakeholding in Singapore'* has argued that Singapore's public housing programme has been successful because it combined the strategies of decommodification with a limited role of the market. Unlike in the US, the provision of public housing is dictated by the market, where rent subsidies became profits for landlords or with socialist system in Europe, where the absence of returns on capital resulted in stoppage of public-housing construction. In the former, it failed '*... because of the high cost of land and production due to profit maximization by all actors involved in the market-based economic organization of housing activities and restrictive allocation, which leads to concentration of the lowest-income groups, thus creating serious financial difficulties for local housing authorities.*[57] In the socialist states like Hungary and Poland, the total decommodification, its universal provision as a basic right for every citizen and the very marginal rent derived from it, made housing provision a great drain on the national economy and was further exacerbated with the expected new construction for every new citizen.

Besides the absence of uncontrollable rural-urban migration, Chua argued that in Singapore's case, there were five crucial features that ensured its success. The first is the PAP government's

56 Both Khoo and Huang worked in RSP Architects, Planners and Engineers prior to setting up their own practice, with Khoo working extensively on housing projects under the team headed by Liu Thai Ker.

57 Chua, Beng Huat, *Political Legitimacy and Housing* (London: Routledge, 1997), p.17

commitment to universal housing provision. The eligibility income ceiling for lease ownership is reviewed periodically in step with economic growth, which will include 90 percent of households in the country. He argues that *'This commitment is, in part, ideologically motivated by the PAP's belief that home ownership, in giving the people a greater stake in the nation, will induce in them a greater measure of nationalism. However, unlike in the socialist system, this belief does not extend to regarding the level of housing as a natural entitlement or right.* [58] As such HDB operates like any private developer, sensitive to demands of buyers and making its operations economically viable. The second is the decommodification of public housing, made possible by 1966 Land Acquisition Act which enabled the state to build at a significantly lower cost as land is completely owed by the state. And because 90 percent of existing household is eligible for public housing, HDB is virtually the monopolistic provider of housing for the nation, thus enabling it to set the level of housing prices in line with the general state of country's economy. The third involves the equitable distribution of subsidies, where lower-income groups have access to higher subsidies compared to higher-income groups. This is also reflected in the flat sizes that HDB provides, from 3-Room to 5-Room flats. Fourth, the financial resources needed by the government for public-housing construction comes from the state-managed, employee's compulsory social security savings fund, the Central Provident Fund (CPF). *The 'availability of this CPF makes possible a closed circuit of housing funding and consumption, which does not compete with capital demands in other sectors of the economy.* [59] Residents can pay 20 percent down payment for a HDB flat with their accumulated CPF and monthly mortgage payment deducted from monthly savings, thus allowing a family to own a flat without suffering a reduction in disposable income. HDB inadvertently, is the largest mortgagee

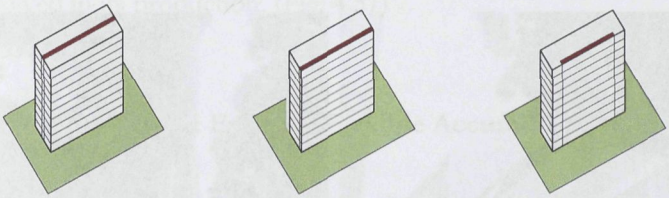
58 Chua, Beng Huat, *Political Legitimacy and Housing* (London: Routledge, 1997), p.20

59 Ibid., p.22

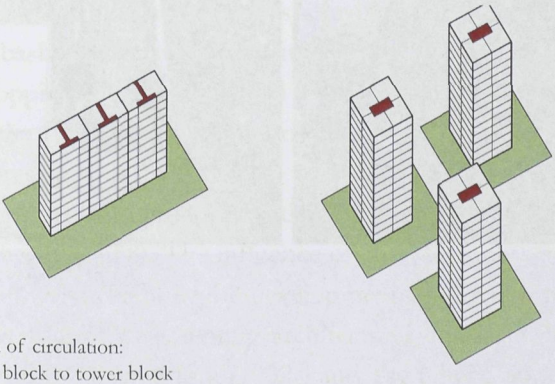
in the nation. This final feature ensures that housing consumption is *'tied exclusively to the ability to pay. The type of flat rented or purchased is dependent entirely on what the household itself can afford, no other measure is considered.*'[60] Public housing is also a good investment as it can be sold in the open market after five years for those eligible to buy. The vendor is entitled to keep the capital gains, tax free, and in return permitted to apply for a new upgraded HDB flat, with the maximum number of up-grades limited to one. This, according to Chua, shows that universal housing provision and a capitalist economy are not incompatible and is in fact a key to its success.

As a developmental state, universal housing provision is one of PAP most important claim on its political legitimacy. Its ability to house more than 85 percent of its population in relatively high standard of living condition furthers entrenches the acceptance of its political programme. With more than 600,000 completed dwelling units in by mid 1980s, HDB's high-rise high density housing, the dominant type of the tower and slab block, stands as symbolic monuments to the governments efficacy. The success of the developmental state also necessitates it to continually produce tangible progress, where the continuous improvements and upgrading of housing provision transforms the very dominant type that is discussed here. Thus the continuous reinvention and improvement of the dominant type is quintessential to the political project of any succeeding Prime Minister. In the case of the dominant type of the tower and slab block, its instrumentality and pliability lay in its generic character, reduced to its deep structure at the point of inception. This allowed it a generative potential that is specific enough to articulate specific architectural and planning goals and yet general enough for further transformation. Crucially, the dominant figures forth the idea of the city as a developmental city state and is used as a diagnostic and prognostic device for all those

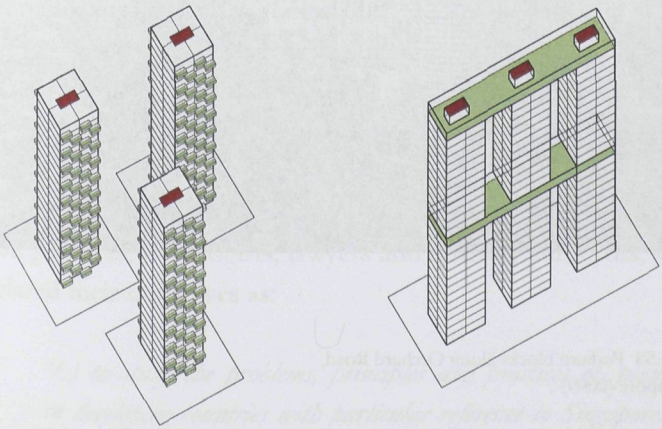
60 Chua, Beng Huat, *Political Legitimacy and Housing* (London: Routledge, 1997), p.24



Evolution of circulation spine with increasing unit sizes



Evolution of circulation:
from slab block to tower block



Evolution of balconies to landscape decks:
from free standing towers to linked towers

Fig 4.57 The transformation of dominant type of high-rise, high-density housing type in Singapore (1960s-2010s)

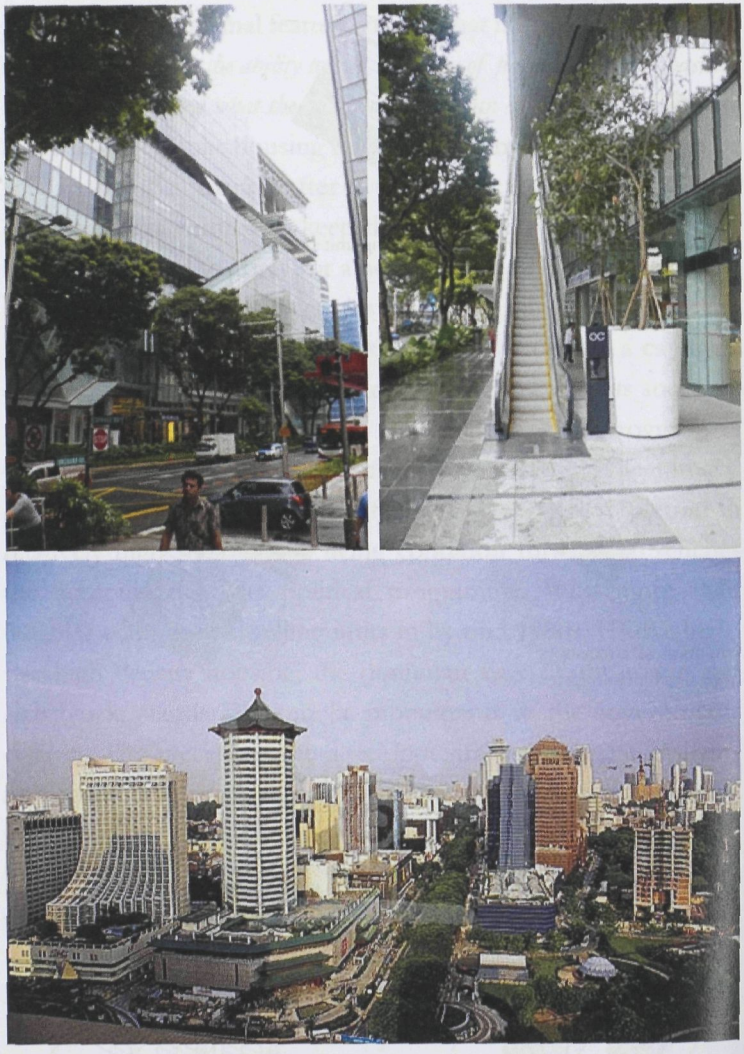


Fig 4.58 Podium blocks along Orchard Road, Singapore (2009)

involved in its production. (Fig. 4.57)

8. Podium Block: Framing Flexible Accumulation

The second dominant type - the podium - is unique to Asia and is different to its Northern American counterpart as it is usually much bigger, containing an atrium within and acting as a large base for several high-rise blocks above. It is more of a product of unabashed confrontation with the problem of high density and shopping in Asia. In parallel to the development of the high-rise in the 1960s, the podium block developed in response to the same pressures of high density and the hot and humid climate of Singapore but predominantly to serve the programme of shopping (Fig. 4.58). The influence of the Metabolist movement of Japan was evident in the development of the dominant type of the podium by dissenting architectural voices in Singapore, chiefly led by William Lim (1932-) and Tay Kheng Soon (1940-), (Fig. 4.59) who were shut out of the public housing project by the state. The state felt that these architects' views were in the way of their urgent direct action and that their criticism of the government's developmental programme would jeopardise the confidence needed for foreign investments[61].

Both Lim and Tay were founding members of the Singapore Planning and Urban Research Group (SPUR), an independent multi-disciplinary group of architects, economists, geographers, town planners, sociologists, lawyers and quantity surveyors, who declared their objectives as:

> *'1.) to study the problems, principles and practices of planning in developing countries with particular reference to Singapore. 2.)*

61 See, *Tay Kheng Soon and SPURS: Activism in the early days of Singapore's History* (1999), <http://www.newsintercom.org/?p=18> (accessed 10 December 2011).



Fig 4.59 William Lim S.W. (1932-) (left) and Tay Kheng Soon (1940-)

> *to develop, through team work, an approach to and conceptual framework of the planning process and planning strategy. 3.) to advance and promote the art and science of planning and the work of the Group through research, publication, discussion and participation with allied organizations, professions, and government authorities on matters of mutual planning interest.* [62]

Although most of SPUR's proposals were either ignored or rejected by the government, two of them were co-opted, namely the proposals to locate the new international airport to Changi rather than in Paya Lebar, which was deemed too close to populated areas; and the proposal for a mass rapid transport system[63]. The members of SPUR, like the state, shared the sense of urgency in finding answers to the problems of urbanization and nation building, but with opposing views as to the best course of action.

