Transparency and Obfuscation: Politics and Architecture in the work of Foster + Partners

Thesis submitted in fulfilment of candidature for degree of Doctor of Philosophy

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April 2011

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Summary

This dissertation examines the obfuscatory potential of transparency in the work of architectural practice Foster + Partners. Transparency, as a narrative of Western culture, has been used unthinkingly and uncritically by architects to equate clarity with rationality, accessibility and democracy. Through a close analytical reading of the practice's output, using a framework which draws from Henri Lefebvre's *The Production of Space* (1974), Jean Baudrillard's *Simulacra and Simulation* (1981), Marshall McLuhan's *Understanding Media* (1964) and Reinhold Martin's *The Organizational Complex* (2003), the political, cultural and social significance of Foster + Partners' transparent architecture is discussed.

The dissertation works with two definitions of transparency: one drawn from Foster + Partners' use of transparent techniques and rhetoric as found in their built and published work; one based on a critical approach to materials which locate the place of transparency in architectural and spatial history and theory.

Three case studies from the practice are read for their transparent capacity and are placed in their respective historical-geographical contexts, following the methods of David Harvey. These projects, The Palace of Peace and Concord in Kazakhstan (2004-2006); HACTL SuperTerminal in Hong Kong (1992-1998); and the Philological Library of the Free University Berlin (1997-2005), are analyzed to examine the technological, material, aesthetic, formal and spatial qualities of their organization. By placing these projects in their respective contexts, the position of transparency as an active architectural and cultural device is discussed, and its role in shaping the structure of social, political and institutional forms is explored.

The thesis concludes by questioning widespread assumptions in architecture and culture that transparency acts to open-up and decrypt the hidden; reading the case studies in relation to Baudrillard on the production of systems that simulate the conditions of the democratic.

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Acknowledgements

To those that helped, thank you.

Especially, Adam Sharr.

And with particular thanks to:

Sam Austin, for listening and persuading.
Freya Geall, for encouragement.
Vanessa Pape, for believing it could actually be finished.
Rowan Sloss, for our conversations on matters material, and more.

My very close friends, who made me laugh, which kept me sane: Amy Larkins, Annabelle Close, Chris Elvidge, Deepa Kothari, Franziska Kelch, Jan-Paul Hartmann, Mareile Pfannebecker, Mat Jones, Sam Eden, Steve Coombs, Steve Harmer and Tom Close.

Dedicated to the memory of my Grandmother, Margaret Blanche Johnston.

Supported by an AHRC doctoral research award.
Travel part-supported by grants from the Welsh School of Architecture

Researched and written in Astana, Berlin, Hong Kong, Cardiff, and London. 2007-2010

'Words do not express thoughts very well; everything immediately becomes a little distorted, a little foolish. And yet it is also pleasing, and seems right, that what is of value and wisdom to one man seems nonsense to another.'

Herman Hesse

For Joss, Penny and Emma.
Impossible without you.

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1 Introduction

Motivation

The term transparency is often used unthinkingly and uncritically by Western architects, commentators, critics and politicians. As part of the narrative of contemporary architectural culture, it is assumed simplistically to equate with openness, democracy, accessibility and material and technical 'honesty'. In Western culture, it is associated with clarity, lucidity, enlightenment and truth. It is rooted in Platonic[1] ideals of light and reason, in the rationality of Cartesian space and in the Hegelian logic of sight and vision.[2] Today, it is associated most primarily with the structural principles of democratic societies and their built representation. Democratic states use it to connote accessibility and it supplies a code for branding the seats of government. Transparency is used, as this thesis will demonstrate, to order, organize, rationalize and control. Its rhetoric often provides a cover story, producing an image of public accessibility where little exists. It is this mechanism of obfuscation and control that motivates the writing of this thesis. The hidden technical, spatial and

1 The myth of the cave indicates the position of light as illumination of form in the philosophical enquiries of Plato. From the *Oxford Dictionary of Philosophy:*
"Myth of the cave Not properly a myth, but the figure or allegory used by Plato in Bk. vii. 514–18 of the Republic, to demonstrate the degrees to which our natures may be enlightened, or unenlightened. At the first stage are prisoners, tied so that they can perceive only shadows on the back of the cave. The shadows are cast by artificial objects, and the light is thrown by a fire. Their only reality would be the shadow of these artificial objects. With enlightenment a prisoner might be turned to see first the artificial objects, then the fire, then the real world, and last of all the Sun. Each stage would be difficult and unfamiliar, and at the end the enlightened subject would be unable to communicate his knowledge to the prisoners remaining below. Plato says that the ascent stands for the upward journey of the soul into the region of the intelligible (the forms), identified with that which is alone truly real. The myth may be read purely as an invitation to think, rather than to rely on the way things appear to us, but it is often used as an open invitation to belief in esoteric and mystical states of knowing."
"myth of the cave" Blackburn, Simon. *The Oxford Dictionary of Philosophy*. (Oxford: Oxford University Press, 2008). Oxford Reference Online.
<http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t98.e2110>
[accessed: 15 April 2010]

2 For a discussion on the relationship between light and truth see Hans Blumenberg 'Light as Metaphor for Truth' in *Modernity and the Hegemony of Vision* ed. by David Michael Levin (Berkely: University of California Press, 1993) pp. 30-62. Here, an historical lineage of the Western conception of light as productive of philosophical enlightenment is given, encompassing Cicero, Plato, Descartes, Bacon. Also, in the same volume, see Stephen Houlgate 'Vision, Reflection, and Openness: The "Hegemony of Vision" from a Hegelian Point of View', pp.87-123, where the Western episteme of vision is placed as a positive model for enquiry drawing on Hegel. Also, again in the same volume, see Dalia Judovitz 'Vision, Representation, and Technology in Descartes', pp.63-86, for a discussion on the metaphorical position (as against the literal position) of vision to accurate, philosophical-scientific enquiry and the augmentation of human vision (fallible) with technology. These provide an introduction to the position that this thesis approaches transparency and vision through.

rhetorical operations of transparency are rarely acknowledged in architecture. The following will examine how transparency obfuscates, for what reasons, in specific situations.

Aim

The architectural practice Foster + Partners has deployed the rhetoric of transparency widely. In order to investigate the hidden operations of transparency, this thesis will read closely the written, drawn, photographed and built output of three of the practice's projects: the Palace of Peace and Concord, Astana, Kazakhstan; HACTL air-cargo handling facility, Hong Kong; and the Freie Universität Philological Library, Berlin. It considers these projects in reference to the understanding of space developed by Henri Lefebvre in *The Production of Space*[3] and the critique of simulations provided by Jean Baudrillard in *Simulacra and Simulation*[4]. Marshall McLuhan's *Understanding Media*[5] and Reinhold Martin's *The Organizational Complex*[6] develop this understanding of the confluence of architecture, media and organization.[7] Together the work of these four shows that transparency is a method of organizing space through systems and structures. This thesis sets out a definition of transparency as a complex of ideas. It suggests that Foster + Partners implement an ideology of transparency in built form that constitutes an obfuscatory mechanism and a system of rhetoric:[8] a system that hides through its very openness.

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3 Lefebvre, Henri *The Production of Space* Translated by Donald Nicholson-Smith, (Oxford: Blackwell, 1991), first published in French in 1974.

4 Baudrillard, Jean *Simulacra and Simulation* (Ann Arbor, MI: The University of Michigan Press, 1994) first published in French in 1981

5 McLuhan, Marshall *Understanding Media: The Extensions of Man: Critical Edition* (Berkeley: Gingko Press, 2003) first published in 1964. pp.18-19

6 Martin, Reinhold *The Organizational Complex*, (Cambridge, MA: MIT Press, 2003) p.15

7 Lefebvre provides the overarching epistemology for this thesis. His Ph.D student Jean Baudrillard's work is used to develop points within Lefebvre's writing and to discuss the production of simulations. Marshall McLuhan's analysis of media (in a myriad of forms) takes a similar starting position on the spatiality of relations as Lefebvre, provides a catalyst for Baudrillard's work and is explicated through Reinhold Martin's text which takes McLuhan's dictum as one of its critical components. See Genosko, Gary *McLuhan and Baudrillard: Masters of Implosion* (London: Routledge, 1999) and Baudrillard, Jean 'Review of Marshall McLuhan's *Understanding Media*' in Gary Genosko (ed.) trans. By Mike Gane *The Uncollected Baudrillard* (London: Sage, 2001) p.42. The interrelation of these texts is important, as they build on each other to develop a unified theoretical position to question social, cultural and political instances of transparency.

8 *Rhetoric, (n.)* Oxford English Dictionary

'1. a. The art of using language so as to persuade or influence others; the body of rules to be observed by a speaker or writer in order that he may express himself with eloquence.

2. a. Elegance or eloquence of language; eloquent speech or writing. Obs. b. Speech or writing

The close reading and critical analysis of Foster + Partners that this thesis undertakes has not been performed before. Literature on Fosters' practice is dominated by closely controlled monographs and journal publications. This dissertation contributes an original piece of research on an architectural practice that has considerable influence both in the architectural culture of the UK and abroad.

This project presents an original contribution to knowledge through the focused and critical analysis of projects from Fosters, particularly three projects that have not been viewed as significant in the development of the practice, yet are important to understanding how Fosters operates. The close reading of Fosters carried out here also presents an original contribution, as the practice has not received focused and theoretical attention towards the politics of their projects. As stated below, the majority of written material on the practice is of a biographical nature and eschews the critical stance that this thesis takes. By approaching Fosters through an analytical framework that draws on a Marxist base, hidden structures and forms of architectural organization are revealed that have not been discussed or analysed from an architectural perspective before.

By building a framework for analysis of the transparent in Fosters' work, this thesis develops an original contribution to the debate on the position of transparency within modern western architecture and critically appraises the practice's approach to the production of both the rhetoric and the built fabric of transparent, 'democratic' architectures. The combination of a focused and critical assessment of these three Foster projects, and the resulting analysis of the obfuscatory position of the transparent within the built and published output of the practice constitutes an original contribution to knowledge on corporate and institutional architectural organization.

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expressed in terms calculated to persuade; hence (often in depreciatory sense), language characterized by artificial or ostentatious expression.

e. transf. and fig., said esp. (a) of the expressive action of the body in speaking; (b) of the persuasiveness of looks or acts; (c) of artistic style or technique.'

From Oxford English Dictionary Online, Oxford University Press <http://dictionary.oed.com.abc.cardiff.ac.uk/cgi/entry/50205926?query_type=word&queryword=rhetoric&first=1&max_to_show=10&sort_type=alpha&result_place=1&search_id=UX3K-Ji0vqU-3013&hilite=50205926> [accessed: 5 May 2010]

Structure

At the core of this dissertation are case studies of the three Foster projects already mentioned. Each project is addressed in order to investigate overlapping uses of architectural, political, cultural and social transparency. These are preceded by two definitions of the transparent: the first drawn from the design output of Foster + Partners following a close reading of their published material; the second setting out a critical definition of transparency based on Lefebvre and Baudrillard, Martin and McLuhan. The conclusion brings these definitions together and suggests the obfuscatory mechanisms at work in transparent architectures.

Definitions

The thesis relies on two definitions of transparency, which intersect throughout and which will be outlined in more detail below: as understood by Fosters and; as defined by reading Lefebvre, Baudrillard, McLuhan and Martin. Transparency as a material property will not be separated from transparency as a political, social and cultural condition. The two definitions do not operate independently from each other.

Space can be taken to mean the complex of intersecting forces that Lefebvre defines in *The Production of Space,* which will be developed in the course of the discussion.

The architectural practice which is currently known as Foster + Partners is referred to colloquially among architects and in the construction industry as 'Fosters'. It has previous been known as Foster Associates (established in 1967 with Wendy Cheeseman, then married to Norman Foster), Foster & Partners Limited and in October 2006 changed its name to Foster + Partners Limited. Throughout this document, Foster + Partners will be referred to as 'Fosters' or 'the practice'. Norman Foster, the architect who leads the practice, will be referred to with his full name.

Reading Organization

The analysis of the built fabric of architecture is crucial to arguments of this dissertation. Architecture can be read through its organizational structure. It can be read through the organization of facades; through the organization of space; through the organization of material and construction and through the organization of patterns

of inhabitation. To understand the layers of organization implicit in the conception, procurement, design, construction, inhabitation and destruction of a structure provides a more complex illustration of the intersecting drives behind architecture. Conceiving of architecture in its broadest sense as system of competing and complementary structures is the approach this document will take, an approach that stems from the idea of the active quality of space as produced[9] and the complex organization of productive forces that generate built fabric.[10]

Foster + Partners

Fosters have an approach to design that emphasizes the use of advanced materials to the fore. The literal 'see-through' capacity of much of their architecture is of interest. However, it is the cultural implications of an obsessive approach to surfaces, structure and materials which remain particularly important, for example at Stansted, Chek Lap Kok and Beijing airports, or at the British Museum, Greater London Assembly or Carré d'Art.

Fosters' use of transparency in such projects is well documented. Most prominently at the Reichstag in Berlin, where transparency has been overtly linked to the democratic process[11] by Deborah Ascher Barnstone[12] and others, as a transparent ideology. The practice has helped to establish a distinctive relationship between architecture, democracy and transparency associated with the project of reconstruction and reunification. As producers of iconically transparent structures they have established a reputation with democratic Western (and Westernized) nations and with major international corporations. They sell a design product that claims a 'solution' to functional, aesthetic and organizational demands. A product and a process that is, after thirty years of practice, refined. Fosters also have a media operation that seeks to control public perception of the practice's output. They are prolific, globally, as a commercial firm.[13]Their published output has cultural influence over other large-scale

9 Lefebvre *The Production of Space,* p.26
10 Martin, p.15
11 Reichstag, renovated home for the Deutsche Bundestag in Berlin. See fosterandpartners.com <http://www.fosterandpartners.com/Projects/0686/Default.aspx> [accessed: 15 April 2010], and <http://www.bundestag.de/htdocs_e/index.html> [accessed: 15 April 2010]
12 Barnstone, Deborah Ascher *The Transparent State* (Oxford: Routledge, 2005)
13 The practice has offices in: London, New York, Madrid, Abu Dhabi and Hong Kong. The closure of Berlin and Istanbul offices was announced in February 2009. See bdonline.com

architectural practices that produce key spaces of contemporary Westernised society.[14] As a widely published and internationally acclaimed practice,[15] Foster and Partners appear to set standards of commercial functionality, economic efficiency and organizational rigour through a closely controlled and managed design process.

Producing the Organization of Space: Henri Lefebvre and Reinhold Martin

Lefebvre argues that space is directly produced. Not a volume awaiting filling by content, or an indefinable quantity that can be enclosed by walls, a roof. Space for Lefebvre is produced by, and produces, the actions of a society, a culture. For Lefebvre, space in capitalist societies becomes dominated by abstraction – a concept of distinct difference from what he terms the lived quality of space.[16] Lefebvre sees the social production of space, which will be outlined in greater depth in the critical definition of transparency, as being an illusion:

> 'If it is true that (social) space is a (social) product, how is this fact concealed? The answer is: by a double illusion, each side of which refers back to the other, reinforces the other, and hides behind the other. These two aspects are the illusion of transparency on the one hand and the illusion of opacity, or 'realistic' illusion on the other.'[17]

It is this capacity for transparency to present an illusion through the production of space and spatial conditions that this thesis take as its basis for critiquing the ideology and material quality behind Fosters' use of transparency. Jean Baudrillard – Lefebvre's former doctoral student and French sociologist – develops the notion of illusion in *Simulacra and Simulation* which contributes to the following analysis of the obfuscatory potential of transparent systems of organization.

<http://www.bdonline.co.uk/story.asp?storycode=3133727> [accessed: 15 April 2010]

14 For an example of the scale of Fosters' activity and influence, see Colin Davies 'Landmarks and Lost Opportunities in Foster's London' *Architecture Today* May 2007, n.178, p.30-51

15 Prizes and awards for Foster + Partners: Norman Foster, Pritzker Prize, RIBA Gold Medal. Multiple awards for projects, including 2 Stirling Prizes. See fosterandpartners.com <http://www.fosterandpartners.com/Data/Awards/2000.aspx> [accessed: 15 April 2010]

16 Lefebvre *The Production of Space,* p.26

17 Lefebvre *The Production of Space,* p.27

Reinhold Martin's study of cold-war military, technical and cultural intersections, *The Organizational Complex*, suggests how to understand the relationship between architecture and the systems and structures bound with it. Any building is not merely a physical object that stands in space; it is both representative and productive of human systems and structures of interaction and control. Organization, through the material construct of transparency and its associated rhetoric, constructs these systems. *The Organizational Complex* provides the method to question the specific relations between organization and architecture within Fosters' work.

Baudrillard & McLuhan

The Production of Space sets the basis for the understanding of spatial production in social, political and cultural spheres; *The Organizational Complex* provides the framework for understanding the congruence between architecture and organized social groups. In this context, the texts from Baudrillard and McLuhan clarify the use of transparency in built forms, and elucidate positions developed by Lefebvre and Martin.

Marshall McLuhan outlines the productive power of media to generate social forms, implying that transparency is a material property leading to social conditions. Transparency is considered part of a system that organizes and controls space, building on Martin's suggestion that media has power to organize, through both structuring and communicating rationality and order.

Using Jean Baudrillard's texts *Simulacra and Simulation, The Transparency of Evil,*[18] and *The Intelligence of Evil,*[19] the notion of transparency as a mechanism for the production of simulations of social conditions, such as democracy and participation, will be developed. Taking the idea from *Simulacra and Simulation* of the production of illusions that become real through architecture, and the notion of a cultural condition of transparency that Baudrillard refers to as Integral Reality, the illusory capacity of transparent architecture is questioned.

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18 Baudrillard, Jean *The Transparency of Evil: Essays on Extreme Phenomena* (London: Verso Books, 1993)

19 Baudrillard, Jean *The Intelligence of Evil or the Lucidity Pact* (Oxford: Berg, 2005)

Drawing these two themes together, within the framework of space as product, the thesis looks at transparency as productive of a form of brand identity or image.[20] Bringing together McLuhan's ideas on media and Baudrillard's conception of illusion/simulation, the capacity of architecture to generate a transparent brand or identity for an organization, institution or state, is investigated.

Method

As already stated, through close readings of the social, cultural, political and material conditions of each project, using the texts introduced above, this dissertation investigates the obfuscatory operations of transparency within the architecture of Foster + Partners. This method can be described as contextual analysis; to use David Harvey term, it is a form of 'historico-geographical materialism'.[21] It pursues Marxist, dialectical analysis built on the careful study and reading of specific social, economic and political contexts.[22]

Architectural details, spatial-planning and aesthetics are read closely to draw conclusions about the use of transparency in each project. These architectural specifics are placed within a political and cultural context in order to relate the function of the architecture to its social setting, examining reasons for its production. The geo-political and cultural context for each project is related to the functioning of the architecture (in its broadest sense: technical, social and political). The contextual production of the architecture - *not* its production as an object of art from an author[23] - is of interest here. Architecture is understood, following Lefebvre, as a social product: a building emerges from a combination of local and global politics, economic conditions and creativity.

Discussion of Fosters' built output is based on publicly accessible published material in the form of journal articles, monographs, web-based sources, and architectural

20 Klingmann, Anna *Brandscapes: architecture in the experience economy* (Cambridge, MA: MIT Press, 2007)

21 Harvey, David in Soja, Edward *Postmodern Geographies* (London: Verson, 1989) p.44

22 For a discussion of the analysis of the context of the city and architecture, see Iain Borden et.al, 'Things, Flows, Filters, Tactics' in *The Unknown City: Contesting Architecture and Social Space* ed.by Iain Borden, Joe Kerr and Jane Rendell (Cambridge, MA: MIT Press, 2001), pp.2-27

23 See: Barthes, Roland 'Death of the Author' in *Image, music, text* essays selected and translated [from the French] by Stephen Heath (London: Fontana Press, 1977), and Adam Sharr (ed.) 'Introduction' *Architecture and Culture* (London: Routledge, 2012) forthcoming.

texts. It is also based on photographs, video and notes gathered from a four-week AHRC funded study visit to Berlin, Astana and Hong-Kong. This latter material formed the basis for the analysis of the lived (to use a Lefebvrian term) spatial condition associated with each site.

Throughout the course of this research, I have been asked on numerous occasions: why are you not interviewing Norman Foster? Or at least a director or senior architect? Owing to the specific content of this chapter, it is necessary to address here the question of intentionality and the author. Architecture does not operate in a vacuum. It is not produced by an individual genius, devoid of cultural contexts and political influence. It is not Norman Foster the man that this thesis discusses, instead it is Foster + Partners – the international, Public Limited Company. The company's brand is identified with the image and productive capacity of an individual who still retains an involvement in the practice but in a more symbolic role. Norman Foster remains the majority shareholder, but whose specific contribution is less decisive than the combined work of over six hundred individuals within an organization dedicated to design production. The output of the practice is document for external consumption through salaried authors (David Jenkins) and subcontracted writers (Richard Weston, Deyan Sudjic amongst others), who have contributed to a series of monographs and documentary publications in the public realm.[24] This thesis draws solely on those works that are widely published, because the construction of the understanding of the building is as important to this study as the physical object: the ideal reception of the built fabric is fashioned, refined and promoted through these publications. These publications also help to construct a broader definition of transparency within architectural circles. It is impossible to discern Norman Foster's intent where authorial agency is spread between many authors. It is so complex with regard to specific projects that it is impossible to pursue. Instead, following Barthes' analysis of the necessarily reductive focus on the voice of a single author – which, according to Barthes, reduces the capacity to read broader cultural motivations and impulses behind production – this chapter examines the material from Fosters in the public domain.[25] These cultural artefacts, as they could be termed, are also valuable to study,

24 For a complete list of publications, see bibliography, p.257. The use of respected authors for Fosters' monographs provides an impression of academic impartiality that would not exist if they were authored only by members of the practice or Norman Foster himself.

25 Barthes, 'Death of the Author' *Image, music, text*, p.142

as they are fundamental to the production of a corporate identity, a brand, for the practice. As I will illustrate later, the production of a brand is equally a production of an image of a thing, and an image that encompasses and produces the idea of transparency.[26] This thesis does not attempt an historical survey of the practice, but focuses on the position of ideas of openness, clarity, lucidity and accessibility within recent projects, published practice outputs and the three case studies, in order to illustrate how transparency operates as a cultural phenomena of organizational potential within specific, built examples. Effectively, this thesis looks at the production of social and cultural effects through a close reading of cultural artefacts.

Foster + Partners is an internationally recognised brand with a product that is assumed to have consistency in its design and construction, as well as in its rhetorical content. In their contemporary shape, past works and publications construct the current identity of the practice. Methods of production and corporate structures are institutionalised based on the experiences of past projects and these experiences now form established patterns of behaviour and approaches to design and construction. Methods worked out during these projects have become fixed points for development. Around these seminal moments, the practice's epistemological approaches have grown. Ways of thinking and acting have been concretised into a widely shared product – shared with future employees, other architects, critics and the public through publications from the Foster + Partners office.

The case studies have been arranged in order to sequentially develop the story of the use of transparency in Fosters' work. They are not chronologically ordered, but construct a narrative of the practice's implementation of techniques and technologies of the transparent.

Projects

The three case study projects, distributed globally and operating in corporate, political and cultural spheres, span fifteen years of Foster + Partners' activity. The three projects - Palace of Peace and Concord, Kazakhstan; HACTL Air Cargo handling

26 Klingmann *Brandscapes*, p.20

facility, Hong Kong; and the Freie Universität, Berlin - represent a spectrum of the practice's work on institutional structures. These projects are significant for their spatial and material developments within Foster's output. They are distinctively related. Their surface details and metaphorical expression of transparent ideals are central to their production. They are key examples of the practice's development of transparent techniques and technologies.

Kazakhstan

The Palace of Peace and Concord *[1]*, 2004-2006, Astana, Kazakhstan is a venue for the Congress of the World and Traditional Religions, held every three years from 2003, and from 2006 in the Palace of Peace and Concord. Here, representatives of the world's main religious groups meet and discuss matters of international significance in the setting of Kazakhstan's new city, Astana. The building is a key part of the redevelopment of the city, from Akmolinsk (White Grave), a provincial Soviet outpost, to Astana (Capital). It is a project significant for the identity of Kazakhstan, presented to the world as a developing petro-democracy.[27] The rhetorical significance of this project is considerable, and its manifestations of transparency are central, it will be argued, to its functioning.

Hong Kong

The HACTL SuperTerminal *[2]*, 1992-1998, processes cargo at Hong Kong's Chek Lap Kok airport. The structure is a semi-automated handling unit for one of the world's busiest freight airports. HACTL holds a central position of importance in the distribution networks within Southeast Asia and global trade flows. The economic stability of the region is closely related to the successful functioning of this building, its internal electronic and mechanical systems, and its interaction with air-traffic within Chek Lap Kok.

A systemic and organizational approach to the use of transparency is in evidence in this project: conditions of transparency within the building are, it will be argued, related to maintaining the operation of HACTL's systems of distribution.

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27 See Prof. John Keane on petro-democracy <http://www.johnkeane.net/pdf_docs/petro_democracy.pdf> [accessed: 13 May 2010]

Transparency is used here as a regulating device: rational and logical systems of organization within the building are used to resist the entropic potential of flows of global trade. How Fosters uses transparent techniques and technologies to control these systems will be explored through this project.

Germany

The Freie Universität Berlin Philological Library, *[3]* 1997-2005, provides a new centre for humanities research on the Dahlem campus of the FU in Berlin. Sitting within the context of Candilis Josic Woods Schiedhelm's *Rostlaube* project from the 1970's, the FU library can be read as a combination of Foster + Partners' uses of transparency within institutional settings.

Within this project, the practice's ideological position is read as a reflection of social convictions surrounding the rhetoric of the transparent, and its position as a central aspect of the practice's work.