The influence of the Metabolists on the subsequent works of Lim and Tay was born out of this sense of urgency, isolation and impotence. Lim joined an international group of young architects to form an Asian platform to discuss matters of design and theories of urbanism. The result was the formation of The Asian Planning and Architectural Collaboration (APAC), which included among others, Fumihiko Maki (Japan), Tao Ho (Hong Kong), Charles Correa (India), Koichi Nagashima (Japan), Sumet Jumsai (Thailand) and Lim (Singapore). Lim attributed the influence of Metabolism to this group and his travels to Tokyo,

> *'... I was strongly convinced of the dire need for new design directions beyond the sterility and rigidity of modernism. This conviction was strengthened by a visit to Tokyo in the early seventies where*

62 Singapore Planning and Urban Research Group, *SPUR 65-67* (Singapore: SPUR, 1967)

63 Tay, recounted that his activities in SPUR and his alternative ideas agitated the government to the point where his professional life became unte7.5

I witnessed many avant-garde projects in the post-Metabolist style. Many projects that I carried out during the next few years, including the Yeo Hiap Seng Factory (1981) and Unit 8 Apartments (1983) were experiments in breaking rules of Modernism. [64]

Metabolism was part of the larger Megastructures movement in the 1960s. Reyner Banham in his *'Megastructures: Urban Futures of the Recent Past'* outlined the two main considerations that qualify large buildings as megastructures, for not all large buildings are necessarily one. They should consist of a massive monumental supporting frame, in which various arrangements of habitable units beyond the control of the architect are aggregated[65]. Maki would define it as *'a large frame in which all the functions of a city or part of a city are housed. It has been made possible by present day technology. In a sense it is a man-made feature of the landscape. It is like the great hill on which Italian towns were built...* [66], and Ralph Wilcoxon focusing more on the structural instrumentality, argues that the megastructure is not only a structure of great size, but also a structure which is frequently constructed of modular units, capable of great or even 'unlimited' extension, a structural framework into which smaller structural units (for example, rooms, houses, or small buildings of other sorts) can be built – or even 'plugged-in' or 'clipped-on' after having been prefabricated elsewhere, and is a structural framework expected to have a useful life far beyond that of the smaller units which it might support[67].

The context in which this movement arose, in the 1960s, was the period that saw modernism's ambition and arguments to design the total environment as completely 'dead', if not

64 Lim, William S.W., 'Architecture, Art, Identity in Singapore: Is there Life After Tabula Rasa?', in *Constructing Identity in Contemporary Architecture: Case Studies from the South* (ed.), Herrle, Peter and Schmitz, Stephanus (New Brunswick: Transaction Publisher, 2009), p.257-260

65 Banham, Reyner, *Megastructure: Urban Futures of the Recent Past* (New York: Harper & Row, 1976), p.8

66 Ibid.

67 Ibid.

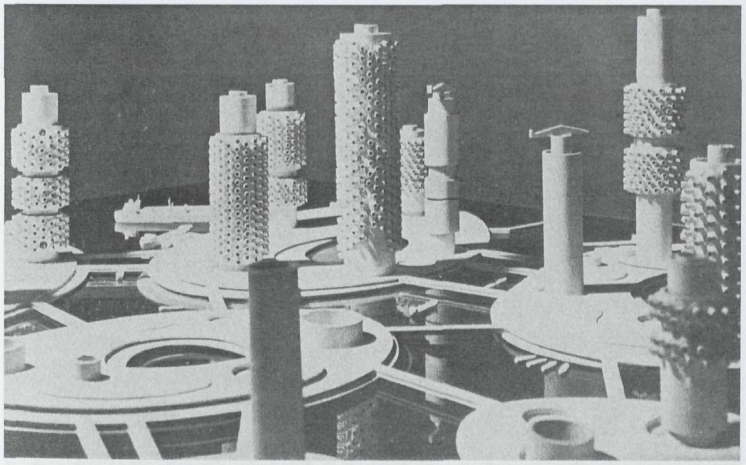


Fig 4.60 Kiyonoru Kikutake's Ocean City Project (1962)

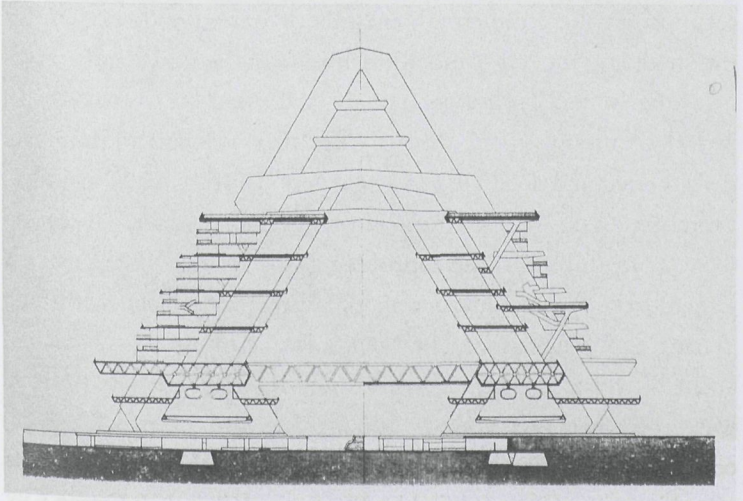


Fig 4.61 Kenzo Tange & MIT students, Boston Harbour Project (1959), A-frame section

culturally thin as any other perfect machine. Maki's repetition and agglomeration of standardized folk-building elements, rhymed with the call for 'spontaneity' as early as the CIAM meeting of 1951. Banham argued that many Megastructuralists saw their projects as *'urban structures of the future'*. The ambition is that the architect designs the main structure and self-organization takes place. In reality, like Mohse Safdie's Habitat (1967), it is a monument to the image of accretion rather than self-built by the community; and in many similar instances, the megastructure is an excuse for formalism on a epic scale. The criticism is always assured because the megastructures were so difficult and took so long to build. Nevertheless, they dominated architectural culture for more than a decade because they gave a bearing to the incomprehensible problem of the expanding city, offering a response to the conflicting demands of design and spontaneity, the small and the large, the permanent and the transient[68].

The Metabolist movement in Japan, led by Kenzo Tange, included among others, three figures that went on to dominate the architectural scene for the next few decades. They included, Fumihiko Maki, Kisho Kurokawa and Arata Isozaki. The group were confronting similar problems to their counterparts in Singapore - the reconstruction of Asian cities faced with high density and congestion. The Metabolist manifesto was launched at the World Design Conference in Tokyo in 1960. The projects were influenced by a new monumental and excessive use of concrete, Corbusian in its origin but unmistakably Japanese in its visual impact, as exemplified by Kiyonoru Kikutake's Ocean City Project (1962) (Fig. 4.60). In this project, towers formed trees standing on floating islands, where individual dwellings come and go like seasonal leaves, each according to the natural time-scale of its own 'metabolism'. Banham would later critique that the

68 Banham, Reyner, *Megastructure: Urban Futures of the Recent Past* (New York: Harper & Row, 1976), p.10

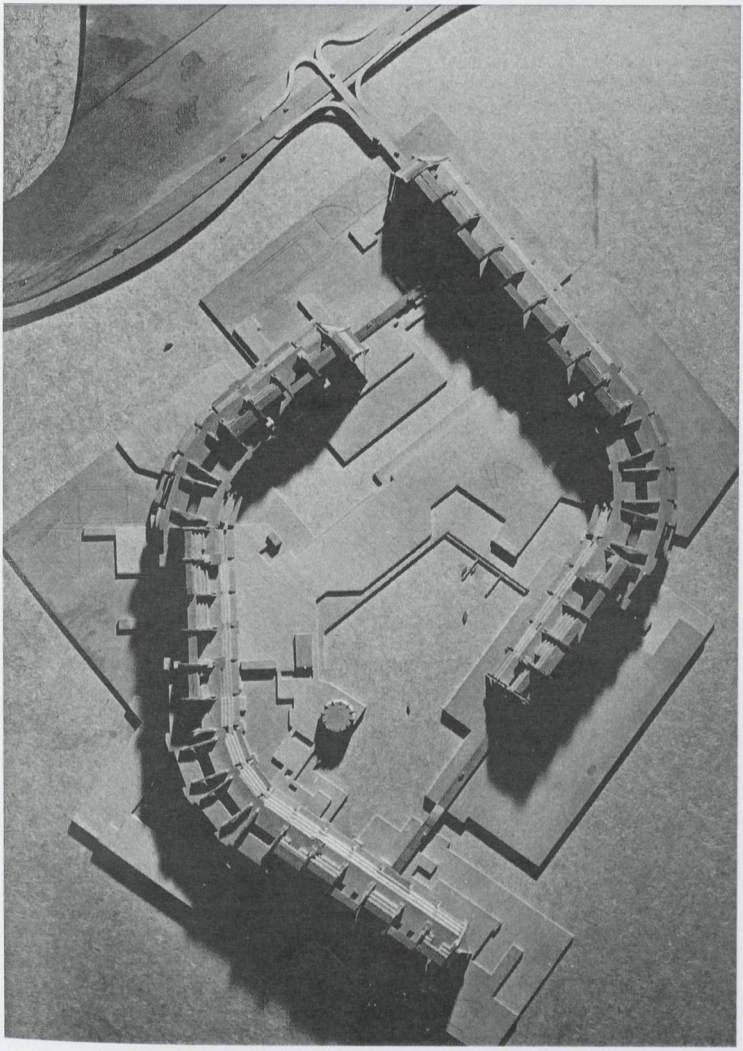


Fig 4.62 Kenzo Tange & MIT students, Boston Harbour Project (1959)

correlation between Mies and Japanese simplicity had been taken over by the opposite: large, bulky, irregular and brutalist. The 1960 conference was preceded by Tange's own declaration on megastructures, using his Tokyo Bay proposal at CIAM 1959,

> *'Tokyo is expanding but there is no more land so we shall have to expand into the sea ... Every day people come into the centre of the city, and must then return in the evening to their homes outside the city. For the average man the time required for this trip is an hour. In this project the architect is thinking of the future of the city. He has divided it into two elements, one permanent and one temporary. The structural element is thought of as a tree – a permanent element, with the dwelling units as leaves – temporary elements which fall down and are renewed according to the needs of the moment. The buildings can grow within this structure and die and grow again – but structure remains.'*

Thus Tange put forward two basic propositions: that artificial land must be created in overcrowded cities and second, different building elements have different natural rates of metabolic change. Tange's (and his MIT students') Boston Harbour Project (1959) (Fig. 4.61 and Fig. 4.62) is accepted as the first Metabolist project. It was based on a detailed study and drawings that lend it a semblance of buildability. Tange himself was well established at that time and MIT was a place where these ideas were fervently discussed. The project embodied all the points of the Metabolists. The use of the A-frame spine was not the first – Gropius used it in Wohnberg (1928) and Sant'Elia, in Milan Central Station (1914). The Boston Harbour Project was followed by the Tokyo Bay project of 1960 (Fig. 4.63). Banham cites this project as the movement's masterpiece[69]. It was an extendible linear

69 For Banham, Tange's Tokyo Bay simply raised the scale of the megastructure argument to a level of monumental vastness from which it could not get down again. And after Tokyo