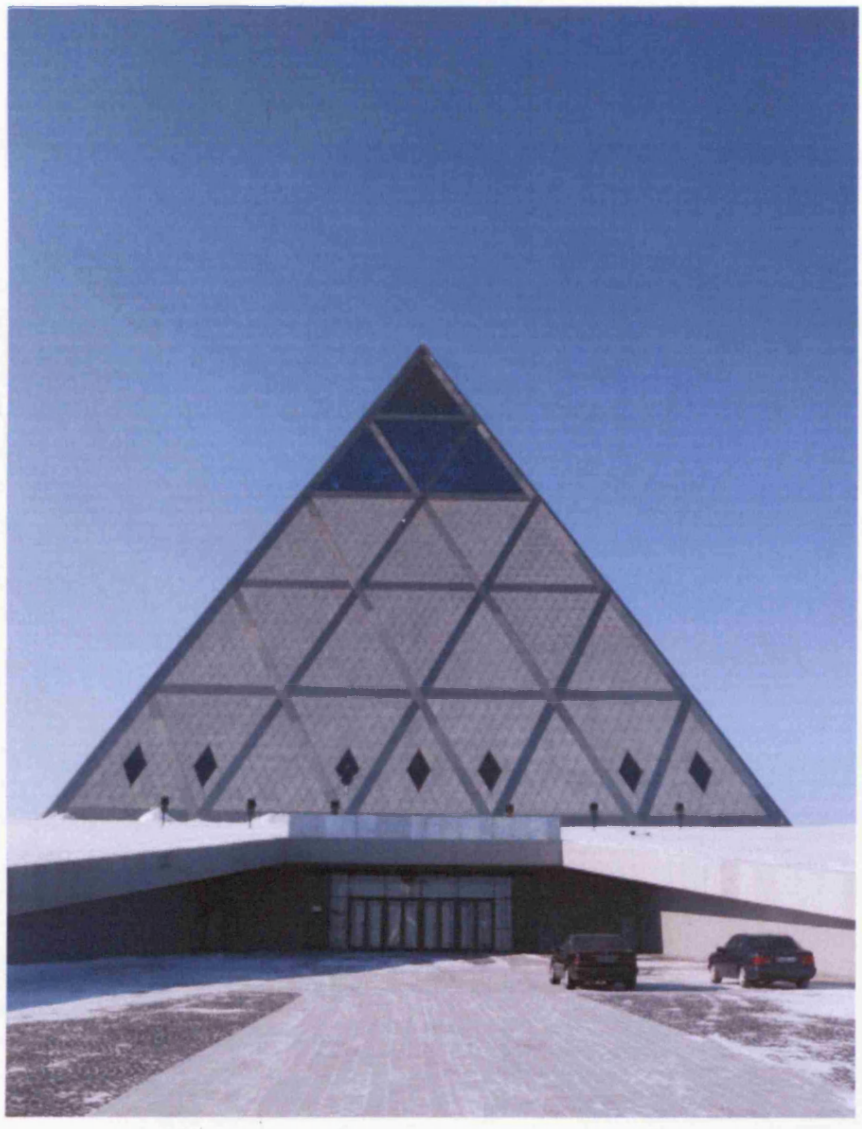

Fig. 1
Palace of Peace and Concord, Astana

Fig. 2
HACTL, Hong Kong

Fig. 3
Free University, Berlin

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In order to examine Fosters' approach to transparency, and investigate the obfuscatory mechanisms at work within the three projects, it is necessary to define the practice's stated approach to the ideal of the transparent. But first it is necessary to define what has come to be termed transparency in relation to architectural discourse and position the practice's work in relation to key critiques of the transparent.

2 Defining Transparency

Transparent Context

Transparency is variously attributed to material properties: the literally 'see through' capacity of glass; the necessary structural condition for democratic systems; and positions of intellectual and philosophical engagement. Transparency also brings to the fore the systems and structures of spatial, political and cultural organization which form an invisible base supporting the idea of democratic cultures.[28]

Lefebvre's conception of the production of space locates transparency as central to what he considers a Western epistemology: transparency as central to society and culture based on values of logic and rationality. In order to understand the way transparency is used by Fosters, it is helpful to establish the position of transparency within Western architectural space as defined by Lefebvre. This chapter begins by establishing his stance on the development of Western approaches to space and goes on to define the role of transparency within this position, before reviewing its relationship to the work of other architectural theorists. It ends with a definition of transparency drawn from Lefebvre and Baudrillard, Martin and McLuhan, that informs the subsequent analysis of transparency in Fosters' practice.

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28 Notion of the twin supportive structures of capitalist society from Karl Mark and Freidrich Engels, and defined by Marx in *A Contribution to the Critique of Political Economy*. from *Oxford Dictionary of Philosophy:*

'Base and superstructure The metaphor used by Marx and Engels to characterize the relation between the economic organization of society, which is its base, and the political, legal, and cultural organization and social consciousness of a society, which is the superstructure. The sum total of the relations of production of material life 'conditions the social, political, and intellectual life process in general' (Marx, Preface to A Contribution to the Critique of Political Economy). The way in which the base determines the superstructure has been the object of much debate, with writers from Engels onwards concerned to distance themselves from the reductionist and mechanistic implications that the metaphor might suggest. It has also been pointed out that relationships involved in production are not merely economic, but involve political and ideological relations. The view that all causal power is centred in the base, with everything in the superstructure merely epiphenomenal, is sometimes called economism. The problems are strikingly similar to those that arise when the mental is regarded as supervenient upon the physical, and it is then disputed whether this takes all causal power away from mental properties.' "base and superstructure" Blackburn, Simon *The Oxford Dictionary of Philosophy* (Oxford University Press: Oxford, 2008). Oxford Reference Online. <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t98.e346> [accessed 15 April 2010]

The logos: Transparent Rationality and Reason

The spatialization of relations is a concept that has its roots largely in the later Modern period, around the rise of industrial economies.[29] Space, Lefebvre argues, became synonymous with its logical quantification for productive purposes. Early modern conceptions of space rested on mathematical and empirically observable states of being. The logos[30] – the Western approach to rational, logical thought and conception, discussed by Lefebvre in *The Production of Space,* has its basis in Greek thought, in the ordering of the cosmos, and hence the world, to the rule of Law. Cartesian[31] logic proposes a grid of space, an attempt to define the world in terms of its subdivisibility – an attempt, it may be argued, to position the world in an intelligible, rational frame of reference. As Lefebvre suggests:

> 'Not so many years ago, the word 'space' had a strictly geometrical meaning: the idea it evoked was simply that of an empty area. In scholarly use it was generally accompanied by some such epithet as 'Euclidean', 'isotropic' or 'infinite', and the general feeling was that the concept of space was ultimately a mathematical one.'[32]

Nineteenth century, rationalist conceptions of space, and hence the arts and sciences of space such as architecture, tended towards the absolute. According to Lefebvre space came to dominate all senses and bodies. Architectures were positioned in space that was seen as a volume to be filled, a mathematical void of quantifiable proportions within which activity took place. Space was seen as existing *a-priori*, without prior conception or formulation. Human relations, individuals in their existence, were not considered as a constructing factor of space. Space was to a certain degree abstracted, reduced to a statistically assessable form:

> 'With the advent of Cartesian logic, [...] space had entered the realm of the absolute. As Object opposed to Subject, as *res*

29 Lefebvre *The Production of Space,* p.82

30 Dent, Nicholas "logos" *The Oxford Companion to Philosophy* (Oxford University Press: Oxford, 2005) Oxford Reference Online. *'Logos. A Greek word, of great breadth of meaning, primarily signifying in the context of philosophical discussion the rational, intelligible principle, structure, or order which pervades something, or the source of that order, or giving an account of that order.'* <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t116.e1469> [accessed: 15 November 2006]

31 *The Production of Space*, p.1

32 Ibid.

> *extensia* opposed to *res cogitans*, space came to dominate, by containing them, all senses and all bodies.'[33]

The mathematician, for Lefebvre, was the master of this space. They calculated and quantified the functioning of individuals and objects within and detached from space. The rational analysis of spatial factors, of the very fabric of daily life, the environment within which people lived, was placed as the determining element of its existence – space was divided into subsets and mathematical reference points.

> '[...] mathematicians appropriated space, and time, and made them part of their domain, yet they did so in a rather paradoxical way. They invented spaces – an 'indefinity', so to speak, of spaces: non-Euclidean spaces, curved spaces, *x*-dimensional spaces (even spaces with an infinity of dimensions), spaces of configuration, abstract spaces, spaces defined by deformation or transformation, by a topology and so on.'[34]

This is the background against which Lefebvre was to work – a modern conception of the development and capacity of space. Space as volume, as object (and as objectified) reality. It is against this background that Lefebvre wrote *The Production of Space*, to attempt to reintroduce into the discourse on space a lived dimension, a dimension that reacted against the *a-priori* conception of space, and introduced an *a-positori* dialectical analysis of space in a triad of states: perceived, conceived, and lived. Effectively, Lefebvre attempted to bridge the gap between the mathematical conception of space and the philosophical, even ontological, discourse on space that had characterised the Modern period. In *The Production of Space*, Lefebvre aims at the development of a unified theory of space: a theory that is capable of linking disparate discursive traditions in a 'unitary theory' of the physical, mental and social realms.

Lefebvre's Tripartite

This conception of a whole analysis of spatial production rests on Lefebvre's notion of the *tripartite.* The three-part analysis of how space is directly produced, through social, technocratic and economic methods. I will refer here to the definition of

33 Ibid.
34 *The Production of Space,* p.2

Lefebvre's tripartite as outlined in my M.Phil 'The Production of Corporate Space'. From this I suggested that Lefebvre's contention in *The Production of Space* is that space is directly 'produced' on three interconnected planes of activity: those of the perceived, the conceived and the lived. These three terms are developed through the tripartite of 'spatial production', discussed by Lefebvre as 'spatial practice', 'representations of space' and representational space. According to Lefebvre, space is not an empty volume waiting to be filled by social or scientific activity, but a product (or work) that is inseparable from all human activity, constantly altered and dialectically developed through daily life. This conception of space differs from that of traditional western thought, which creates a notion of space as either the container, an empty vessel that is malleable to fit social forms (Cartesian space) or as a quantifiable, scientific space of rationality and reason, (Kantian space) belonging to what Lefebvre labels an 'a priori realm of consciousness',[35] a space of conception that exists without experience of events in the lived world, but existing as a 'science of space'.[36]

The nature of space as product entails its reproducibility. As Lefebvre highlights from a Marxist analysis, in a capitalist state the reproduction of the means of production is a key feature of its operation. According to Lefebvre, the multiple spaces of modern capitalism have a high level of complexity in their reproducibility and spaces of reproduction, and these incorporate three interrelated levels, those of the reproduction of the family (the basis of the production of labour), the reproduction of labour power, and the reproduction of the social relations of production.[37] These spaces of reproduction, constituting elements of social space, are maintained by symbolic representations in society – through the codification of relations in specific locations. Relations such as those that form the experiences of daily life, from accepted protocols of activity in the workplace, including spatialized relations of hierarchy, the physical position of those in power in relation to subservient employees, to the exchange of goods and money in retail environments. Lefebvre states that the representations of the relations of production (subsuming power relations) occur in the form of buildings, works of art and monuments.[38] Lefebvre terms these displays of

35 *The Production of Space,* p.2
36 Ibid.
37 Lefebvre, *Dialectical Materialism (Le Matérialisme Dialectique)* (Paris: Presses Universitaires de France, 1940), p.33
38 Ibid.

power relations as frontal, public, overt expressions. He realises the existence of covert, clandestine activities that also act to maintain these relations, such as the physical layout of a shopping arcade to ensure high product sales through the hidden manipulation of environmental qualities, or the covert surveillance of the workplace via closed circuit television, and even subtler monitoring of computer activity in offices. According to Lefebvre, there are spaces that directly control, in an explicit fashion and there are spaces that implicitly control, through actions that appear superficially emancipatory.[39]

Transparent Ideologies

Understanding that space is produced, this definition uses Lefebvre's historical portrayal of the development of an ideology of transparency within western epistemologies. Transparency, on one level, is defined as being that condition most closely allied to enlightenment principles of rationality, reason and science.[40] However, Lefebvre's understanding of this condition sees transparency as an 'illusion':

> 'Here space appears as luminous, as intelligible, as giving action free rein. What happens in space lends a miraculous quality to thought, which becomes incarnate by means of a design (in both senses of the word).'[41]

Thought, mental activity and logical reasoning are conflated, as Lefebvre theorises, with light, with luminosity. The desire to illustrate, intellectually, to think freely and with a liberal humanist position, is to throw light on to a previously dark and shadowy interior of knowledge. Enlightenment, the enlightening of the world through applied knowledge, the transformation of the unknown into the known through human endeavour. According to Lefebvre, that which was previously thought of as magic, as unintelligible and encrypted was subject to a process of illumination – casting aside the complexity of myth and replacing it with a logic of the visible, the seen and the knowable.

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39 Wainwright, E 'The Production of Corporate Space: Henri Lefebvre, Reinhold Martin & the working methods of DEGW North America' M.Phil thesis, Cardiff University, January 2006

40 Lefebvre *The Production of Space*, pp.39-40

41 Lefebvre *The Production of Space*, p.27

> 'The illusion of transparency goes hand in hand with a view of space as innocent, as free of traps or secret places. Anything hidden or dissimulated – and hence dangerous – is antagonistic to transparency, under whose reign everything can be taken in by a single glance from that mental eye which illuminates whatever it contemplates.'[42]

For Lefebvre, the mental capacity to interrogate space, and hence to discover the 'true' meaning of space and its relationship to material existence, is directly linked to a transparent ambition. The illusory nature of transparency is related to comprehension, the casting off of realms that Lefebvre discusses as 'dissimulated' – realms hidden from the penetrative gaze of the *Logos*, the Greek basis for Western society's rational and logical approach to ontological forms, including space. The luminous quality of transparency is key to its illustrative capacity – and a quality that is bound up in the history of the application of transparency and its forbears, 'clarity' and 'openness', to architecture.

The emergence of a transparent society can, for Lefebvre, be seen to have its lineage in Greek and Roman architectures; an architecture and form of urbanism that Lefebvre sees as commensurate with the *Logos* and as an 'exorcist of underworld forces.'

> 'Rome was itself the exorcist of the forces of the underworld, challenging those forces by representing them in a graspable manner [illuminating them]'[43]

The underworld was demystified, illustrated and illuminated by intellectual activity, by scientific and mathematical thought and, through the construction of temples, *agora* and urban realms, this status of the *Logos* was developed and reinforced. The mathematical design and construction of the Parthenon, as Lefebvre illustrates, came to dominate a material use of stone with a precise technique of proportion and minute adjustments that produce a perfect straight edge: the perfection of material abstraction that is not 'object' as Lefebvre determines it, but a purely intellectual perception of total meaning.

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42 Ibid., p.28
43 Lefebvre, *The Production of Space,* p.243

> 'Visitors may walk all the way around, but the place is not an 'object' that can be grasped otherwise than by means of a thought-process capable of perceiving of it as a totality, and hence as endowed with meaning. Curves appear – intentionally – to be straight: the lines of the columns, as of the entablature, have a curvature which is 'imperceptible' because the eye compensates for it. Thus for the Greeks curves are as it were reabsorbed by straight lines, which in the process lose their rigidity, and are softened, while continuing to obey the dictates of the Logos.'[44]

Space became embedded with a signifying potential that was encoded through intellectually shared signs – the light of the *Logos* suffused the urban with an intelligibility and enabled a shared communication. The absolving of space, for Lefebvre, of the dark, subterranean and mystical (a process that began in Greece and found its apotheosis in the Modern) led to an 'absolute' space, as Lefebvre terms it, where the cryptic was overlaid (an important concept for Lefebvre) with the rational – an early form of transparent thinking.

> 'In the west, therefore, absolute space had assumed a strict form: that of a volume carefully measured, empty, hermetic, and constitute of the rational unity of logos and the cosmos.'[45]

Lefebvre demonstrates a foundation for western ideology, for a culture and society of (apparent) rationality and reason. But, as he discusses with relation to Greece, this is a processes of overlying, of supplanting previous conceptions of space with new versions of a spatio-political realm. The dark spaces of Greece were exposed but they were not eliminated, they were overwritten. In discussing the 'cradle' of modern conceptions of space, Lefebvre suggests that the:

> '[...] underworld had thus not disappeared. In daytime, Zeus and reason had vanquished the shadowy or chthonian forces. But in the depths of the infernal world, their defeat not withstanding, the Titans were still active. [...] Greek genius was able to localize the underworld, to specify and name it, and in so doing subordinate it to the surface world.'[46]

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44 Lefebvre, *The Production of Space*, p.237
45 Ibid., p.238
46 Ibid., p.248

Myth and legend, subterranean forces, these were still active yet subsumed by Greek culture – as much as is still active today, the rational being posited above the irrational. A hierarchy of space was created, with the 'illuminated' and 'light' positioned as the pinnacle of progress, the height of modern desires.

To illustrate the emergence of the modern as another spatial overlay, Lefebvre suggests a rift was wrought with the fall of Rome – the absolute that had been the totalising force in pre-modern society became, in what are termed the 'dark ages', associated with the subterranean again. Logic and rationality were overlaid. The city and urban realm were replaced by a largely rural, agrarian society of less codified rule. This split occurred, according to Lefebvre, with the commodification of land – the development of the Roman villa as a unit of landownership.[47] The villa model of space denied the sacred, and for Lefebvre, it represented the zenith of Greco-Roman progress, the privatisation of land and the rule of law.

> 'The villas of a latifundiary landowner retained not a trace of the sacred. It was the concretization, within agro-pastoral space, of a codified, law-bound spatial practice, namely private ownership of the land. The villa thus combined in a single unit of material production the general traits of Roman society (an order grounded in juridical principles).'[48]

Lefebvre suggests this had the effect of breaking up a previously homogeneous space of communal ownership and social order. Land became a commodity and was subject to a process of division and rule – effectively, it could be argued, setting the scene for the emergence of a fiefdom of individual ownership.

> 'The resulting diversification of space, along with the legal predominance of the private realm, meant the loss of Greek order and a rupture of the unity of form, structure and function.'[49]

The enlightenment named the period dark, as to enlighten, one must have its opposite. This opposite, this darkness of the subterranean was, for Lefebvre, to re-emerge after the fall of Rome. The excesses of the final years of the Roman Empire saw its decline

47 Lefebvre, *The Production of Space*, p.252
48 Ibid.
49 Ibid.

– and a process of decline that Lefebvre argues continues to this day. The rise of Christianity was linked, by Lefebvre, to a cryptic world – literally the world of the crypt. For Lefebvre, Christianity worshipped the tomb. The hidden and encrypted were part of the ritual experience of the religion.

> 'Christianity [...] was a great worshipper of tombs. Its holiest places, those stamped by divinity – Rome, Jerusalem, Santiago de Compestela – were all tombs: St. Peter's, Christ's, St. James. The great pilgrimages drew the crowds to shrines, to relics, to objects sanctified by death. The 'world' held sway. This was a religion which 'codified' death, ritualizing, ceremonializing and solemnizing it. [...] Essentially cryptic in nature, religion revolved around those underground places, church crypts.'[50]

The characterisation of this space by Lefebvre was as an absolute space of the subterranean – the world was ruled by forces that were not subjected to the rationality of reason, the logic of law or the cosmic ordering of the *Logos*. Agricultural and largely rural, the realm of the *Polis* was overlaid with superstition and the occult – according to Lefebvre, this was a space of the merciless God, and 'Earth-Mother'. Using the example of crypt painting from the middle-ages, Lefebvre suggests that the intellectualised quality of the Greeks and Romans, and later the ocular-centric conceptions of space, were not present:

> 'What is the *raison d'être* of Lascaux's frescoes, or of those in the crypt of St. Savin? The answer is that these paintings were made not to be seen, but merely to 'be' – and so that they might be known to 'be' there. They are magical images, condensing the struggle against death, whose aim is to turn death's forces against death itself.' [51]

But for Lefebvre, this period was soon to be overlaid with an age of light, of appeal to clarity and unity, of a visual logic. For Lefebvre, a considerable challenge to the culture of servility of the middle ages, through the peasants revolt of the twelfth century, had the effect of destroying the hegemony of serfdom, of reducing the power of individual Lords and reinstating a centralized Monarchical and State system and reforming religion towards a rationalized experience of a self-relation with God.

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50 Lefebvre, *The Production of Space*, p.254
51 Ibid.

Consequently for Lefebvre, social relations were radically restructured and this individualised Christianity formed a social norm of rationalized individuality.

Towns and the urban again overlaid the agro-pastoral realm with an increasingly formalised production structure that, Lefebvre contends, produced surplus material goods and a culture of collective working. This radical re-appropriation of space led, for Lefebvre, to the separation of the crypt and wider society. The urban realm was liberated from the subterranean and exposed to an illuminating potential:

> 'In contrast to the maleficent utopia of the subterranean 'world', it [the urban landscape of the Middle Ages] proclaimed a benevolent and luminous utopia where knowledge would be independent, and instead of serving an oppressive power would contribute to the strengthening of an authority grounded in reason.'[52]

Supposed reason, knowledge and human autonomy were the markers of a 'new space' as Lefebvre terms this revision of society and culture. The early-modern period saw the emergence of the autonomous individual, 'liberal humanism' as a (Western) world view, and a reformulation of the space of the church; principally for Lefebvre a decrypting of the previously subterranean and occult, an overwriting of one socio-cultural, religio-political space with another. For Lefebvre, the Church and specifically its buildings represent the turning point of this age – the decrypting of, quite literally, the crypt:

> 'The crypt of St-Savin holds the now symbolic 'earthly dust' and images of St Gervase and St Protase, and of their edifying lives and martyrdom. The church vault, however, features scenes from the Scriptures, from the Old and the New Testaments – painted imagery diametrically opposed to the cryptic/cryptal space. The vault 'decrypts' by exposing the contents of the underground chambers to the light of day.'[53]

This process of decrypting had the effect, according to Lefebvre, of emancipating social space from the cryptic, the hidden and the 'dissimulated, to use an earlier term

52 Lefebvre, *The Production of Space*, p.256
53 Ibid., p.257

from Lefebvre. Drawing on the art historian Erwin Panofsky's[54] analysis of Gothic cathedrals, Lefebvre suggests that Panofsky described a 'logic of visualisation', defined as the opening up to light, to the view, of those spaces that were previously of the 'other', hidden world.[55] When pushed, according to Lefebvre, the structural logic and the search for ever greater exposures of light in Gothic cathedrals contain a desire to open up to sight, and hence the intellect, all aspects of the world and its concomitant space. The 'logic of visualisation', extended, reaches the point of visual totality. Rationality and reason again took the fore in this space of sight and vision and led, according to Lefebvre, to the reawakening of interest in the cultures of Greece. For Lefebvre, the 'underworld' had been brought to the surface, exposed and neutralised. These previous spaces had not disappeared, but had been overwritten, overlaid with a resurgent logos.

> 'The full implication of [Panofsky's] 'visual logic' is that all should be revealed. All? Yes – everything which was formerly hidden, the secrets of the world.'[56]

Veils and obscurity are being removed. The hidden and dissimulated are exposed to an ever present gaze – a site of visual totality begins to emerge and for Lefebvre, this is a revealing, an illuminating and an illusion of transparency, from earlier: 'space appears as luminous, as intelligible, as giving action free rein [...] What happens in space lends a miraculous quality to thought, which becomes incarnate by means of a design.' The world is liberalised, the individual placed at the centre of existence in a liberal humanist model and here can be charted the rise of transparency as a trope of Modern architecture; charting a rise of a desire, a liberation of architecture from its material properties, a search for an 'existential minimum'.[57]

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54 Erwin Panofsky. 1892-1968. Art historian, taught in both Hamburg and New York. 1935, professor at the Institute of Advanced Studies, Princeton. Panofsky developed the 'iconological' approach to art analysis. Beginning with a pre-iconological study, followed by an iconological analysis then an iconological interpretation, he attempted to illustrate the 'intrinsic meaning' of a work of art to its cultural context. Achim Timmermann, 'Panofsky, Erwin' *The Oxford Companion to Western Art.* Oxford Reference Online. Oxford University Press <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t118.e1954> [accessed: 1 October 2005]

55 Lefebvre, The Production of Space, p.259

56 Ibid.

57 Neuymer, Fritz 'Head First Through the Wall: an approach to the non-word "façade"', Journal of Architecture, Volume 4, Issue 3 September 1999, 245-259, 249

The idea, the concept of transparency is by no means isolated to the Modern period – its complexity is far greater in earlier incarnations of this existential desire for the minimum, for lucidity and immediacy. Transparency, considered as both material quality – 'literally' – and intellectual capacity – 'phenomenally'[58] – is traceable, as Lefebvre illustrates, over varying time frames and recurs despite epistemological breaks and political schisms.

Ocularcentrism

The dominance of the visual, echoed in Lefebvre's discussion of the move from subterranean space to spaces of rationality and reason, and Panofsky's logic of visualisation, is discussed by Juhani Pallasmaa with reference to this searching out of the clear and lucid in both art and culture. A 'logic of visualisation' as Panofsky terms it, is discussed by Pallasmaa as an 'hegemony of vision'. Placing his argument firmly in the Modern, Pallasmaa sets forth to polemically argue the case for a movement away from this 'ocular-centrism' as discussed by Georgia Warnke.[59] For Pallasmaa, working from a phenomenological background, the sense of vision has come to dominate the other bodily perceptions and experiences of phenomena.