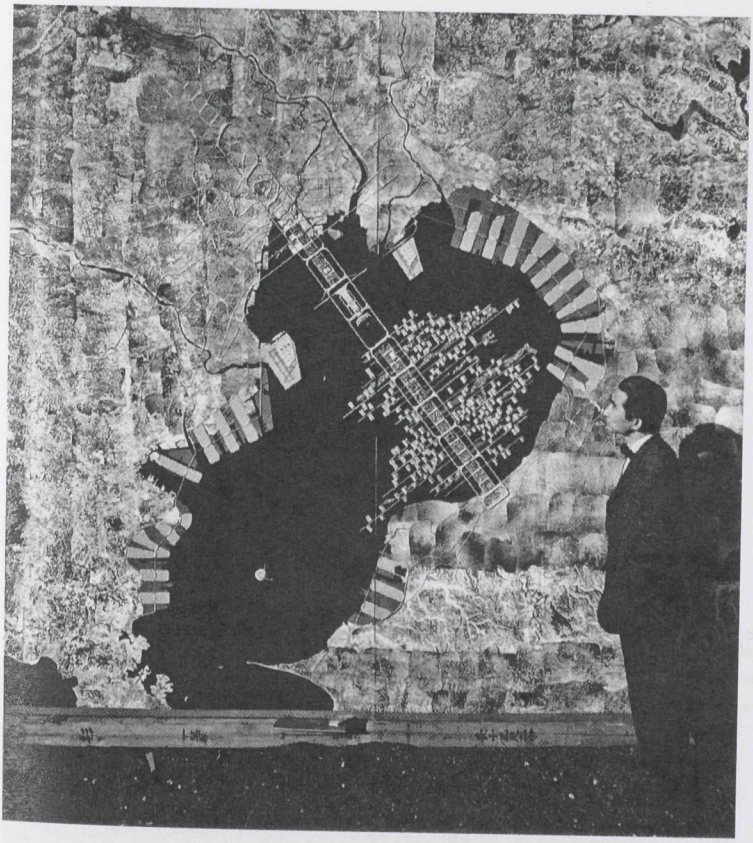


Fig 4.63 Lin, Zhongjie, The Myth of Tokyo Bay, in Kenzo Tange and the Metabolist Movement, *Urban Utopias of Modern Japan* (New York: Routledge, 2010), p.145

scheme unlike Boston, with irregular extensions and straddles across Tokyo Bay. The idea of using the water came not from Tange but from Kyuro Kano, president of the Japan Housing Corporation, who suggested the filling in of some 80,000 Ha of the northern part of the bay, an idea that triggered not only Tange's but Kikutake's proposal. The main spine consists of freeway loops, some inland, some straddling, some completely in the water; within the spine are civic buildings and places for work and commerce. Perpendicular to this spine are housing blocks, designed like the Boston Harbour project, but the A-frame of the Tokyo Bay project was curved, giving it a tent-like sheltering effect (Fig. 4.64 and Fig. 4.65). All parts were envisioned to have their own rates of growth and thus act autonomously but in cohesion with the other parts.

Fumihiko Maki's *'Investigations in Collective Form'*[70] can be seen as a reaction to the monumentality and impracticability of Tange's Tokyo Bay project, and the aesthetic detachments of the projects of late modernism from the problems of the city. In the introduction, Maki states that, *'What is needed is not just observations and critical comments, but utilization of the observation to develop strategic tools in making our physical environment.'*[71] This sentiment for doing, being operative and not only critical, resonated with the climate of urgency in the transformation of the city for Lim and Tay[72]. Maki goes on to state the conditions that his investigations

Bay, no one in Japan managed to match this formal vision and inventive capacity. Even with Tange, the sense of authority over the design was not repeated again; the only realised project was Yamanashi Communications Centre, Kofu, which was in the end a closed structure, not extendible but retaining the formal appearance of being so.

70 Maki, Fumihiko, *Investigations in Collective Form*, (St. Louis: Washington University, 1964)

71 Ibid.

72 Tay's account of the over-riding sentiment of SPUR as, *'... the attitude was a can do attitude, dare to do, dare to say, dare to think. That was the whole thing. That was in sharp contrast to the kind of disciplining process that was going on in Singapore, nation building under PAP rule.'* See, Tay, Kheng Soon and Bay, Philip, *Tay Kheng Soon and SPURS: Activism in the early days of Singapore's History* (1999), <http://www.newsintercom.org/?p=18> (accessed 10 December 2011)

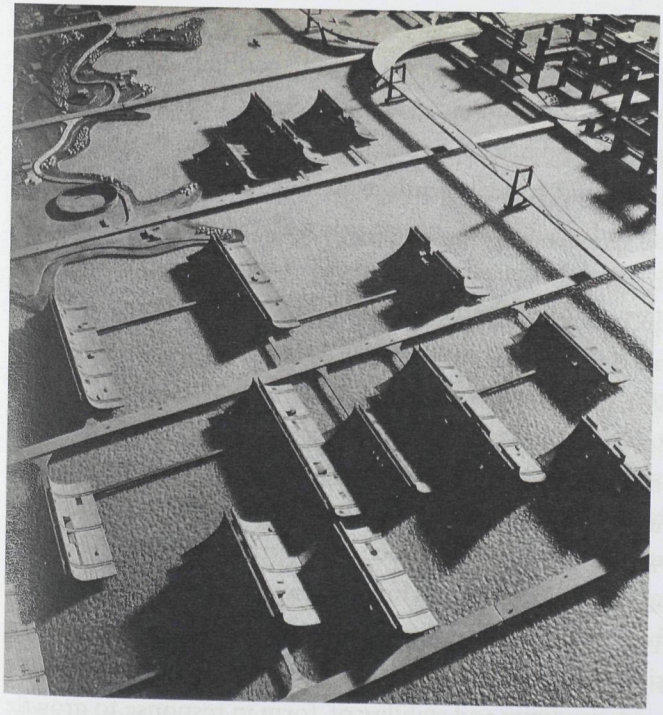


Fig 4.64 Kenzo Tange, Tokyo Bay Project (1960), curved A-frame housing components

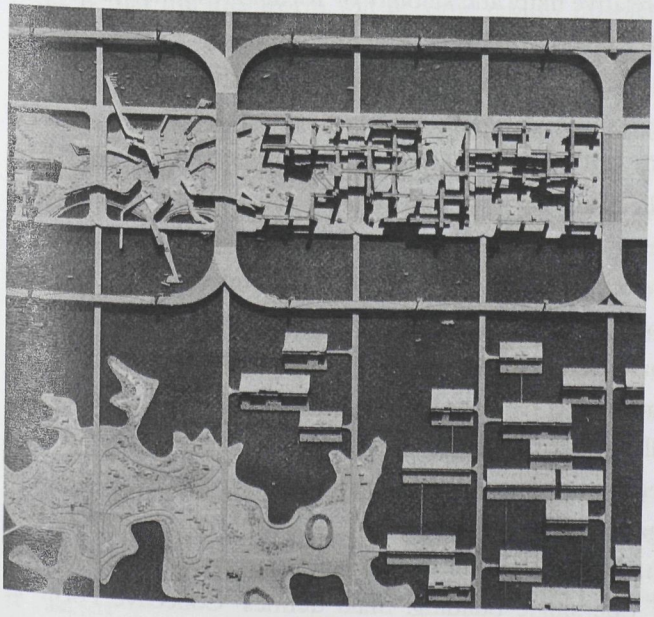


Fig 4.65 Kenzo Tange, Tokyo Bay Project (1960), linear transportation structure and housing below

are addressing: (1) coexistence and conflict of amazingly heterogeneous institutions and individuals; (2) unprecedented rapid and extensive transformation in the physical structure of society; (3) rapid communications method and (4) technological progress and its impact upon regional cultures. Importantly, Maki is setting himself apart from Tange's Tokyo Bay and the unitary plan of the city of architectural modernism, in his explicit recognition of and the call to address and embrace the heterogeneous conditions that are transforming society.

To deal with these conditions, Maki introduces the notion of 'master programme' to oppose that of the masterplan and, crucially, the dimension of time and the multiple stake holders who are involved in the process of urbanization. Thus two important ideas are proposed here that set the 'master programme' apart from the ideas of its predecessors (chiefly CIAM and Le Corbusier): that is the rejection of the single authoritative figure and the relative fixity and stability of form in response to growth. With HDB subscribing to the principles of CIAM and Le Corbusier's ideas for the city of modern architecture, the voice of Maki, an Asian avant-garde, re-questioning the continued validity of CIAM and the city of architectural modernism was refreshing and radical to Lim and Tay. The heterogeneity that collective form promulgates was liberating and empowering compared to the developmental programme of HDB and the state's political hegemony.

Corresponding with and complementing the 'master programme' according to Maki, is a required 'master form' which is a collective form that can aggregate and thus take time into consideration with regards to growth. The urgency of Maki's investigation into 'Collective Form' is all the more pertinent in the light of the absence of any single coherent theory beyond that of one single building. Maki defines 'Collective Form' as follows: *'Collective Form represents groups of buildings and quasi-*

buildings – the segment of our cities. Collective Form is, however, not a collection of unrelated, separate buildings, but of buildings that have reasons to be together."[73] He further outlines three types of collective forms (Fig. 4.66). The first is termed 'Compositional Form' and involves a compositional approach, examples of this will be Brasilia and Chandigargh – the use of pristine form and ordered geometry for compositional effect. The second type is 'Megaform' and is characterised by a structural approach. The main proponents of this will be Kenzo Tange. Essentially this approach involves, from the outset, a large frame (usually structurally superfluous) in which all the functions of a city or part of a city are housed. The use of this large frame implies some utility in combination and concentration of function, but an affinity for structural virtuosity at the expense of human scale and human functional needs. Megaform also suggests a large framework with differential hierarchy and depends heavily on the idea that change will occur at different speeds in different realms. This danger, according to Maki, is that the megaform will become rapidly obsolete if the different speeds are not addressed, and any attempt to predict which portions will change faster or slower, is fundamentally difficult. The extended criticism levelled at Tange's megaform and megastructures shows the popularity and attractions these projects had in the late 1960s with Tange's Tokyo Bay project as the paradigmatic project of the megastructures.

Maki favours the third type of 'Collective Form', which he calls group-form that emphasizes a sequential approach: *'So the ideal is a kind of master form which can move into ever new states of equilibrium and yet maintain visual consistency and a sense of continuing order in the long run.*"[74] Group-form, Maki elaborates, is a form that evolves from a system of generative elements in spaces like villages (Greek, Sudanese or Japanese). This incremental

73 Maki, Fumihiko, *Investigations in Collective Form* (St. Louis: Washington University, 1964)
74 Ibid, p.11



Fig 4.66 Fumihiko Maki, Collective Form (1964)

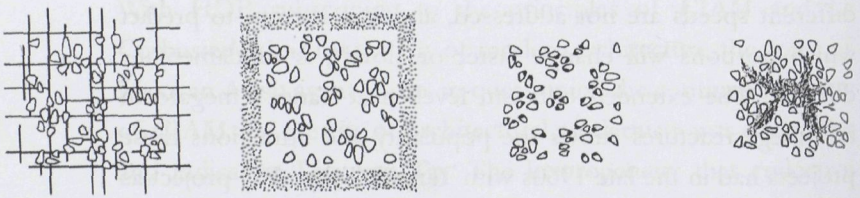


Fig 4.67 Fumihiko Maki, Collective Form – Operational Categories (1964)

aggregation of generative elements allows for a consistency of form and the flexibility of growth. In the examples of the villages, Maki recognizes the long period of time required for such aggregation and stresses that the urban designer is faced with an increased speed of growth. His proposition is that group-form and its space are prototypical elements with implied system and linkage. The combination of both these aspects will thus allow more responsive and flexible growth. Unlike the mega-structure, group-form does not require a skeleton to grow and does not require powerful leadership – it is bottom-up and grows from people and society. Group-form, Maki predicts, will offer 'more suggestive activities' than Le Corbusier's air, green and sun. Maki elaborates this with five operational categories: *to mediate, to define, to repeat, to make functional path* and *to select* (Fig. 4.67). All five categories begin with a given suggestion of an existing cluster of buildings. The first, to mediate, creates links among disparate elements to form a cohesive framework of spaces and linkages. The second, to define, is to create a wall surrounding the preceding elements, thereby giving them definition and clarity. The third, involves the repetition of one element that will provide an overall consistent grain to the existing. The fourth, involves the threading of a sequential path with programme and activities into the existing, again to result in a coherent and legible group form. The last involves a preselection of a site to coincide with the four preceding operations. The biggest difference between Tange and Maki is the appropriation of the tabula rasa as a precondition. Maki operates with a given, Tange starts anew. Second, Maki relies on elemental parts that aggregate towards a cohesive whole, Tange relies on a large permanent megastructure that acts as a container for smaller temporary elements.