> 'In the Renaissance time the five senses were understood to form a hierarchical system from the highest sense of vision down to touch. The renaissance system of the senses was related with the image of the cosmic body: vision was correlated to fire and light, hearing to air, smell to vapour, taste to water, and touch to earth.'[60]

Pallasmaa cites the term of 'ocularcentrism' as stemming from David Levin's analysis of Western society in *Modernity and the Hegemony of Vision:* '[...] beginning with the ancient Greeks, our Western culture has been dominated by an ocularcentric paradigm.'[61] This ocularcentric paradigm, as Pallasmaa discusses it, operates in a contemporary context of the late Modern and has implications on a global scale. A transparent project relies on this worldview of sight-focused understanding and logic,

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58 Rowe, Colin and Slutzky, Robert 'Transparency: Literal and Phenomenal' *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, MA: MIT Press, 1997)

59 Warnke, Georgia 'Occularcentrism and Social Criticism', in *Modernity and the Hegemony of Vision*, pp. 287-308

60 Palassma, Juhani 'Hegemony of the eye and the loss of the body' Thesis, Wissenschaftliche Zeitschrift der Bauhaus-Universitat Weimar, (1997) Heft 6, p. 109

61 David Levin in Pallasmaa's 'Hegemony of the Eye', p.109

and absorbs technological changes into the totality of vision. For Pallasmaa this expansion in technique and technology has acted to concretise the power of the eye:

> 'The technologically expanded and strengthened eye today penetrates deep into matter and space, and enables man to cast a simultaneous look on the opposite sides of the globe. The connection of technology and the eye has lead to the instantaneity of the world and collapse of time, as an experiential dimension. We live increasingly in a perpetual present flattened by the eye.'[62]

The flattened immediacy – instantaneous communications connect the world rapidly into a seamless whole within a networked 'digital' realm. The power of the gaze, of vision, is not limited to merely that which is physically observable or material. The powerful quality of interconnected networks comes in their ability to abstract complex information and phenomena to simple reductions of quantifiable data – a facet of the ocularcentric that Pallasmaa illustrates. For Pallasmaa, 'architecture has become an art of the printed image fixed by the hurried eye of the camera [...] In our culture of images, the gaze itself has flattened into a picture [...]',[63] which, it will be argued later, supports Jean Baudrillard's conception of the production of simulacra, images of extinct realities, through a form of cultural transparency.

Pallasmaa's conception of the eye and vision, stemming from the work of Maurice Merleau-Ponty[64] and Martin Heidegger[65], contains a negating potential, a nihilistic bent. 'The narcissistic eye views architecture solely as an intellectual-artistic game detached from its essential mental and societal connections.'[66] Pallasmaa defines this in terms of its alienating quality; the rapidity of information flows and images detaches individuals from the context of visual material. For Pallasmaa, the eye dominates social and political discourse, and consequently, vision dominates architecture and becomes a central facet of its production and experience.

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62 Pallasmaa, 'The Hegemony of the eye', p.109

63 Ibid., p. 110

64 Merleau-Ponty, Maurice *Phenomenology of Perception*, (London: Routeledge, 1962)

65 Heidigger, Martin 'Letter on Humanism,' *Martin Heidegger: Basic Writings* (New York: Harper & Row, 1977), p.237, discussed by David Levin in the introduction to *Modernity and the Hegemony of Vision*, p.5 *'For Heidegger, visionary experience has always dominated both the origin (*arché*) and the end (*telos*) of the discourse of metaphysics. But he saw in modernity an historically distinctive phase in the evolution of this ocularcentrism. Whereas, at the beginning, this hegemony brought forth glorious visions as well as visions of violence, it has, in modernity, turned increasingly nihilistic.'*

66 Pallasmaa, 'The Hegemony of the eye', p.109

> 'The current industrial manufacture of visual imagery tends to alienate vision from emotional involvement and identification and turn imagery into a mesmerizing flow of images without focus and participation.[67]'

A 'mesmerizing flow of images' that disconnect and fracture the connection between subject and object can also be read through Lefebvre's research. Pallasmaa illustrates this phenomena with concrete examples of architectural projects. Levin's research into hegemony and vision extends the argument of a 'logic of visualisation' into the specifics of architecture's production. This notion of the flow of images constituting a transparent position, and generative of effects that could be considered spatial simulations, will be discussed with reference to Baudrillard and the notion of simulacra. Architecture as the production of an 'image' of something else.

Transparent Myth

The idea that transparency is related to the production of an image can also be read in the work of critic and theorist Anthony Vidler. Writing in *The Architectural Uncanny,* Vidler sees the condition of transparency also as a projection of an image of something. [68] A myth of transparency has, according to Vidler, been a trope of architectural modernity: the opening of 'machine architecture' to the gaze, the illumination of parts within a whole as a social metaphor of morality. This, according to Vidler, is one of the interpretations of transparency in the modern.

> 'Modernity has been haunted [...] by a myth of transparency: transparency of the self to nature, of the self to the other, of all selves to society, and all this represented [...] by a universal transparency of building materials, spatial penetration, and the ubiquitous flow of air, light and physical movement.'[69]

This myth – an important definition in the conception of transparency for this thesis – will be illustrated later as a facet in the Baudrillardian notion of transparency obfuscating, pretending not to exist. The technology necessary to make transparent is often anything but. Vidler illustrates with reference to projects in Paris, structures that

67 Ibid., p.110
68 Vidler, Anthony 'Transparency' *The Architectural Uncanny*, (Cambridge, Mass.: MIT, 1992) p. 217
69 Vidler, p.217

purport such transparency are often operating to produce a mythological state of openness, clarity and honesty to the self or others.

The canon of the Modern movement is rich with a potential for transparent discussion. However, Vidler suggests that in the Modern, transparency came to be challenged, not least through a disavowal of the centrality of the liberated individual, posited in the conception of liberal humanism:

> '[...] transparency was gradually discredited by the critique of the universal subject in politics and psychoanalysis. In its place, opacity, both literal and phenomenal, became the watchword of the post-modern appeal to roots, to tradition, to local and regional specificity, to a renewed search for domestic security.'[70]

However, this disavowal seems, according to Vidler, to be a transient one, soon replaced by a neo-transparent agenda well illustrated in the *Grand Projects* of 1990's Paris and a return to transparent values in democracy and politics. For Vidler, the transparent has once again become irrefutably linked to the 'progressive' in both architecture and wider culture. Vidler sees this re-emergence of the transparent as a reaction against the dissimulations of the post-modern within architecture, purification 'only by a renewed adhesion to the spirit of the age.'[71] Vidler suggests a *Zeitgeist* of transparency; particularly in France where the rationalist design principles of Viollet-le-Duc and others has a particular strength. However, as Vidler suggests, a pure 'literal' transparency, the actual dematerialisation of form through technology, is virtually impossible to achieve. Glass has an inherent dissimulation in its reflective quality that can, if not correctly managed and manipulated, negate clarity through multiple reflections and refractions. So, Vidler asks, why bother to be transparent?

> 'The conclusion would be that to work effectively, the ideology of the modern, either as *bête noire* of the postmodern or its recent replacement, would have to be a fiction in practice.'[72]

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70 Ibid., p.219
71 Vidler, p.219
72 Ibid., p.220

It is worth focusing on the notion of the 'fiction in practice' of the transparent: a theme that will be considered with relation to the production of transparent systems within Foster's work, and also the notion of the simulation of cultures of transparency within Western societies. Operating within a similar understanding to that of Pallasmaa when he comments on the simultaneity of produced images through technology and their inherently visual logic, Vidler's idea of myth and fiction of transparency lead towards Baudrillard's ideas of simulation. The Modern demands a myth of progression in order to retain dynamism – monumentality, according to Vidler, as the state sponsored demonstration of bureaucratic (and democratic) power must be monumental in technological scope, not mere physical mass.[73] And, according to Vidler, the dematerialisation of the solid is the zenith of current technological capacities. Monumental architectures are expressed, particularly in the French case, through transparency and de-substantiation.

> 'For if it was in the task of constructing a new and modern subject that transparency in architecture was first adduced, the present passion for see-through buildings is indubitably linked to the attempt to construct a state identity of technological modernity against a city identity [...] enmeshed in the tricky historicism of preservation.'[74]

Effectively, for Vidler and with specific reference to Paris, the subject is constructed as Modern through the counterpoising of progression against a background of historical fabric. The Modern is identified through its contrast with its decisively non-Modern context – the city streets and neighbourhoods of 'old' Paris. The transparent as contrasted with the opaque and complex. Vast State sponsored projects, such as Dominique Perrault's *Bibliotheque Nationale,* are the built equivalents of Lefebvre's 'illusion of transparency' and the Corbusian negation of the 'cancerous' growth of Paris's old streets: *Ville Radieuse* realised at the turn of the century. Illusory transparency decrypted and illuminated the embodied knowledge of the city and state in the shining, rational insanity of illogical logic, of burning books (technical failures of the storage systems), frustrated scholars and the flattening and making 'accessible' of culture:

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73 For a discussion on the relationship between glass and organization, see Yiannis Gabriel 'Glass Cages and Glass Palaces: Images of Organization in Image-Conscious Times' in *Organization,* 2005 vol.12, no.9

74 Vidler, p.220

> 'We are presented with the apparently strange notion of a public monumentality that is more than reticent – indeed wants literally to disappear, be invisible – even as it represents the full weight of the French State.' [75]

But, as Vidler suggests, this state sponsored transparency contains the potential for its own negation. The illusory quality of the material, the reflectivity of glass, harbours a dissimulation that encourages more complexity within architectural production. Drawing a Lacanian reading of reflectivity, with reference to the status of 'mirror' as a stage of psychological development.[76] The strange and 'uncanny' quality of encountering multiple mirror images and overlaid versions of one's reflection are liable to induce feelings of destabilisation and multiple superimpositions, throwing, according to Vidler, the simple unity of form, technology and reason into confusion and contradiction. But, as Vidler suggests, these practices, carried out knowingly, are rare – the dissimulated is still largely subjugated by the power of the logos so well illustrated by Lefebvre as the cornerstone of Western culture and transparency is blindly equated with the democratic realm.

Transparency/Democracy

One of the most commonly understood notions of the transparent in architecture is as a built indication of democracy: the myth of transparency supporting the myth of democracy. In the late twentieth and early twenty-first centuries, transparency and openness have become synonymous with the democratic. From Richard Rogers Partnership website, one of the most recent invocations of transparency as democracy,

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75 Ibid.

76 Lacan, Jacques 'The mirror stage as formative of the function of the I as revealed in psychoanalytic experience', 16th International Congress of Psychoanalysis, Zürich, July 17, 1949 in *Jacques Lacan, Écrits: A Selection*, trans. by Alan Sheridan (New York: W.W. Norton, 1977), pp. 1-7. The mirror stage is a developmental phase in children's psychology, where the awareness of the self as a distinct entity beings to emerge as being separated from the surrounding environment. From *The Oxford Dictionary of the Social Sciences, 'mirror stage: A developmental stage in Lacanian psychoanalysis in which the infant gradually begins to understand itself as possessing a delimited and unified body, distinct from the world around it. Jacques Lacan explained this process through the example of a child's discovery of its image in a mirror—the initial recognition of itself as a discrete being—although he emphasized that this mirroring need not be literally conceived. For Lacan, the mirror stage occurs between the ages of six months and eighteen months, during which the infant begins to be inscribed into the world of selfhood, difference, and symbolic behavior—ultimately language.'* "mirror stage" *Dictionary of the Social Sciences* ed.by Craig Calhoun, (Oxford: Oxford University Press, 2002) Oxford Reference Online. Oxford University Press. <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t104.e1086> [accessed: 15 April 2010]

the recently completed Senedd Building for the Welsh Assembly in Cardiff Bay *[4]*, is described as:

> '[Embodying] democratic values of openness and participation, [...] The idea of openness is exemplified by the transparent form of the building. Public spaces are elevated on a slate-clad plinth stepping up from the water level and cut away to allow daylight to penetrate the administrative spaces at lower level.'[77]

Daylight, openness and involvement are terms invoked to demonstrate a transparent process that is claimed for modern democracy. If a political system is open to the view, to sight, then the undemocratic is, at least metaphorically, banished or so the rhetoric goes. This ideal has implications and actions beyond architecture. Systems and structures of politics, when opened and illuminated, necessarily become transparent. This is the often-proclaimed aim for contemporary democracy; democratic systems, in order to be reliable, dependable and crucially free from corruption must be transparent. On the BBC World Service Americas website, the leader of government business for the tax-haven Cayman island, Kurt Tibbets is quoted as '[...] [hoping] to usher in a new era of transparent politics.'[78] From the BBC Media Monitoring service on the World Service website, French Foreign Minister Hubert Vedrine is quoted as saying, with reference to the extradition of the former leader of the Ivory Coast, that the legal process of extradition will only take place under 'democratic' conditions: "we are waiting to confirm that it will all go ahead in the best conditions of transparency and democracy."[79] Transparency and democracy are typically linked in comments such as these. Places where democratic processes are new and potentially subject to attack are integrated into a transparent dimension, in order to negate the potentially threatening suggestion of political impropriety.

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77 Richard Rogers Partnership, rrp.co.uk <http://www.rrp.co.uk/render.aspx?siteID=1&navIDs=1,4,23,656,1183> [accessed: 10 May 2008]

78 BBC World Service Americas, <http://news.bbc.co.uk/1/hi/world/americas/country_profiles/3709816.stm> [accessed: 20 July 2008]

79 BBC World Service Media Monitoring <http://news.bbc.co.uk/1/hi/world/monitoring/media_reports/781368.stm> [accessed: 20 July 2008]

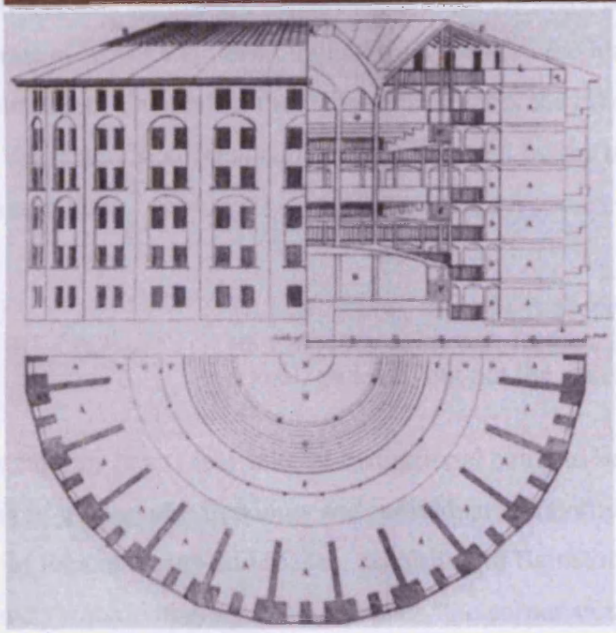

Fig.4
Welsh Asembly, Cardiff Bay

Fig.5
The 'Panopticon' model, from Bentham

Transparent States

This 'democratic' transparency is discussed by Deborah Ascher Barnstone with a particular focus on post-war West-German State architecture in *The Transparent State*.

> "'He who builds transparently, builds democratically." is a truism of parliamentary architecture in the Federal Republic of Germany adopted to further several post-war myths: the occasion of a Zero Hour; the existence of a democratic architecture and its opposite, a totalitarian one; the likening of an open society with a transparent one and the equating of a democratically elected parliament with an accessible one'[80]

For Barnstone the transparent, in West Germany at least, was a rhetorical device of politicians and diplomats, actualised through the work of architects and planners, to generate a decisive epistemological shift between the ideologies of both Nazism and Communism. The realms that these represented, the hidden and secretive spaces of fear, death and totalitarianism, are counteracted by the transparent space of a modern German State.

> '[...] a drive towards transparency is not the same as transparency achieved. Rather, it is the expression of a desire, a goal, an ideal, but not the state of things.'[81]

Transparency is an ideal state of institutional being to be achieved, a clear and lucid utopia of democratic freedoms and individual autonomy, carried out under a general state of logical clarity and reason, according to Barnstone's argument. Transparency is Germany's contemporary myth of ideals, the corner stone of the ideology of a new Germany. This myth, this utopia has come to be concretised, according to Barnstone, in both constitutional terms and in the state architecture of a Federal Republic of Germany. With particular reference to the national parliament building in Berlin, the *Reichstag*, re-conceptualised by Foster and Partners, Barnstone at first attempts a definition of the metaphor of transparency: 'the implication is that where there is transparency, there is democracy but not totalitarianism, despotism, monarchical rule, or communism.'[82]

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80 Barnstone *The Transparent State,* p.1
81 Barnstone, pp.1-2
82 Ibid., p.11

The current use of the metaphor of transparency, according to Barnstone, is the democratic one, a direct relationship between open architecture and open systems. But while Barnstone questions the realisation of a transparent project, and suggests that transparency and democracy are 'ultimately not related'[83] (and if they are, it can be extrapolated, it is through continued associated use) she does not question the central validity and assumed capacity of the 'transparent' as ideal. Recognising the duality inherent in any total use of a transparent material, Barnstone does suggest that the metaphor has a continuing strength:

> '[...] neither the obvious inability of transparent buildings to improve access and openness, nor the inherent contradiction between the desired see-through characteristic of transparent glass and its performance as alternately transparent, reflective, and opaque, has quelled interest in transparent state buildings.'[84]

The centrality of 'myth' to Barnstone's argument is important in understanding the variety of realms within which transparency is used. However, it is also Barnstone's omissions that are interesting for a survey of the development and use of this term. Being placed firmly in the analysis and discussion of transparent democratic architecture, Barnstone neglects the wider potential of a transparent analysis, the position of transparency as a social and cultural metaphor, the production of broader images of openness, accessibility and clarity.

Post-War West-German Transparency

Germany can be seen as one of the key sites for the development of the transparent myth in post-War Europe and the West. Tracing the development of the metaphor of transparency in Germany, Barnstone suggests that this metaphor became important as almost an antidote to the complex and troubled history of Germany in the twentieth century. By associating architecture with an 'open society' and 'open institutions', as defined, according to Barnstone, by Jürgen Habermas and Ralf Dahrendorf, a metaphorical power is enabled that supposedly communicates a desire, a willingness

83 Barnstone, p.232
84 Ibid.

to make accessible and clear to the voting public the 'democratic' intent behind a state government:

> 'When people ask for transparent institutions they mean ones in which it is possible to see the true motivations, goals, operational structures, and achievements of an organization without veils, masks, and manipulations of the truth.'[85]

The accepted notion of transparency within a democratic state is thus described, as a literal view, as vision into the inner workings of an organization. Transparency as a tool of the state, applied where previously hidden realms need to be opened up to the public eye. For Barnstone, transparency is directly connected to the ability to 'see-through' a material, an organization or perceive the 'true' functioning of a structure – be it political or architectural. According to Barnstone, 'In the past 20 years [...] transparency has become a mantra for corporate honesty and truthfulness'.[86] Transparency is a call to action, rather than an actual state – it is an idealised notion of the supreme democratic system, as Barnstone suggests. This stems, according to the author, from the work of Jean Jacques Rousseau, where the State and the individual exist in a situation free from dissimulation and secret practices, 'Polis and state would blend into one as self-interest dissolved in the face of a perfect transparency.'[87] Similar to the Greek model as posited by Lefebvre and described above, the interests of the individual are subservient to a benevolent state organization, with stability and security enabled through an application of transparent politics and activity.

According to Barnstone, social reformers in the eighteenth century, such as Jeremy Bentham, Cesare Bonesana Beccaria, Antoine Desgodets, and Leonhard Christoph Sturm, saw the conditions of this period as necessitating action:

> 'They were concerned with a litany of problems from overcrowding and filth to ineffective reform programs, and hoped to apply rational methods to improving the architecture and thereby the function of these institutions. They worried about the proper architectural form that would maximise institutional efficiency, provide adequate observation of

85 Barnstone, p.30
86 Ibid., p.31
87 Ibid., p.32

> inhabitants whether prison inmates or the ill, and induce moral and ethical well-being.'[88]

Here, Barnstone discusses the idea of transparency as surveillance, Bentham's 'panopticon' model of control by an all seeing and ever-present eye, as illustrated by Michael Foucault *[5].*[89] Power became synonymous with observation and a transparency of action, on behalf of the subjects of surveillance, became another functioning metaphor, linking transparency to openness, and clear vision. Barnstone sees this movement, from 'schemes based on visual access to those based on see through architecture'[90] as a slow, yet inexorable process linked to developments in material technologies.

> 'The explosion of glass building types at this time [the 1900s] is related to new material developments and constructive techniques, firstly the development of iron frame construction systems that were steadily improved [...] and secondly, the improvements in glass production, especially the invention of flat glass.'[91]

Material Transparency

The idea of a relationship between transparent architecture and transparent systems (systems that embody ideas of openness, accessibility, democracy) is located in both spatial and material conditions, as can be seen in France's *Grands Projets.* As a rhetoric of transparent societies, material in its architectural sense is used to reinforce this relationship through large-scale built structures. Annette Fierro, writing in *The Glass State,* discusses the image, presented to the population of Paris, of the technological supremacy of the French State, as a form of tectonic-transparency:

> 'In these two monuments [Pompidou Centre and Eiffel Tower] specific characteristics emerge that echo resonantly into the present day. First, transparency is employed on a gargantuan scale with the intention of dwarfing and/or emphatically expressing difference from the surrounding fabric. Second, in these enormous monuments advancing technology is an essential part of the expression of their

88 Ibid., p.33
89 Foucault, Michel *Discipline and Punish, the Birth of the Prison*, trans.by Alan Sheridan, (London: Penguin, 1979), pp.195-228
90 Barnstone *The Transparent State,* p.34
91 Ibid. p.35

> transparency beyond that called for by the demands of structure.'[92] *[6+7]*

To make legible, on the mega-scale, the structural conceits behind two of Paris' most iconic buildings is, for Fierro, a form of literal transparency: A transparency of spectacle, of state monumentality of the most technologically advanced kind. The techniques behind these monuments are effectively rational engineering solutions to the creation of public spectacles, according to Fierro. The use of complex iron structures, clearly expressed without obfuscation in the case of the Eiffel Tower, can be read as an application of a transparent value to a public monument:

> 'Eiffel marvelled that the age of iron marked the advent of rationality over the muddled lack of quantification characteristic of masonry construction. According to [Roland] Barthes, this force of intelligence is engaged incrementally as the vast structure is encountered at closer and closer distances. [...] While the visitor is mystified by the towers sheer scale and sense of advanced technology, this mystification is coincident with rational appreciation, as the particular configuration of the structure and the method of assembly of its constituent pieces become apparent.'[93]

The materiality and structure of the tower suggest a reasoned and rational approach to the construction of, effectively, an irrational monument. The Eiffel Tower served no legible rational ends, but its construction and status proposed a shift in architectural and engineering practices towards the rationality of structure and construction. The very mathematics of the Tower's construction delineate its position in a Lefebvrian abstract space, and its continuity can be read, according to Fierro, in the next major monumental architectural statement in Paris, the Pompidou, or Beaubourg Centre.[94]

> 'The powerful elation bared in the Eiffel Tower's latent sense of indeterminacy might have ended here in this text as pure speculation. Ninety year later across the Seine in the Marais, however, the identical melange of traits was played out again, and consciously amplified, by the young Rogers and Piano.'[95]

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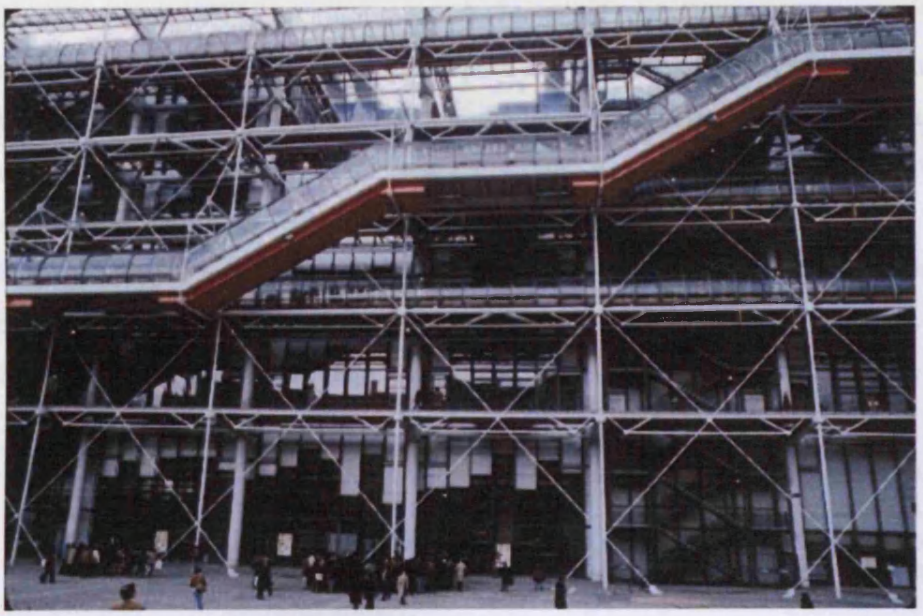
92 Fierro, Annette *The Glass State; the technology of the spectacle, Paris, 1981-1998* (Cambridge, MA: MIT Press, 2003), p.44

93 Fierro, p.56

94 For a discussion on the relation of the Beaubourg to networks, structure and simulations, see Baudrillard, 'The Beaubourg Effect' in *Simulacra and Simulation*, p.61-73

95 Fierro, p.69



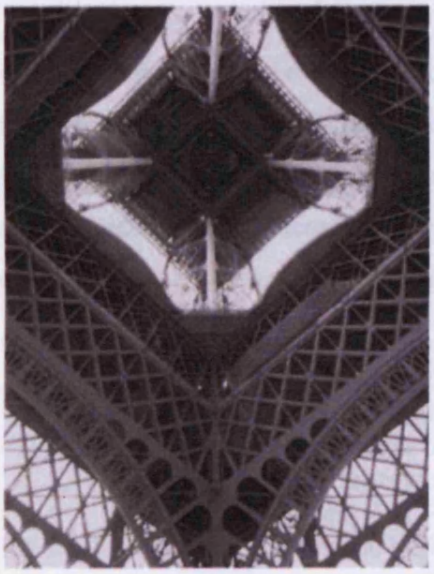


Fig.6
Centre George Pompidou, Paris

Fig.7
Tour Eiffel, Paris

The Pompidou centre, as Fierro's analysis suggests, operated as a condenser of social spectacle. The state sponsored monument was recreated in the image of the Situationists – a Lefebvrian carnivalesque space in the city, and an accessible venue for Parisians: accessible both physically and intellectually.[96] The form and structure of the building were intended to eliminate elitist cultural values and open-up art to a wider audience. Through a radical departure from previous incarnations of 'art' galleries and cultural institutions, the Pompidou centre used industrial construction processes and materials to create a space of flexible accommodation, intended to enable spontaneous events to take place:

> 'This notion of event, as literal as well as metaphoric, idealizes the qualities of unassignability, openness to interpretation, and permanently incomplete status, each designated by Piano and Rogers not as conditions of event, but as intrinsic conditions of transparency.'[97]

Through these events, and the idea of a folded and wrapped ascent to the rooftops of the city, Fierro suggests that the 'Beaubourg, like the Eiffel Tower, makes the city visible.'[98] According to the author, the Pompidou does not mirror the activities of the city on its façade in an abstracted fashion. Instead, its significance lies in the activities of the inhabitants of Paris animating the façade through its glass-tubes and escalators.