The more 'suggestive activities' that Maki alluded to earlier, turned out, in his subsequent studies and research projects, to be shopping at a large scale in a concentrated manner. Among

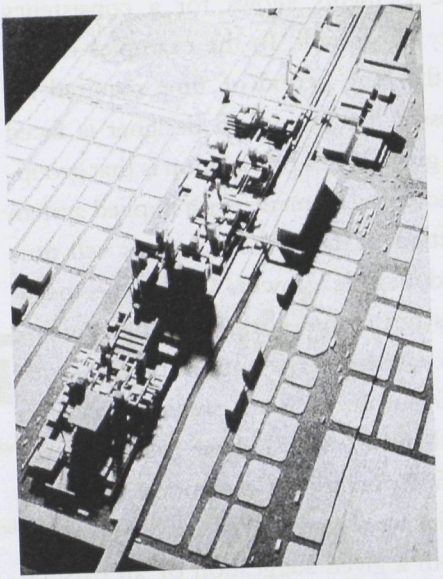


Fig 4.68 Fumihiko Maki, K-Project (1964)



Fig 4.69 Fumiko Maki, Hillside Terrace, Tokyo (1969-1992)

the early projects of Maki that furthered these concerns were K-Project Tokyo (1964), (Fig. 4.68) and the much celebrated Hillside Terrace, Tokyo (1969-92), (Fig. 4.69). The latter a mixed-use development of no more than three storeys, built over seven phases and incorporating an interconnection of small public spaces with spaces for residential, commercial and office use. The project as a whole is an aggregation of elemental parts carrying different use and spatiality over time, and gives rise to a very Japanese conception of inter-spaces[75]. These studies tackled head-on the public activity that is all too common in Asian cities, a programme that Western academics shied away from until perhaps Koolhaas' *'Harvard Guide to Shopping'* in 2001. In all of Maki's proposals and studies, linkages or circulation flows act as the binding agent for the prototypical elements. Together they create city rooms and city corridors.

Exposed to these ideas, Lim and Tay developed their own *'Asian City of Tomorrow'*, first published in *Asia Magazine* in May, 1966 and featured in the opening pages of *SPUR 65-67*, conjuring up the image of an alternative Asian City:

> *'Imagine a city where we have dwellings that stretch upwards towards the sky, and beneath them people humming with activity in the business houses, governmental offices, educational centres, theatres, open spaces, and recreation centres.. where the various centres of activity are linked up... centres of entertainment and culture in the heart of the city that light up in the evening.. Imagine clean parks and roads free from scores of hawkers and street vendors, and open drains un-littered. This is our Asian City of Tomorrow'*[76]

75 Sakiko Goto proposed that the architecture of Maki was underpinned by the Japanese conception of 'inter-spaces'- spaces that are ambiguously located between two opposing spaces defined by use, level changes, material, orientation, and degrees of enclosure. See Goto, Sakiko, *Tokyo Podium* (unpublished MPhil dissertation, Architectural Association Projective Cities Programme, London, 2012)

76 Singapore Planning and Urban Research Group, *SPUR 65-67* (Singapore: SPUR, 1967), p.5

Three perspectives illustrate this *'Asian City of Tomorrow'*. The city is presented as one gigantic megastructure, towering above an existing street with small low-rise Chinese shophouses (Fig.4.70). The influence of the Metabolists is unmistakable in their use of a large overall structure, rendered as heavy concrete in brute form, carrying smaller units of containers within them. Half of Tange's A-Frame structure reappears as the main structure holding up and containing everything else. By removing the other half, the megastructure allows a partially shaded linear volume that acts as one large continuous city room. It contains open terraces, entrances and landscape, with a monorail or a mass rapid transport threaded through it. The description of their strategies in dealing with growth is identical to Tange's,

> *'The idea of a lineal city is coming into favour. It is free of the traffic confusion of a radial city which by extension and improvement of roads brings more confusion to the centre. Because the lineal city can be controlled along certain lines of growth, it would permit frictionless expansion and renewal when the cycle of regeneration occurs.'*[77]

Lim and Tay called for an overlay of programme, circulation and infrastructure and insisted that congestion is the essence of the city,

> *'a true city is a congested city – congestion not of cars but of people drawn close together by a multitude of related activities. We must reject out-dated planning principles that seek to segregate man's activities into arbitrary zones, no matter how attractive it may look in ordered squares on a land use map. Rather there should be in cities many areas that are of multiple use where all the advantages*

77 Singapore Planning and Urban Research Group, *SPUR 65-67* (Singapore: SPUR, 1967), p.11

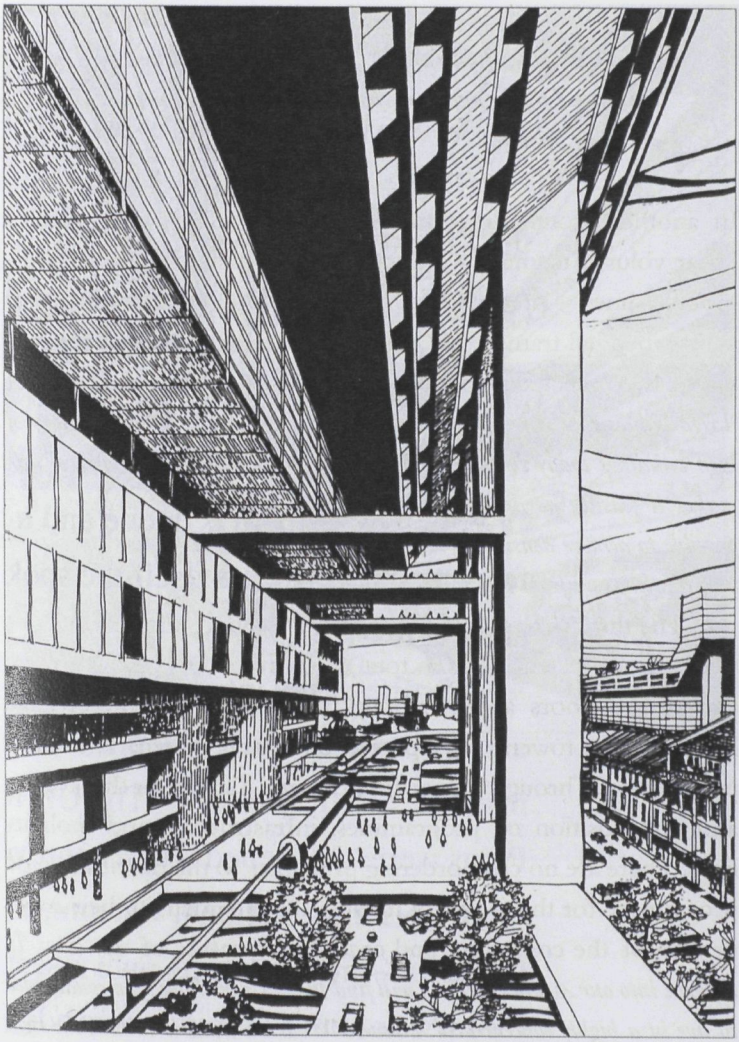


Fig 4.70 William Lim S.W. and Tay Kheng Soon, 'Asian City of Tomorrow' (1966), Half A-frame structure

of city living – shops, schools, recreation and even work, if not for the main breadwinner, for those who seek to supplement income – are never far away. [78]

In another ground level perspective (Fig. 4.71), they show a linear volume teeming with activities and threaded by different mobility lines – promenades, walkways, bridges, wide staircases and suspended trams. Curiously, Lim and Tay proposed the very model they rejected in HDB's – the high-rise high-density model, *'High buildings will be the norm rather than exception. The technology of high buildings today in the development of reinforced concrete and of lifts makes it feasible as an effective planning tool. With high buildings it is possible to achieve densities of more than 1,000 persons to an acre without banishing nature from the city.'* [79]

The third perspective (Fig. 4.72), in section, shows a gigantic podium, seventeen floors in total, with five floors below ground and twelve floors above. Above the podium sits the sheared half A-frame towers, interspersed on a large terrace in a linear progression. Through the section, Lim and Tay render the layering and juxtaposition of programmes, infrastructure and mobility lines. There are no clear ordering principles to the distribution of programme for this is what Lim and Tay intended, in their Asian version of the congestive and cacophonic nature of the city: *'If we look into our Asian cities you will find that Asians have been conditioned to live in a highly concentrated manner. What we want is to find the right living pattern for our present needs and the right symbols to satisfy our present cultural aspirations.'* [80] Here, the similarity to Maki's collective form - especially in terms of the aggregation of programmatic cells - is pronounced. Thus, Lim and Tay's *'Asian City of Tomorrow'* can be read as a gigantic podium block; with the podium representing the

78 Singapore Planning and Urban Research Group, *SPUR 65-67* (Singapore: SPUR, 1967), p.8
79 Ibid., p.8
80 Ibid., p.8

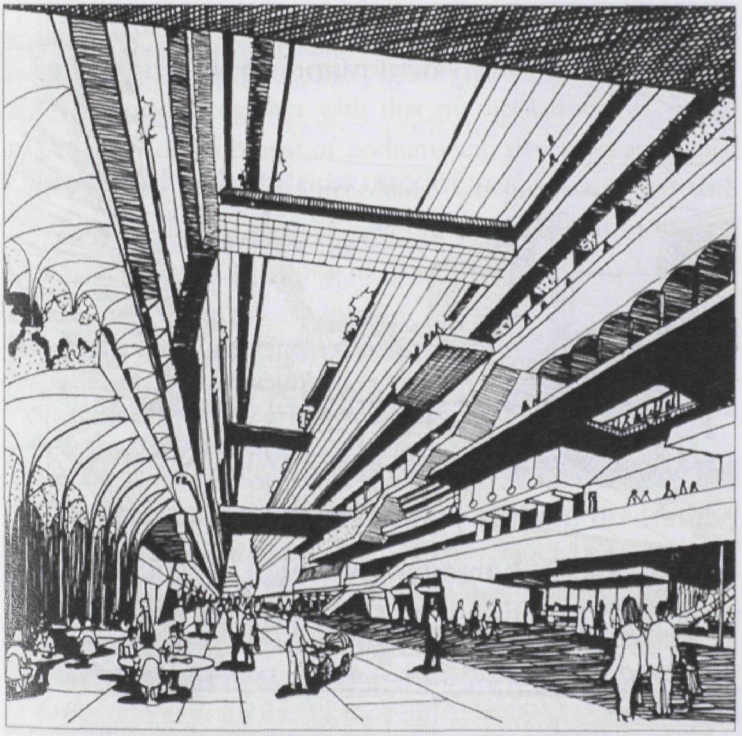


Fig 4.71 William Lim S.W. and Tay Kheng Soon, 'Asian City of Tomorrow' (1966), Stacked mobility systems

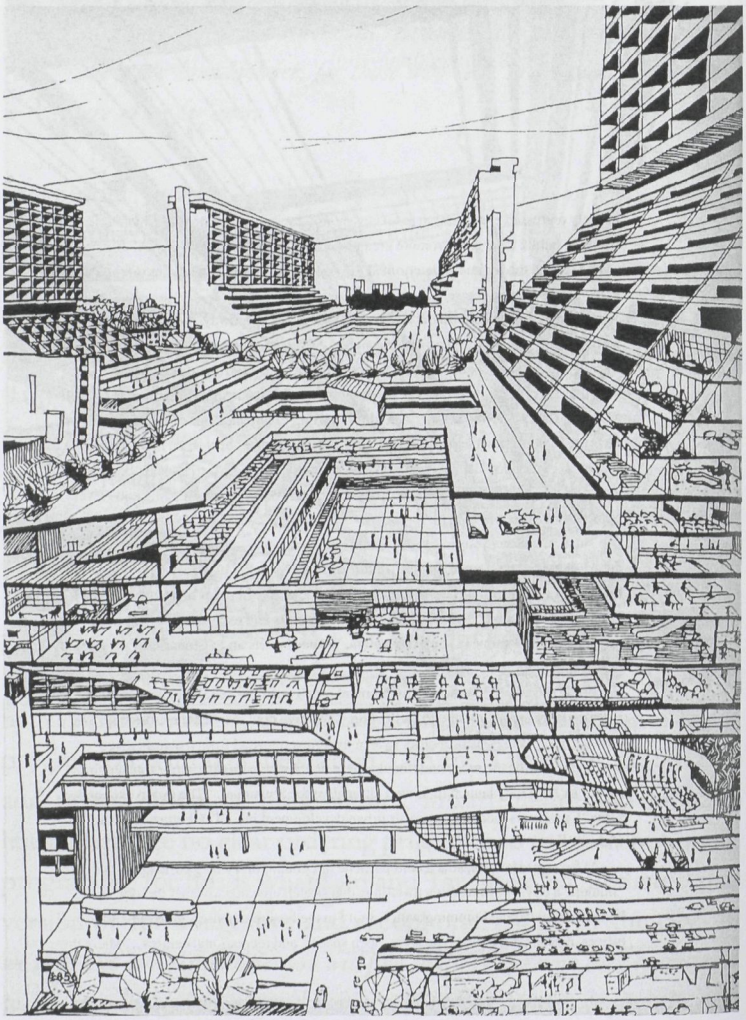


Fig 4.72 William Lim S.W. and Tay Kheng Soon, 'Asian City of Tomorrow' (1966), The beginnings of the podium block.

ideas of Maki and the half A-frame towers above, representing Tange's ideas of a linear megastructure.

These ideas, together with that of megastructures, would influence the development of podiums and structures associated with shopping - and its antecedents' activities associated with urban cores - in high-density environments from late 1960s till 2001 with Toyo Ito's proposal of One North in Buona Vista.

9. Shopping and City Rooms

Following on from the 'Asian City of Tomorrow', Lim and Tay formed Design Partnership and started work on the first few sites under the government Land Sales programme – an initiative to release land, by URA, as the housing problem had been addressed by HDB. This project, along Beach Road and Eu Tong Sen Street, on a 1.0 hectare site at the heart of Chinatown is the first experiment using the ideas of an emerging master form – a paradigmatic project of the Metabolists. Utilising Maki's ideas of 'City Corridor' and 'City of Rooms', it is the first building in Singapore to introduce the atrium as a model for capturing flows and to then expose and disperse these flows to a cellular matrix of shops (Fig. 4.73). Above the six-storey podium, a 25-storey-high slab block consisting of 264 apartments is positioned diagonally on a north-south orientation, favouring a frontal impact perpendicular to Eu Tong Sen Street, rather than a more pragmatic alignment to avoid heat gain favoured by HDB (Fig. 4.74). The six-storey podium contains 300 shops, offices, restaurants, coffee houses and car-parking for 633 cars - it is a brutal high-rise slab on a brutal podium, a condensed version of a Chinese downtown, 3D market on a cellular matrix. The main atrium or city room as an idea borrowed from Maki is different from John Portman's atrium (Fig. 4.75). In the latter, the atrium is

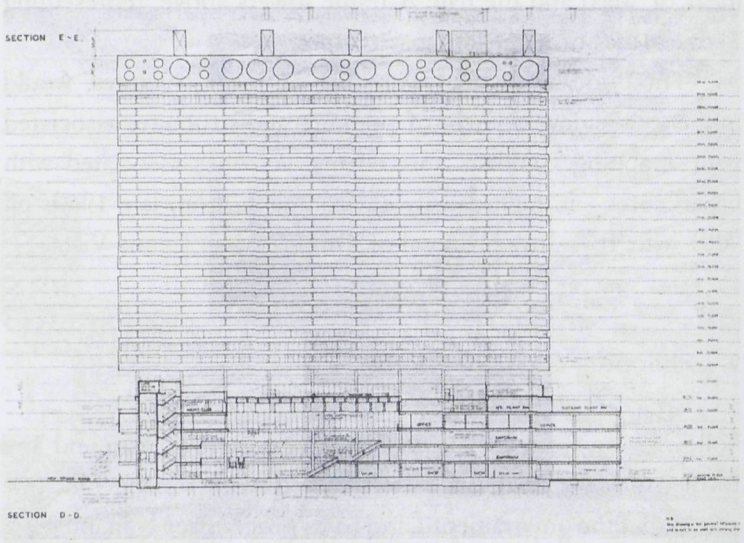


Fig 4.73 Design Partnership, William Lim and Tay Kheng Soon, carpark section of People's Park Complex, Singapore (1967)



Fig 4.74 People's Park Complex, Singapore (1967)

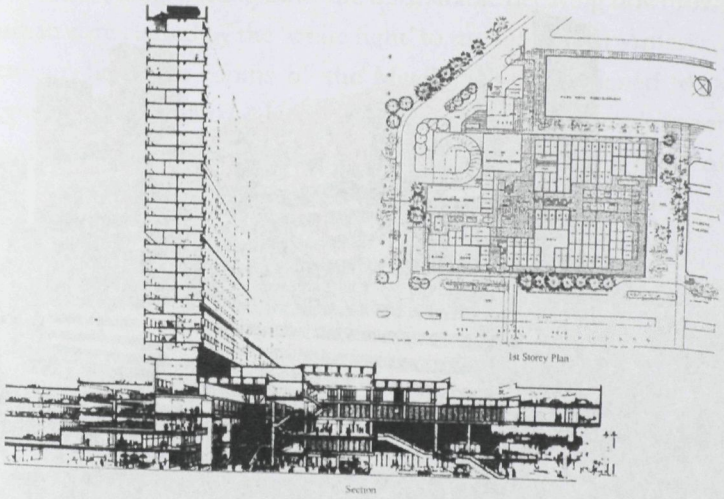


Fig 4.75 People's Park Complex, Singapore (1967), Section



Fig 4.76 People's Park Complex, Singapore (1967), Interior volume of the podium, 'City Room'



Fig 4.77 Design Partnership, William Lim and Tay Kheng Soon, Golden Mile Complex, Singapore (1967)

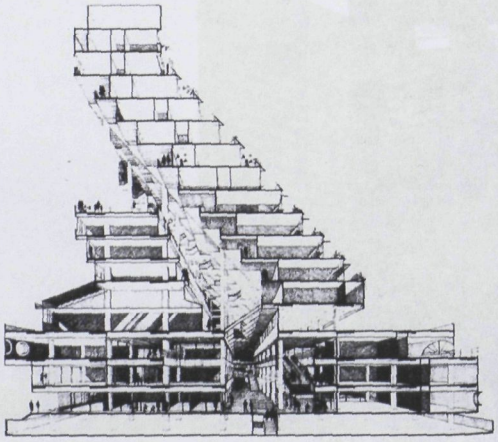


Fig 4.78 Golden Mile Complex, Singapore (1967), Section

inward looking, cutting away the undesirable decaying downtown urban core caused by the 'white fight' to the suburbs of American cities. The urban rooms of the Metabolists are designed to be open to the city, linked by city corridors, and can be understood and perhaps reinterpreted as a frame that captures the flows of the city, and thus attempts to connect and at the same time seeks to contain (Fig. 4.76).

On another project, the Golden Mile Complex, also designed by Lim and Tay under Design Partnership is the first Asian segment of megastructure realised anywhere (Fig. 4.77). It is reminiscent of Tange's Tokyo Bay project and Rudolph's Lower Manhattan Expressway. Located on the Golden Mile, a strip of land between Nicoll Highway and Beach Road was designed as a high-rise spine fronting Kallang Basin (Fig. 4.78). Hailed by Maki as an example of 'Collective Form' and the myriad of activities it recaptures for the city, it is based on the use of 'City Rooms' and 'City Corridors' (Fig. 4.79). The strategy in treating the atrium here differs from that of the People's Park Complex in that the high-rise slab block is sheared and inclined, breaking the orthoganality of the earlier slabs and podiums and revealing an interior nave as an urban linkage. This linkage acts as both room and corridor, drawing light and air into the interior and pulling pedestrians upwards towards the open sky (Fig. 4.80). The early success of these projects prompts Koolhaas to conclude: *'in these projects Singapore's centre is theorised as a prototype of modern Asian metropolis: the city as a system of interconnected urban chambers.*[81]

The influence of the Metabolists, and in particular, the city room and corridor to contain and thread through mobility lines, inadvertently introduced a gradual evolution in the internalisation of the activity of shopping. This aspect sets the Metabolists apart as Asian, in its direct confrontation and utilization of

81 Koolhaas, Rem in 'Singapore Songlines' in *SMLXL* (Rotterdam: 010 Publishers, 1995) p.1073

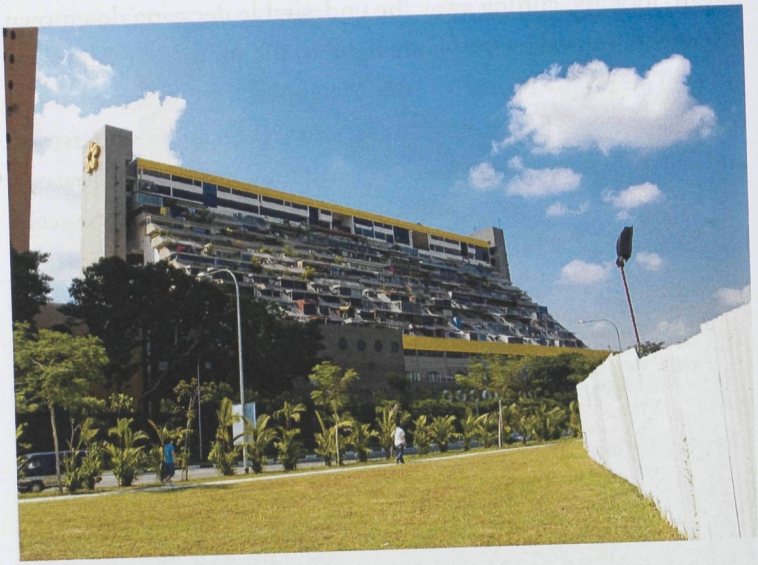
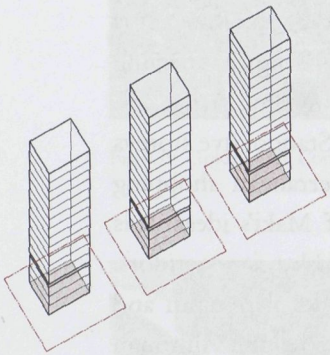


Fig 4.79 Golden Mile Complex, Singapore (1967)

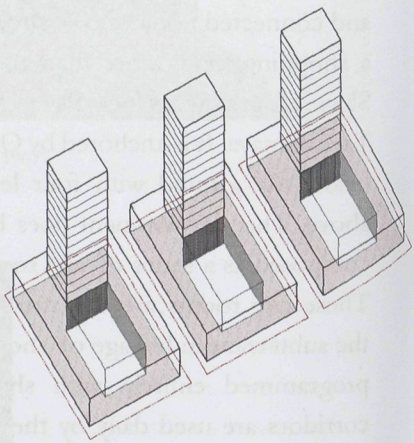


Fig 4.80 Golden Mile Complex, Singapore (1967),
Interior volume of half A-frame structure

the conditions of high-density as a source for architectural experimentation. By the end of the 1990s, almost all shopping environments in Singapore were internalised, compressed into podium blocks and spread along underground linkages that are stacked four storeys below ground, connecting infrastructural nodes and completely cut off from the hot and humid climate of Singapore. Citylink Mall is one such example, built in the mid 1990s and designed by Kohn Pederson Fox and LPT Architects, it is a subterranean mall, linking two MRT Stations - City Hall Station and Esplanade Station - stretching for more than one kilometre. The second notable example is the subterranean malls and connected podiums of Orchard Road and Scotts Road. It is a shopping loop, more than three kilometres long, connecting Shaw House, Wheelock Place, Ion Orchard, Wisma Atria, and Takashimaya. It is anchored by Orchard MRT Station, five storeys below the ground with four levels of subterranean shopping above. This development does hold many of Maki's ideas: it is composed as a series of city rooms connected by city corridors. These city rooms are the atria of each individual podium and the subterranean linkage of shops, is the city corridor. Although programmed entirely with shopping, these city rooms and corridors are used daily by the population to get about, owing to their placement above and around main MRT stations. And the third adherence to Maki's idea is seen in the way the podiums aggregate over the years incrementally, from podium to podium, from stations to podium, linking different plots together to form an overall cohesive group form (Fig. 4.81).