> 'The Pompidou Centre does not represent the city through the reflection of a mirror: Rather than an abstraction of its image, the constituents of the city actually make up the façade. Like in the Eiffel tower, as the building is filled by the public, it is the citizenry of Paris – indeed the world – who prominently configure the buildings surface.'[99]

For Fierro, the transparent capacity of Beaubourg lies in its ability to promote situationist activity. The movement in, around and through (now curtailed through security and ticketing costs) was intended to integrate the structure into the very fabric of the city, whilst still remaining a monument to the socialist ideals of Modernity within the Pompidou administration. This, according to Fierro, contained a strong desire for social reform through a more complex transparent architecture: 'according

96 Highmore, Ben *Everyday life and cultural theory: an introduction* (London: Routledge, 2002) pp.122-128
97 Fierro, p.86
98 Ibid., p.81
99 Fierro, p.81

to the architects, transparency would enlighten, amuse and even comfort the general public.'[100] Fierro suggests that humour is used within the centre as a further element of transparency, perceived initially along the same lines as the rational transparency of the structure of the Eiffel Tower, yet reducing the monumental scale of the architecture through an approach to details that humanised and even potentially anthropomorphized the building. The Pompidou, through its detailing and programme became an 'everyday artefact, [an] everyday festival'[101] in the Lefebvrian sense. Accessibility, openness and visibility within the Pompidou project contain the potential for liberation, according to Fierro, and suggest a position against which she analyses the 'success of contemporary attempts'[102] at a monumental transparency, such as in the Bibliotheque Nationale *[8]*.

> 'Just as [the Bibliotheque Nationale] qualifies the reception and memory of all the *Grands Projets*, it also qualifies the specific symbolism of transparency that Mitterrand co-opted to express monumentality in late twentieth-century Paris.'[103]

This 'specific symbolism' can effectively be interpreted as another layer of myth added to the idea of the transparent. The projection of the image of an open yet intellectually powerful and technologically sophisticated state system is the intent of the monumentality of the *Grand Projets*, and their use of transparency. The technology expresses the monumentality, which in turn expresses the technology for the purpose of super-scale sublimation of a city (and a country).

The desire for openness is matched in Mitterrand's *Grand Projects*, carrying on the tradition of grand building projects as expressions of a unity of society and state in a socialist administration. The monumental expression of learning and knowledge was given concrete form by Dominique Perrault and as Fierro suggests,

> 'Perrault's project gave full impetus to transparency as the central metaphor of the new institution. [...] Perrault [...] reinforced the metaphor programmatically proposing that the towers function as storage for the stacks. Equally literal was the material transparency of the towers' glass envelopes,

100 Fierro, p.83
101 Ibid., p.93
102 Fierro, p.93
103 Ibid., p.275

> which would allow the public to view the gradual yet continual accrual of the library's literary matter. [...] The paradigm of transparency inherited from Enlightenment was activated literally and metaphorically: as glass revealed the interior function and contents of the building, the image of books was an overt symbol of the exposure of knowledge to the gaze of the public.'[104]

According to Fierro, the material desire to literally illustrate the accumulation of 'knowledge' in a glass tower overruled all other, more prosaic considerations. The books became symbolic capital for an administration wishing to demonstrate its commitment to a France of culture and learning, and the symbolic value of a 'transparent' approach to this question dominated. The material capacity and metaphoric nature of glass contained, according to Fierro, a substantial strength of meaning that Perrault wished to see his building imbued with. But, as the author suggests in concluding *The Glass State*, the material properties and symbolic potential of glass far outweigh its general use as a singular transparent screen:

> 'This book revolves around a metaphor of transparency characterized by fluidity, a tenacious resistance to the assignation of symbolic import, a perfect wedding of conceptual and material attributes of glass. [...] In the thinness of surfaces, between the most nuanced relationships of materials, lies the fragile and enormous potency of glass.'[105]

Glass is both capable of producing simplistic, rhetorically powerful statements, yet at the same time can undermine these readings and intentions through its unpredictable state of interpenetrating reflections and mirrorings, as well as its unforeseen technical conditions. What can be taken forward from here, however, is the demonstrated capacity of material objects to generate (or at least indicate the potential to generate) social and political effects: through building, desired images of a state's (and also a corporation's) structuring values can be constructed, normalised and communicated to a broad audience. The combination of politico-religious social changes and the development of increasingly advanced construction techniques led to a decrypting (as Lefebvre terms it) through spatial dematerialisation: metaphorical opening of the previously closed to God's light, illumination and transcendence (transparency), the genesis, according to Fritz Neumeyer, of Modernism's project of 'dematerialisation'.

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104 Fierro, p.233
105 Ibid., p.279

Fig.8
Bibliotheque Nationale, Paris

Fig.9
Radiant City, sketch by Le Corbusier

Transparent Walls: Dematerialisation

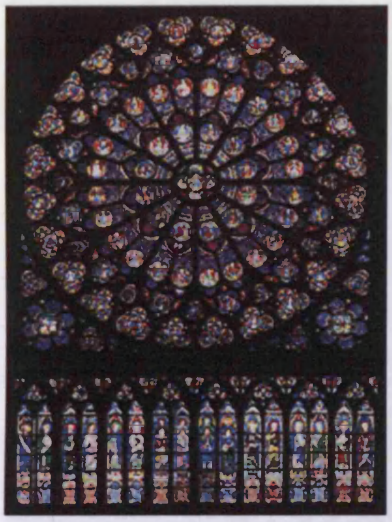
Continuing the discussion of transparency's materiality, the ideal of an opening to light, a decrypting, can be read, as Neumeyer suggests in the *Journal of Architecture*, as a material condition with roots in the Gothic, through the renaissance, and the eighteenth century enlightenment project, culminating in the architecture of Modernism:

> 'Bauhaus Modernism completed the attack on historical architecture's closed spatial shell in the name of openness and transparency. [...] The new ideal was buildings placed freely in space, breathing air and light on all six sides, ideally on green sites.'[106] *[9]*

The dematerialisation of the wall under Modernism was a reaction against the perceived inhumanity and tuberculous nature of the late Victorian city. Glass walls and flowing garden settings were intended to enable the infiltration of purifying light and air and promote healthy physical activity. But for Neumeyer, the wall itself became dominated by the opening. Enclosure was secondary to transparency and lighting function. This, as Neumeyer suggests, was the zero-point of wall-development, the moment the enclosure became entirely subservient to other, more technical and physiological demands. Suggesting, from Alberti, that the wall was the 'foundation of all society and so [accorded] [...] the most honourable place in architecture'[107] Neumeyer goes on to illustrate how this dematerialisation of wall to opening took place. For Neumeyer the baroque overloaded walls to the point of the sublime – the sculptural forces embodied in baroque walls act as a union between the body and space, whereas the gothic is counterpoised as the opposite, the dematerialisation through material means:

> 'The Gothic cathedral represents the other possible manifestation, in which the wall is conquered on the wall. The tricks it dreams up to transform with wall into immaterial material and make it disappear are by nature structural and aesthetic. A diaphanous membrane is stretched between two thin stone ribs, stained glass forms the spatial conclusion of a glowing wall.'[108] *[10+11]*

106 Neumeyer 'Head first through the wall' *Journal of Architecture,* p.1
107 Ibid., p.3
108 Neumeyer, p.4



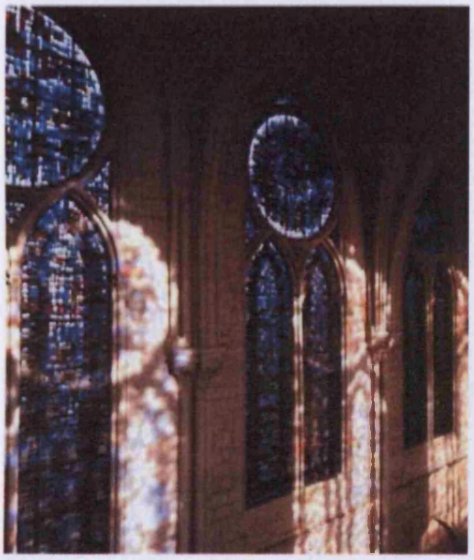
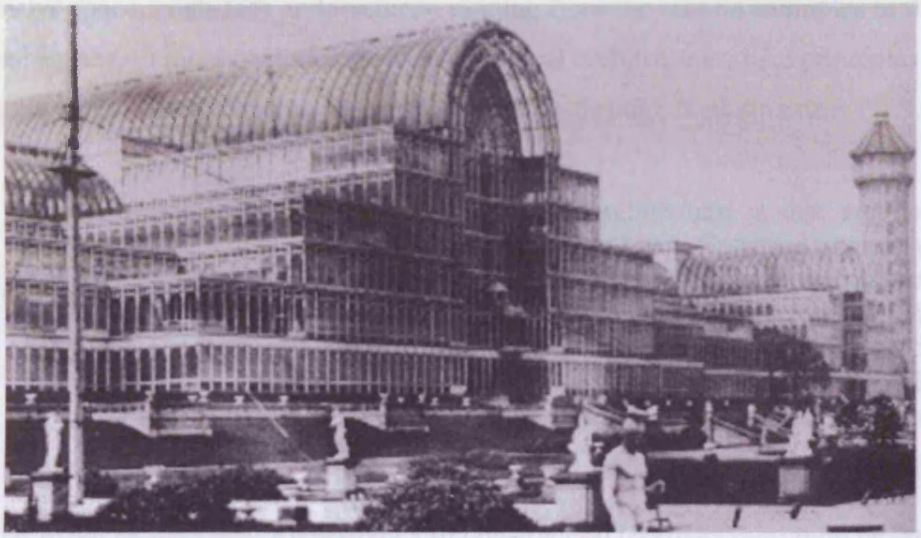


Fig.10
The south rose window, Cathedral of Notre-Dame, Paris

Fig.11
Les verrières de Jacques Le Chevallier, stained glass, Cathedral of Notre-Dame, Paris



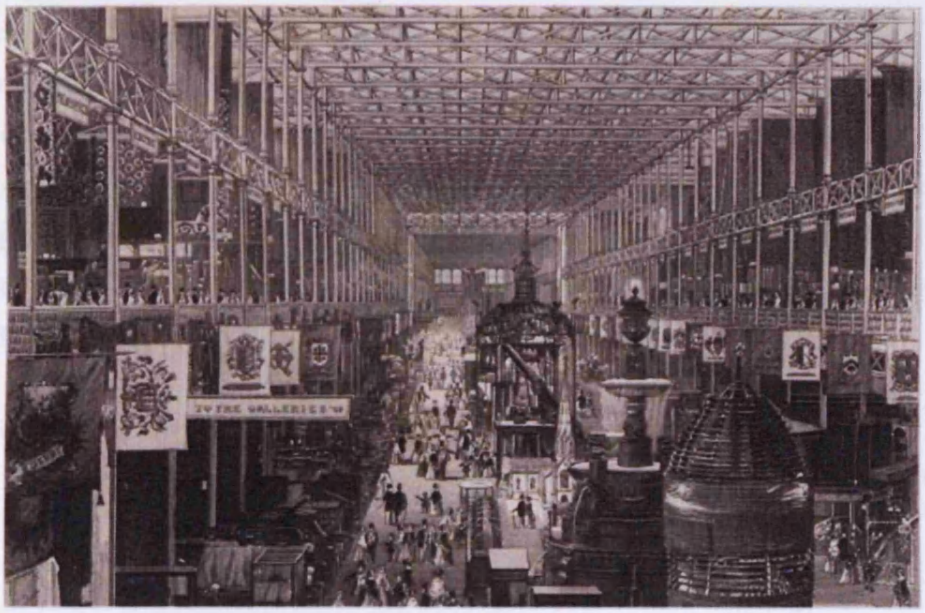


Fig.12
Crystal Palace, London

Fig.13
Crystal Palace, London

The Gothic aims for a transcendence of structure and material through light and expansive space. High-tech architectures, ranging from the earliest examples in the Crystal Palace, to more contemporary technological architectures, take principles from the Gothic but attempt an act of disappearance through their structure:

> 'The dilemma of 'high-tech' architecture is that architecture disappears as a physical phenomenon. Gottfried Semper made the accurate observation that airy, small-surfaced modern bar and wire structures efface themselves to the eye in proportion to the perfection with which they are calculated. Modern construction methods can reduce architecture to almost nothing, can make it disappear into the insubstantial flickering of a mirage [...]'[109] *[12+13]*

Similar to the monumental transparency of construction (perhaps this could be termed a tectonic transparency?) as evidenced by Fierro through the Eiffel Tower, this fragmentation of material through its construction is a calculated and rational process that attempts to 'efface' the mass of traditional architecture. For in architectural history, as Neumeyer points out, the exposure of structure has had the connotations of truth and honesty applied to it – structure as the essence of architecture and the position to which architecture must aim, as suggested by Marc Antoine Laugier in 1753:[110]

> 'Similar to Mies after him, Laugier liberated architecture from everything superfluous, reduced it to the 'almost nothing' of an architectural existential minimum, i.e. the naked skeleton of piers and rafters.'[111]

But, as Neumeyer illustrates, this 'liberation' of the wall from architecture was a process that emerged considerably before Modernisms fascination with a literal transparency of glass. Owing to limited technological potential, earlier desires to transcend the physicality of the wall were enabled through wall painting. The dematerialisation of surface through artificial perspectives acted to bring the exterior into the interior in a way not possible with extensive openings. For Neumeyer, this can be traced back to Vitruvius and his writings on wall painting:

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109 Ibid., p.4
110 Ibid., p.5
111 Neumeyer, p.5

> 'The architecture and views projected on to it [Vitruvius' wall] dreamed of a dissolved new wall beyond the restrictions of building construction [...]'[112]

The solidity and mass of the wall is positioned throughout Neumeyer's research as a constraint to be surmounted. The wall as object in itself is in a continuous process of reference, back to the figure of 'man' as Neumeyer suggests, and a 'projection screen'[113] *[14]* for illusions. What chance the solidity and existence of the wall in the Modern psyche when loaded with these connotations? The wall, according to Neumeyer, was destined for dissolution. In more recent, early Modernist architecture, the wall contains its double, the infinite. Boullee's utopian designs for Newton's monument contain, as Neumeyer suggests, a painting of infinity, integrated into the physical form of the interior of the building so as to blur the distinction between mass and void; between inside and the representation of an infinite universe illustrated in monochrome with complex lighting effects *[15]*. With these proposed projects, architecture's ultimate negation can take place – its very material fabric denied and an 'existential minimum' of an architecture of light and air achieved. Architecture is opened to the cosmos, the light of knowledge flooding in. Transparency, within this specific frame of reference, is linked to a purity of form (in a Platonic sense) as well as a purity of idea – the intellectual freedom of the light of knowledge. And, clearly, a material connection is made – in the absence of glass technologies, the imperative to make open, to develop the transparent project, is enacted through other methods. The development of glass technologies enables this project to be extended, developed and articulated in ever more explicit displays of enlightened opening.