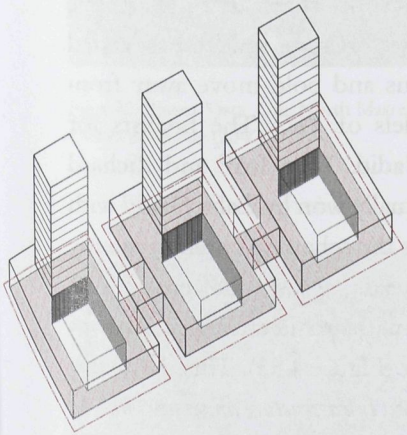


1. Free standing towers with commercial programme on the ground floor

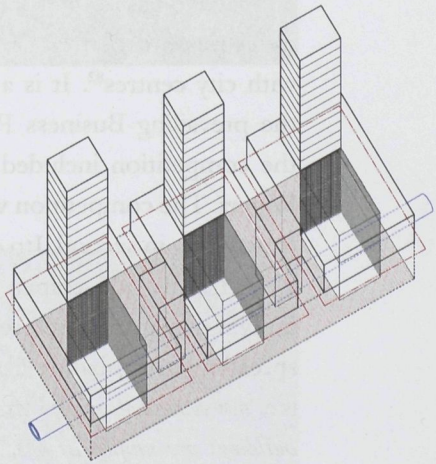


2. Enlargement of tower base to create internal atrium as 'city room'

Fig 4.81 The transformation of the dominant type of podium in Singapore (1970s-2010s)



3. The atria are connected to form a sequence of 'city rooms'



4. Expansion of 'city rooms' downwards to connect to infrastructural nodes

10. One North

Organized by Jurong Town Corporation (JTC) in 2001-2002, the government agency for the planning, construction and management of industries, the One North Masterplan competition set out to transform a 180 hectare virgin land in Buona Vista into Singapore's knowledge-based industry city (Fig. 4.82). The competition called for the creation of a 'technopole' following Manuel Castells' and Peter Hall's observations that knowledge-based environments that support research and creative industries are better served by the 'creative milieu' associated with city centres[82]. It is a conscious and bold move away from the prevailing Business Park models of JTC. The finalists for the competition included Zaha Hadid, Toyo Ito[83] and Richard Rogers. The competition was eventually won by Zaha Hadid with Ito coming in second. Ito conceives the scheme as predominantly a horizontal skyscraper that spreads across the entire site, unifying the infrastructure of a city with architecture as a network spreading in a rhizome-like manner (Figure 4.83). This, Ito states is a *'new concept of architecture where roads, infrastructure and a few hundred buildings are unified as one, and all the fluid elements of a city such as people, information, energy circulation are intermingled and coexisting*[84] and that *'Buildings are not layered perpendicularly but integrated into a "Hyper Neuron Continuum" (HNC) as a horizontal skyscraper*[85]. The HNC is seen as modules of construction, built by different developers and organizations, that carry with them not only floor areas for occupation or rentals but also infrastructure. Thus the city grows by increments and as aggregates, almost identical to the idea of

82 Castells, Manuel and Hall, Peter, *Technopoles of the World: The Making of 21st Century Industrial Complexes* (London, New York: Routledge, 1994)

83 I was personally involved in the competition scheme by Toyo Ito in collaboration with RSP. A year later, I was involved with the implementation phase of part of the masterplan of the winning scheme by Zaha Hadid Architects.

84 Toyo Ito: *Recent Projects* (Tokyo: A.D.A Edita Co. Ltd. 2008) p.30

85 Ibid, p.30



Fig 4.82 Buona Vista, One North Masterplan
Competition Site (2000)



Fig 4.83 Toyo Ito Associates and RSP Architects
Singapore, One North Masterplan proposal,
Singapore (2000)

group-form propounded by Maki thirty years earlier. However, there are differences, the first in how towers are treated in the master plan. The towers are either placed above the HNC as a rhizomic growth or extension of hnc (small HNC) or they stand in isolation in the multitude of captured open spaces of the HNC (Fig. 4.84 and Fig. 4.85). Ito envisions that the captured open spaces will house landscape and activities that are distinct and different from one to the other, thereby creating the condition of exacerbated difference between these spaces and encouraging movements between them (Fig. 4.86). This strategy of framed difference is also a departure from the earlier experiments of the Metabolists that seek to mix and coagulate flows and programmes. The second difference is the way in which Ito deals with the idea of the technopole; in his competition diagrams, a lot of attention is paid to the way in which the spaces flow continuously within the HNC and beyond. In Ito's conception, the flows starts from the airport (taking in flows from a global realm), where the travellator and train connect the airport directly to Buona Vista MRT Station and from there, a 6.2km network of travellators enables a smooth connection to the entire site (Figure 4.87). The circulation system of the interior of the HNC is close to that of an airport terminal (Fig. 4.88). Ito adds: *'As the 21st century Asian city of the future, we found out the possibility of an urban space that flows dynamically through the system growing up in the manner of trees and plants.*[86] The third difference is the scale in which the project is conceived. If built, it will undoubtedly be the biggest single building in the world, but this is also the paradoxical strength of the project. The prospect of realizing the biggest building in the world intimidated the competition organizers – who eventually settled for a more implementable parcel-by-parcel proposal by Zaha Hadid – even with Singapore standards for implementing impossible masterplans. But the project can

86 Toyo Ito: *Recent Projects* (Tokyo: A.D.A Edita Co. Ltd. 2008), p.30

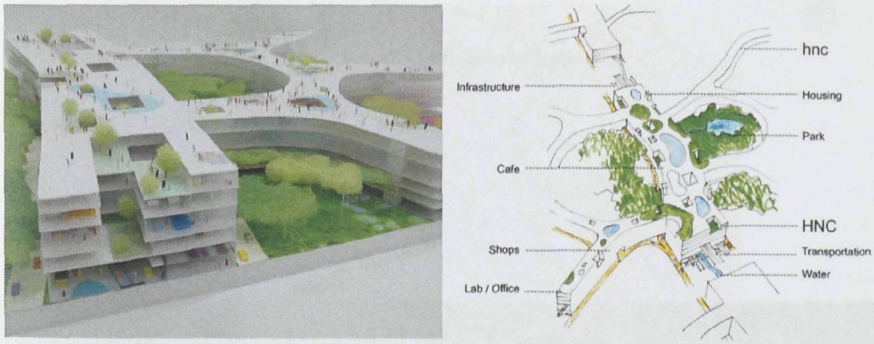


Fig 4.84 Toyo Ito Associates and RSP Architects
Singapore, One North Masterplan proposal,
Singapore (2000)

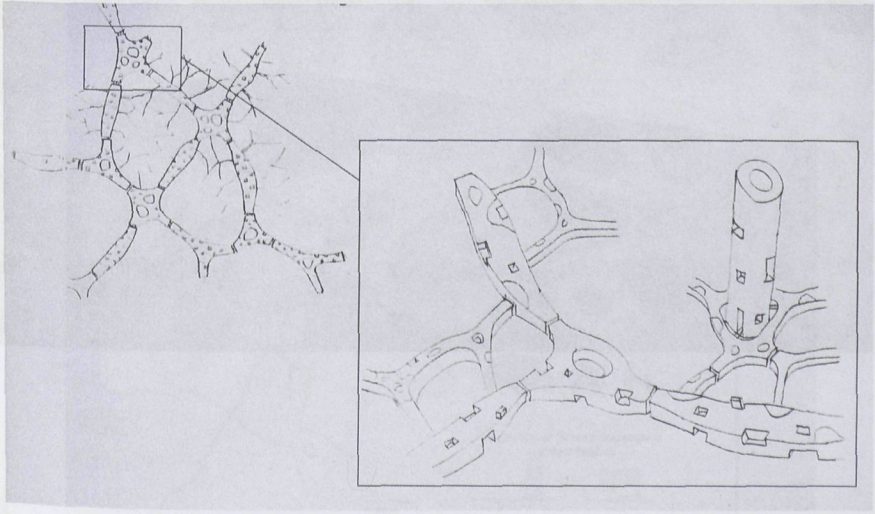


Fig 4.85 Toyo Ito Associates and RSP Architects
Singapore, One North Masterplan proposal,
Singapore (2000)



Fig 4.86 One North Masterplan proposal,
Singapore (2000)

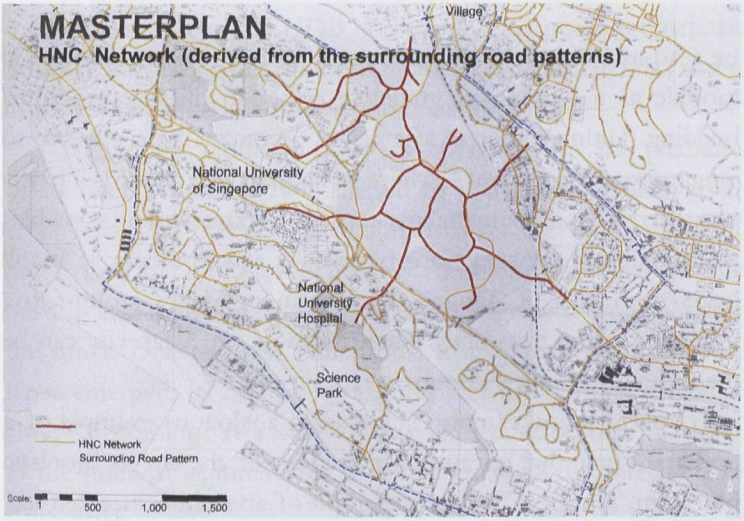


Fig 4.87 One North Masterplan proposal, Singapore (2000)

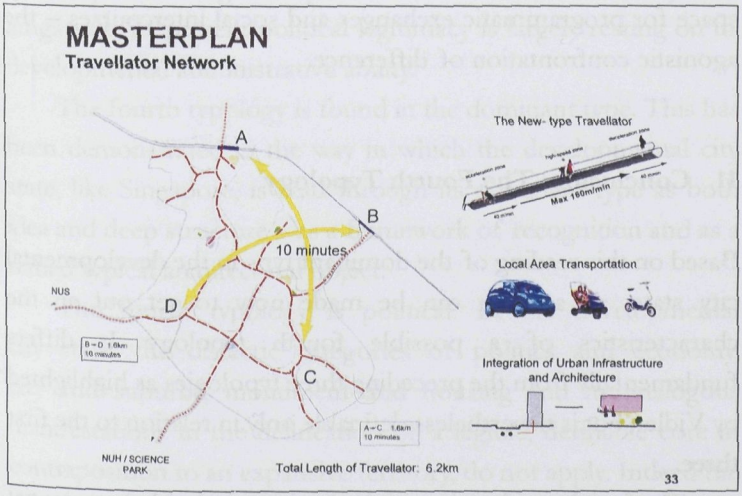


Fig 4.88 One North Masterplan proposal, Singapore (2000)

be read as a city built in increments, with a strong prototypical module as a typological guideline rather than as a prescribed building. Ultimately, it is after all a dominant type specific to Singapore - the podium – where its aggregation towards a city is proposed as an incremental masterplan, a framework that enables the cumulative constructions of various stake holders. If it still bears the traces of Tange's mega-form or Maki's group-form, it alludes to the possibility that an idea of an Asian city can be manifested through a dominant type.

Ito's proposal can also stand as an analogous example of a dominant type that encapsulates the idea of the city as agonistic pluralism. The HNC is a clear example of an architecture that acts as borders of containments and as a framework of recognition. It clearly delineates spaces for the cultivation of difference and maintains their difference by its clearly defined and thickened border. This border is porous and allows the seepage of programme and movement across its width, thereby promoting a space for programmatic exchanges and social intercourses – the agonistic confrontation of difference.

11. Conclusion: The Fourth Typology

Based on this reading of the dominant type in the developmental city state, an attempt can be made now to set out all the characteristics of a possible fourth typology. It differs fundamentally from the preceding three typologies as highlighted by Vidler, but is nevertheless definable only in relation to the first three.

The fourth typology is generic, that is, typical with the potential for transformation. It can be concluded here that Singapore as a developmental city state, in the tropics, starting almost from a blank slate, gave rise to a set of pronounced dominant types – the

tower and slab block of HDB housing and the podium block. In this way, it differs from the third typology which depends on the historical city for its definition and constitution.

The fourth typology owes its operativity to the pliability of its deep structure. It is shaped by a political ideology that emphasizes the efficacy of pragmatism on the one hand, and the nature of multi-stake holders' developments that favour flexible accumulation and aggregation as growth strategies, on the other. Due to these conditions, from which the dominant types emerged, its origins necessitate that the dominant type is always becoming, in a state of constant development, as long as the political legitimacy of a developmental city state holds a consensus.

The fourth typology is pervasive, prevalent and dominant. Its dominant type and idea of the city as a developmental apparatus can be found in cities across East Asia. It is more pronounced in China, with its single party rule under a communist party that is currently overseeing the expansion of a neoliberal economy. Like Singapore, its present political legitimacy is largely resting on its developmental administrative ability.

The fourth typology is found in the dominant type. This has been demonstrated in the way in which the developmental city state, like Singapore, is read through its dominant type as both idea and deep structure – as a framework of recognition and as a reified typical architectural object.

The fourth typology is political. In the developmental city state, the dialectic categories of politics and economy, city and suburbs, monument and housing and its analogous manifestations in the delineation of a legible, definable core in contraposition to an expansive territory, do not apply. Indeed the developmental city is administrative, it is total but it is definitely not an apolitical project. As has been shown, it is a total political project that is tangible and concrete. Whether the developmental

city state can be read as an agonistic space is harder to assert if the above dialectics are applied, which also leads to a certain sense of alienation and disempowerment. This is further exacerbated by the fact that the familiar lines dividing left and right, socialist and capitalist, state and the individual, as a precondition of the political are difficult to delineate here. For instance, the provision of public housing is the hallmark of any socialist government and the success of its near universal provision in Singapore, at a high standard of living, is an envy to the former. Yet, this success is crucially underpinned by the logics of the market. The state's embrace of a neoliberal market economy is the defining feature of the right and yet it is an economy that is micro-managed by the state, with direct and constant intervention. The regime is undoubtedly authoritarian and yet it is democratically elected to office in all eleven parliamentary elections since independence, and follows all due democratic and legal processes. Indeed, the fourth typology acquires a political agency if it is understood as a common framework that enables an inclusive process of change and transformation. Here, the model of agonism is again useful to conceive of the relation between the sovereign and the subject, as one that maintains its bipolarity but does not seek to confront and displace the other; it seeks instead to achieve an equilibrium and balance, albeit in constant transformation and alternation. This alternation presents bipolarity not as a dialectical relationship that moves from contradiction through synthesis and sublation, but as complimentary opposites constituting a totality[87]. Thus, for this common framework to function – to facilitate this alternation - it must be a shared knowledge that is based on rationality, as

87 This conception goes to the heart of Chinese thinking as argued by Francois Jullien in *The Propensity of Things: Toward a History of Efficacy in China* (New York: Zone Books, 1995). For Jullien, efficacy is prized by the Chinese in all domains of life, from military strategy and stage craft to the art of poetry and calligraphy. This efficacy relies on the ability of the general, court official, poet, calligrapher or painter to detect the propensity of things - the potential inherent in bipolar movements, for instance in the *yin-yang* concept, where *yin* is always becoming *yang* and vice versa – and to manipulate this propensity to a favourable outcome.

informed by the example of Durand. The deep structure of the dominant type, as much as it can be appropriated by the state, can also be appropriated by its other. It is a medium, a recognizable framework for negotiation and cooperation – a social contract. The awareness of this form of efficacious pragmatism is not solely to enable the operativity of praxis; as a matter of fact, I argue that the ability to detect, describe, analyze and theorize the dominant type is the first step in surpassing it, which involves a choice and decision upon the closure of analysis; and thus a political act.

In today's context, this notion of a shared knowledge as something that can be held in common can be understood as immaterial labour. In 'The Common in Communism'[88], Michael Hardt highlights that the struggle against the hegemony and inequalities of capitalism is no longer between capitalism and socialism or between immobile property and mobile property. The latter category typified the struggle between rent and profit in the mid nineteenth century, where profit extracted from immobile property triumphed over rent extracted from immobile property. Hardt offers a third way, which he terms *'the common in communism'*. He argues that the struggle today is between material and immaterial property. He reasons that immaterial and biopolitical production is emerging as a hegemonic component in today's economy that provides this immaterial property. This form of production covers the production of '... *ideas, information, images, knowledge, code, languages, social relationships, affects and the like,*'[89] and involves the whole cross section of societies who use information technology as a means of production. The distinguishing factor of this form of production is that it cannot be completely privatized and does not follow the logic of scarcity.

88 Hardt, Michael, 'The Common in Communism' <http://seminaire.samizdat.net/IMG/pdf/Microsoft_Word_-_Michael_Hardt.pdf> (accessed 01 June 2011)

89 Ibid., p.5

It is imminently and infinitely reproducible and easily shared. Thus, Hardt terms this immaterial and biopolitical production as *'the common'* and as a means for emancipation,

> *'... communism is defined by not only the abolition of property but also the affirmation of the common – the affirmation of open and autonomous biopolitical production, the self-governed continuous creation of new humanity. In the most synthetic terms, what private property is to capitalism and what state property is to socialism, the common is to communism.* [90]

By understanding the fourth typology as a shared knowledge, a product of immaterial labour that uses the knowledge of the deep structure of the dominant type as a means of production, it can be constituted precisely as a common framework. It becomes the framework of recognition and a social contract, both as an idea and the ideal of the city as a space of agonistic pluralism.

What is being put forth here is the possibility of architecture, through its disciplinary knowledge, as a means for emancipation from within. This involves the identification of the dominant type and the logic of its proliferation. Furthermore, the dominant types of the developmental city state should not be seen as the culmination of an architecture for a nation or a people, but only a traceable beginning, and one that is still becoming. Thus to understand the deep structure of the dominant types, and redefining the understanding of type and typology here, is a response to a totality of architecture tied to its role in the discursive idea of the city, and thence forth we can proceed in two ways: to harness the cumulative knowledge and intelligence of the deep structure for further variation or to completely destroy its deep structure, that is to displace its validity on its very own terms, to start anew.

90 Hardt, Michael, 'The Common in Communism' <http://seminaire.samizdat.net/IMG/pdf/Microsoft_Word_-_Michael_Hardt.pdf> (accessed 01 June 2011), p.16

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Younés, Samir, 'Quatremère de Quincy's Theory', in *The True, the Fictive and the Real: The Historical Dictionary of Architecture of Quatremère De Quincy* (London: Papadakis Publisher, 2000)

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Zaera Polo, Alejandro, 'Cheapness: No Frills and Bare Life' in *LOG*

About the Author

Christopher Lee is the co-founder and principal of Serie Architects London, Mumbai and Beijing. He is the Design Critic in Architecture at Harvard Graduate School of Design. He was the co-founder and Director of the Architectural Association Projective Cities MPhil Programme, the Unit Master of AA Diploma Unit 6 (2003-09) and Intermediate Unit 2 (2001-03). He graduated with the AA Diploma [Honours] from the AA and awarded the RIBA President's Medal Commendation Award.

The work of Serie is underpinned by the exploration of the problem of type and the city, with particular focus on the renewed relevance of typological reasoning and experimentation – or working projectively in series – to describe, conceptualise, theorise and ultimately project new typological ideas for and from the city. Christopher Lee is also currently conducting his doctoral research on the same topic in the Berlage Institute Rotterdam.

Serie is the recipient of the prestigious BD Young Architect of the Year Award and was recently named as one of the 10 visionary architects for the new decade by the Leading European Architects Forum and was selected by ICON as one of 20 Essential Young Architects in the world in 2008. Serie's current projects include the Singapore Subordinate Courts Complex, BMW London 2012 Pavilion, and Wuxi Xishan Civic Complex, China.

Christopher Lee is the author of *Working in Series* and co-authored *Typological Formations: Renewable Building Types and the City*, both published by AA Publications. He also co-edited Wiley Academy Architectural Design Issue *Typological Urbanism: Projec-*

tive Cities. Christopher Lee lectures widely and the works of Serie has been exhibited as a travelling solo exhibition in Hong Kong University Shanghai Architecture Gallery, Shanghai in 2009 and culminated in the Architectural Association School of Architecture in November 2010.

Curriculum vitae

Christopher Chee Meng Lee

Date of Birth: 20th January 1972
Country of Birth: Malaysia
Country of Residence: United Kingdom
Nationality: British

Education:

2008 – present: Phd Candidate at Berlage Institute, Rotterdam, Netherlands.

1998: Graduated with the AA Diploma [Honours] in 1998 from Architectural Association School of Architecture London and awarded the RIBA President's Medal Commendation Award.
Diploma Tutors: Ben van Berkel and Michael Hensel

1995: Obtained B.A [Dean's List] from School of Architecture and Built Environment, National University of Singapore.

Professional Qualifications:

2006 – present: Chartered Architect of the Royal Institute of British Architects.

2006 – present: Registered Architect with Architects Registration Board United Kingdom.

Work History:

2006 – present: Principal and founder of Serie Architects London, Mumbai, and Beijing

2011– present: Multi-Year Design Critic in Architecture and Urban Design, Harvard Graduate School of Design

2010 – present: Director, AA Projective Cities Programme, Architectural Association School of Architecture London.

2004 – 2009: Unit Master, Diploma Units 6 in the Architectural Association School of Architecture London.

2002 – 2004: Unit Master of Intermediate Unit 2.

2002 – 2004: Studio Tutor, University of Pennsylvania / AA Exchange Program.

1999 – 2000: Design Tutor, School of Architecture and Built Environment, National University of Singapore.

Prizes and Awards:

2012: 1st Prize, Open International Competition for the New Singapore Subordinate Courts Complex

2012: Nominee, International Iakov Chernikhov Prize for young architects (decision pending)

2012: 2nd Place, World Architecture News Awards: 21 for 21

2012: 2nd Prize, Invited Competition for Weihai Cultural District Urban Plan, Weihai, China

2011: 1st Prize, Invited Competition for BMW 2012 Olympic Showcase, London, UK

2011: 1st Prize, Wuxi District Civic Centre and Cultural Centre Competition, Wuxi, China

2011: 2nd Prize, Invited Competition for Genbei Urban Design and Landscape Plan, Hangzhou

2010: Winner of BD Young Architect of the Year Award

2010: 1st Prize, Srimad Rajachandra Ashram Masterplan, Dharampur, India

2010: 1st Prize, Invited Competition for XTD Plot L Residential Complex, Hangzhou, China

2010: 1st Prize, Invited Competition for XTD Plot M

Residential Complex, Hangzhou, China

2010: 2nd Prize, Astana Presidential Park International Invited Competition, Kazakhstan

2010: Nominated for the International Iakov Chernikhov Prize for young architects

2009: 10 for 2010: Leading European Architects Review's 10 visionary architects for the new decade

2009: 1st Prize, International Invited Competition for Ruzinov Residential Development, Bratislava, Slovakia

2009: 2nd Prize, Xi'an Horticulture Expo Masterplan, China

2008: 1st Prize, Bohacky-Zahorska Bystrica Residential Masterplan Competition

2008: ICON's 20 Essential Young Architects, 2008

2008: PEN Japan Design Award 2008

2005: Architectural Record Design Vanguard, 2005

2004: DCC Awards, Mumbai

2004: IIID Awards, Mumbai

2001: 1st Prize, Rabin Square International Design Competition Judges: Arata Isozaki, Harry Siedler, Lea Rabin and Rafi Segal

2000: 2nd Prize, Shinkenjiku-sha Residential Design Competition Judges: Toyo Ito

2000: Outstanding Contribution in Teaching Award, School of Architecture and Built Environment, National University of Singapore

1998: AA Diploma Honours from Architectural Association School of Architecture [1998]

1994: BA [Arch Studies] Dean's List from School of Architecture and Built Environment, National University of Singapore

1996-1998: Building Construction Industry Scholarship to Architectural Association School of Architecture

1991-1994: Building Construction Industry Scholarship to School of Architecture and Built Environment, National University of Singapore

1989-1991: ASEAN Scholarship to Hwa Chong Junior College, Singapore

Lectures:

2011: GDS Talks, *'Type and the Idea of the City'*, Harvard University, Graduate School of Design

2011: Guest Lecture, *'Type and the Idea of the City'*, MIT Department of Architecture, U.S.

2011: Guest Lecture, *'Type and the Idea of the City'*, Oslo School of Architecture and Design, Norway

2011: Guest Lecture, *'Research-Practice'* Lecture Series, Stadelschule Frankfurt, Germany

2011: Guest Lecture, *'Working in Series'*, ICD Stuttgart, Germany

2011: Guest Lecture, *'Working in Series'*, CAFA Beijing, Germany

2011: Guest Lecture, EPFL Media x Design Lab, Lausanne, Switzerland

2011: Guest speaker, *'What about Architecture itself?'* Symposium, Architectural Association, London

2011: Speaker, Symposium for AD Publication *'Typological Urbanism'*, Architectural Association, London

2010: Guest Lecture, *'Working in Series'*, Architecture Department, Chongqing University, China

Guest Lecture, *'Working in Series'*, Sichuan Southwest Jiaoting University, Chengdu, China

2009: Guest Lecture, *'Working in Series'* travelling solo exhibition, Faculty of Architecture Hong Kong University, Hong Kong

2009: Guest Lecture, *'Working in Series'* travelling solo exhibition, HKU Architecture SH, Shanghai

2009: Guest Lecture, Urban Futures Symposium, Sydney, Australia

Guest Lecture, University Technology Sydney, Australia

2009: Gallery Talk, Le Corbusier: the Art of Architecture, Barbican Art Gallery, London

2009: Guest Lecture, Manchester University

2008: Guest Lecture, Tsinghua University, Beijing, China

Guest Lecture, Central Academy of Fine Arts, Beijing, China

Guest Lecture, Beijing Institute of Architectural Design, Beijing, China

2008: Keynote Speaker, School or Architecture & Planning, Chennai, India

2007: Invited Speaker, UIA Conference Kuala Lumpur

2007: Guest Lecture, Chinese University of Hong Kong

2006: Guest Lecture, Barbican London, Futures City Exhibition

2005: Guest Lecture, Bezalel Dept. of Architecture Israel

2004: Guest Lecture, Goldsmith College, University of Arts London, 2004

2004: Speaker, Asia@AA Forum London

2002: Invited Lecture, Urban Design Research Institute, Mumbai

Published Books:

2011: Lee, Christopher C.M., Jacoby, Sam, eds. Typological Urbanism: Projective Cities, *Architectural Design*, V.81, No.1 (London: John Wiley & Sons, 2011)

2010: Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2007: Lee, Christopher C.M., Jacoby, Sam, eds. *Typological Formations: Renewable Building Types and the City* (London: AA Publications, 2007)

Published Articles and Research:

2012: 'Common Artifacts' in Human Experience and Place: Sustaining Identity, ed. by Paul Brislin, *Architectural Design*, November 2012 (forthcoming)

2011: 'Type: A Glossary' for *The City as A Project*, Berlage Institute PhD Programme

2011: 'My Kind of Town' in *Architecture Today*, No. 219, June 2011

2010: 'Working in Series: Towards an Operative Theory of Type' in *Working in Series* (London: AA Publications, 2010)

2010: Article 'Typological Urbanism and the Idea of the City' in Typological Urbanism: Projective Cities, *Architectural Design*, V.81, No.1 (London: John Wiley & Sons, 2011)

2009: 'Working in Series: Towards an Operative Theory of Type' catalogue for travelling solo exhibition, HKU Architecture SH, Shanghai, Hong Kong & China, Sep 2009

2008: Article 'Renewable Types and the Urban Plan' in *Architectural Design*, Vol.78 No. 2, Mar 2008

2007: Article 'Projective Series' in Lee, Christopher C.M., Jacoby, Sam, eds. *Typological Formations: Renewable Building Types and the City* (London: AA Publications, 2007)

2001: Project and writing, *'The Final House'* in Japan Architect 40, 2001

Project and writing, *'AA Current Works'*, Vol. 2 & 7, AA Publications

1999: Project 'SKLCM', AA Diploma Honours Project, *AA Files*, AA Publications

1998: *'Woven Structures, AA 4th Year project'*: Andreas Papadakis

[edt]
Architectural Design: Tracing Architecture, Wiley Academy London

Published Articles about Serie Architects:

2012: Article 'Serie' by Lucy Bullivant in *New Arcadians: Emerging UK Architects* (London: Merrell, 2012)

2011: Article 'Serie Architects' by Rahul Mehrotra in *Architecture in India since 1990* (Mumbai: Pictor, 2011)

2011: Article 'Book Review: Working Series' by Peter Carl in *Architectural Review*, no.1373 June

Article 'Revert to Type' by Christopher Turner in *ICON*, issue 094 April 2011

2010: Article 'Going Against Type' by Brett Steele in Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2010: Article 'Architecture as Mental Habit: Notes on the Method of Serie' by Pier Vittorio Aureli in Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2010: Article 'Punctuated Equilibrium: Typal Conviction of Serie' by Sam Jacoby in Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2010: Article 'The Practice of Conjectures as Project' by Laurence Liauw in Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2009: Article 'Go Forth, Multiply and Build' by Beatrice Galilee in *Tank*, Vol.5, Issue 7 2009

2009: Article 'the Tote' by Jagan Shah in *Domus*, Vol 931, Dec 2009, Italy

Published Interviews:

2011: Interview by Lee Kyung-taek, for webzine *VM Space*,

South Korea

2010: Interview by Anna Richardson in *Design Week*, Vol. 25/ No. 27, 8 July 2010, UK

2009: C3, Issue 296 Apr 2009, South Korea

2009: 'The State We're In', interview by Christopher Kanal, in *Leaf Architecture Review*, Issue 06 2009

Monograph and Special Issues (Serie Architects):

2011: *ICON*, No. 094 Apr 2011, UK

2010: Lee, Christopher C.M., *Working in Series* (London: AA Publications, 2010)

2009: *Working in Series*, catalogue for travelling solo exhibition at HKU, HKU Architecture SH, Shanghai, Hong Kong & China, with contributions from Ralph Lerner and Pier Vittorio Aureli

2009: *C3*, Issue 296 Apr 2009, South Korea

2007: *Archiworld*, Issue Aug 2007, South Korea

2006: *Tatlin*, Issue May 2006, Russia

Publications (Serie Projects):

2012: Lucy Bullivant in *New Arcadians: Emerging UK Architects* (London: Merrell, 2012)

2011: Rahul Mehrotra in *Architecture in India since 1990* (Mumbai: Pictor, 2011)

2011: *ICON*, No. 094 Apr 2011, UK

2010: *Frame* No. 74, May/June 2010, Netherlands

Design Week Volume 25/ No. 27, 8 July 2010

BD No.1807, Feb 2010

Architectural Review, Jan 2010

2009: *Domus* Magazine, Volume 931, Dec 2009, Italy

Tank Magazine Interview, Vol.5, Issue 7 2009

2008: *Monitor* No.48, July 2008, Russia & Italy

ICON No. 058, April 2008
Frame No. 63, July/Aug 2008, Netherlands
XXI No.66, June 2008, Turkey
BD No.1807, Feb 2008

2007: *A+U* (445), Dec 2007, Japan
Arch+, Dec 2007, Germany
Architectural Design, Dec 2007

2006: *News Week*, May 2006, USA

2005: *Architectural Record*, Dec 2005, USA

Exhibitions:

2010: *'Working in Series'* solo exhibition of Serie, Architectural Association, London *'Working in Series'* travelling solo exhibition of Serie, Sichuan Southwest Jiaoting University, Chengdu, China

2009: *'Working in Series'* travelling solo exhibition of Serie, HKU Architecture Gallery Shanghai

2009: Urban Futures: Ideas of the City, featuring works of AA Diploma Unit 6, University Technology of Sydney, Australia

2008: Beijing Architectural Biennale '08: Serie Architects Work in Progress, Beijing, China

2007: Typological Formations: Renewable Building Types and the Urban Plan, Architectural Association, London

2006: Venice Architecture Biennale 2006, with AA Diploma Unit 6, Venice, Italy

2006: Armani Teatro, Milan as part of the Global Edit 06: Emerging International Design curated by Wallpaper* Magazine, Milan, Italy

Ongoing Projects:

2012- New Singapore Subordinate Courts Complex

BMW 2012 Olympic Showcase, London, UK
Hongru International Art Gallery, Linyi, China

2011- Ordos Planning Museum, Ordos, China
Wuxi XiShan district Civic centre and Cultural centre, Wuxi, China
YanZhenQing Calligraphy Museum, Linyi, China
Linyi Mountain Resort, Linyi, China
HF Tower, Linyi, China
Napean Sea School, Mumbai, India
Shrimad Rajchandra Ashram Masterplan, Dharanpur, India
XinTianDi, Plot L and M, Residential Development, Hangzhou, China
Gen Bei Urban Design and Landscape Masterplan, Hangzhou, China

2010- XinTianDi: Factory H, Hangzhou, China
Watchtower Residential Development, Maharashtra, India
Aarvli Estates, Goa, India
Blue Frog II, Delhi, India
Imperial Tower, Penthouse Project, Mumbai
Astana National Park Invited Competition, Astana, Kazakhstan
Ruzinov Middle Income Housing, Bratislava, Slovakia
Bohacky-Zahorska Bystrica Residential Masterplan, Bratislava, Slovakia

Past Projects:

2011: An'ren Culture Centre and Museum Invited Competition, Sichuan, China

2010: Astana National Park Invited Competition, Astana, Kazakhstan

2009: Xi'an Horticultural Expo Masterplan 2010, Xi'an (Competition 2nd Prize), China
Tong'chuan Mixed Use Development, Chengdu, China
Mehta Family Penthouse, Mumbai, India
Meswani House, Pavna, India

2008: Guiyang Huaxi Urban Centre, Parcel 9, Guiyang, China
RC Office Complex, Mumbai, India

2007: V Office, Mumbai, India
Birla Walkeswar School, Mumbai, India
Birla Napean Sea School, Mumbai, India
Birla Medical Spa, Mumbai, India

Completed Projects:

2011: 'The Monsoon Club' at the Kennedy Centre, Washington D.C.

2009: The Tote, Mumbai, India

2008: Blue Frog Acoustic Lounge, Mumbai, India

2007: Gallery Monika Spruth Philomena Magers, London

2005: Thanks Boutique, Mumbai, India

2004: Aluhwahlia Gallery, Mumbai, India

2003: Leo Burnett Office, Mumbai, India

2002: Jewel Tech, Mumbai, India