112 Neumeyer, p.6
113 Ibid.

Fig.14
Arena Chapel in Padua

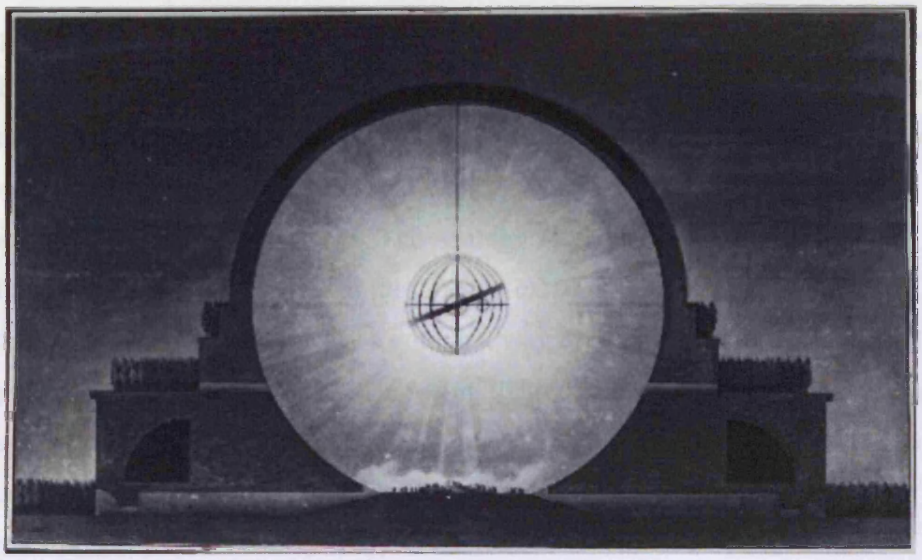

Fig.15
Newton Monument, Boullée

A Different Form of Transparency

The particularly Western nature of the relation of materials to a transparent ideal can be illustrated with a brief look at a particular form of material use in Islamic culture. These material conditions have been argued as embodying social values distinctly other from that of openness, clarity and lucidity. As Bechir Kenzari and Yasser Elsheshtawy suggest in their paper 'The Ambiguous Veil: On Transparency, the Mashrabiy'ya, and Architecture' in the *Journal of Architectural Education*, transparency can and does embody a complex way of looking at the world, veiled and accepting of dissimulation and hidden realms. Through a brief study of early Islamic screening devices, in operation well before the development of glass technologies, the authors suggest that transparency is perhaps best understood in its relationship to screens and veils:

> '[...] transparency in architecture possibly found its historical genesis (and meaning) not through the use of glass but in weaving. Because glass was first used only in Roman times, and yet in a very crude form, one should be able to trace the architectural origins of transparency in the lattice designs that emerged from the braided or woven mats that hung vertically and were invented before clothing.'[114]

114 Kenzari, Bechir and Elsheshtawy, Yasser 'The Ambiguous Veil' The Journal of Architectural Education, volume 56 issue 4, March 2006, 17–25, 2

Fig.16
Carvied wooden screen of the Mashrabiy ya

Tracing transparency's story from the veil as an item of clothing worn by Muslim women to cover their faces and to enable them to enter the world of the male, to the more complex architectural veiling of façade openings, the authors suggest that the *mashrabiy'ya* is a direct counterpart to the textile veil.[115] Acting as an Islamic *brise-soleil* type window cover, the *mashrabiy'ya [16]* is a wooden lattice-like structure that

115 Kenzari & Elsheshtawy, p. 4

acts to filter the outside/inside view and sets up a complex duality of watched/watcher. With a greater degree of complexity than the glass window, the *mashrabiy'ya* allows a level of interaction between an external street environment and the interior world of the 'female' home.

> 'Like the veil, the *mashrabiy'ya* allows one to see but not to be seen; the requirements of a transparent setting are met but in a nonsymmetrical sense. By the mere nature of its fabric and design, it was thus possible to seize upon the lattice screen to secure some appealing optical effects that emanate from a profound need for intimacy and seclusion. Of course, from the outside the *mashrabiy'ya* hides everything behind it. The curious (male) view has little chance to see what happens behind the remote screen. [...] women are therefore left free to behold the universe of outside scenes, or to ignore them at will.'[116]

Through the use of intersecting wooden elements constructing the screen, the position of the viewer is concealed, according to the authors, with relative degrees of exposure permitted through the proximity of the person to screen and light sources. For Kenzari and Elsheshtawy, this is an emasculating transparency, more subtle and complex than see-through glass and generative of ambiguous social spaces:

> 'What is at work here is precisely a dialectic of the eye and gaze: the subject of desire (man) sees the screen behind which the woman (the object of desire) may or may not be sitting, and this provokes a certain form of anxiety, and obscure feeling that the house/ *mashrabiy'ya* itself is somehow already gazing at him from a point that totally escapes his view and thus makes him utterly helpless.'[117]

Whether this somewhat two-dimensional perception of the man by the woman renders him 'utterly helpless' is a contentious position. Male agency is not simply destroyed, no matter how transiently, by the gaze of the female.[118] Certainly, this form of

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116 Kenzari & Elsheshtawy, p.6

117 Ibid, p.7

118 The idea of the gaze stems from Jacques Lacan's psychoanalytic analysis of the recognition of subjectivity of the other. It has been developed in feminist and cultural theories, particularly by Laura Mulvey (*Visual Pleasure and Narrative Cinema*, 1975), where the gaze is sexualized and gendered and emobodies power. See *The Oxford Dictionary of the Social Science, 'gaze A central concept in Jacques Lacan's psychoanalytic theory that has proved useful to a number of projects in cultural and feminist studies. The principle quality of the gaze, for Lacan, is its "desubjectifying" effect. It is not a look that recognizes another person as a subject—but a look through the person that calls into question the recognition of his or her own subjectivity. Lacan explored the diverse*

transparency contains a potential for a diffusion of power away from the singularity of the man in this religio-political context, and as the authors suggest, this has a relation to the often-mentioned 'panopticon' model of spatial observation. As the authors contend, the man may often choose to simply fail to notice this potentially ever-present eye of the woman:

> '[...] far from being terrorized, the men simply ignore the woman's gaze and go on with their daily business. From the woman's standpoint, the gaze denotes both power and impotence. [...] The woman captures perfectly the real suggestion of the act, but is nonetheless appointed to the function of a passive eye witness because her counteraction would stir the suspicion of the innocent, ignorant Other.'[119]

The authors conclude by recognising that this form of veiling contains a negative capacity – namely the subjugation of the woman through confinement to their house. However, this device does offer a myriad of complex instances of transparent and translucent blendings, and embodies a wide range of religious and political issues, which are not denied through the simple suggestion of transparency as equating openness. The conception of transparency as being complex, necessarily unbalanced and in fact producing conditions directly opposing clarity and openness helps to define the position of Western conceptions of the transparent. The idea of transparency embodying anything other than clear ideals in the West is anathema, and we see the position of transparency to our epistemology in a new light. This veil, this transparent screen contains ambiguity within its architectural application, and also embodies an erotic potential that may be limited by Western obsessions with literal transparency.

> 'This reading affirms [the *mashrabiy'ya*] ambiguous nature as both a sign of subordination and of liberation. In this respect, it offers potential lessons for contemporary architects in that it highlights the themes of seduction, translucency, and – perhaps – ambiguity.'[120]

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sexual and social connotations of the concept—theorizing in particular the way in which society (for Lacan, the collective "Other") is invested with the sexualized, generically male gaze.'
"gaze" *Dictionary of the Social Sciences* ed.by Calhoun, Craig, (Oxford: Oxford University Press, 2002) Oxford Reference Online. Oxford University Press
<http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t104.e671>
[accessed: 15 April 2010]

119 Kenzari & Elsheshtawy, p.7

120 Kenzari & Elsheshtawy, p.8

In the case of the *mashrabiy'ya*, depth is welcomed into the perception of a façade, and the complex play of light and dark, screen and opening generate an 'intricacy' of spatial experience that offers a contrast to the all glass façades of much contemporary Modern architecture which have a tendency, as suggested above, to allude to an opening of both spatial and social systems. This understanding of the transparent, in a non-Western sense, also offers a contrast to, and highlighting of, a critical understanding of the transparent within the cannon of European architectural thought.

Literal and Phenomenal

The most widely understood notion of transparency within contemporary Western architectural theory – one which has defined a generation of debate – must be located within the discussion of a literal and phenomenal transparency, as proposed by Colin Rowe and Robert Slutzky. This looks at a distinctly Modern definition of the transparent, and one where the ideas of both transparency and organization are brought together, explicitly, as a functional union:

> '[...] at the very beginning of any enquiry into transparency, a basic distinction must be established. Transparency may be an inherent quality of substance, as in a glass curtain wall; or it may be an inherent quality of organization. One can, for this reason, distinguish between a literal and a phenomenal transparency.'[121]

Although a potentially contentious statement that any enquiry must begin by setting a duality of distinctions (when in all likelihood, there are multiple and competing distinctions), Rowe and Slutzky in their essay *Transparency* first published in the Yale Journal *Perspecta 8* in 1964, take a self proclaimed bi-polar distinction of literal and phenomenal transparency, postulating an argument for the reappraisal of complexity within the transparent. For Rowe and Slutzky, this division of the discussion of transparency places the literal as a common, basic and 'lucid' trope of Modern architecture. Glass is see-through; therefore architecture is transparent and communicates the idea of cognition. The exposure of a steel and concrete staircase in a diaphanous skin of glass illuminates the structural forces and engineering behind

121 Rowe, and Slutzky 'Transpareny: Literal and Phenomenal' in *The Mathematics of the Ideal Villa,* p.22

Modernist architecture. Complexity in architecture is, according to Rowe and Slutzky, neutralised through this 'literal' revealing of parts under a glass blanket.

Using both Modern architecture and Cubist painting, Rowe and Slutzky discuss the divergence of their two kinds of transparency: 'literal' and 'phenomenal'. For the authors, the literal flattens, denies complexity and a confinement to a specific grid. With relation to Cubism, Rowe and Slutzky define the conditions of 'literal' transparency:

> 'Frontality, suppression of depth, contracting of space, definition of light sources, tipping forward of objects, restricted palette, oblique and rectilinear grids, and propensities toward peripheric development are all characteristics of analytical cubism.'[122]

In the cubist depiction of literal transparency, the visual plane of the image takes centre stage – its objectified quality is its hallmark. Singular collections of objects on a singular viewing plane. Using the example of Cezanne's *Mont Sainte Victoire [17]*, a cubist depiction of a mountain scene, Rowe and Slutzky illustrate their definition of the literal:

> 'There is a highly developed insistence on a frontal viewpoint of the whole scene, a suppression of the more obvious elements suggestive of depth, and a resultant contracting of the foreground, middleground, and background into a distinctly compressed pictorial matrix.'[123]

For Rowe and Slutzky, transparency is a potentially rich device for ordering spatial sets of views and experiences. The literal, through a singular concentration on the 'pictorial' quality of an image negates this depth, generating flat images of a potentially reductive capacity. Rowe and Slutzky's position is based on a reading of the transparent in Gyorgy Kepes' *Language of Vision*, where it is defined, in one instance, as the complex interplay between two overlaying figures, where the resulting conflation of the two at their point of intersection incite a 'new' depth of space to be considered, the 'transparent'. Kepes extends his definition of the transparent to the realm of the more than visual, to a deeper perception of space:

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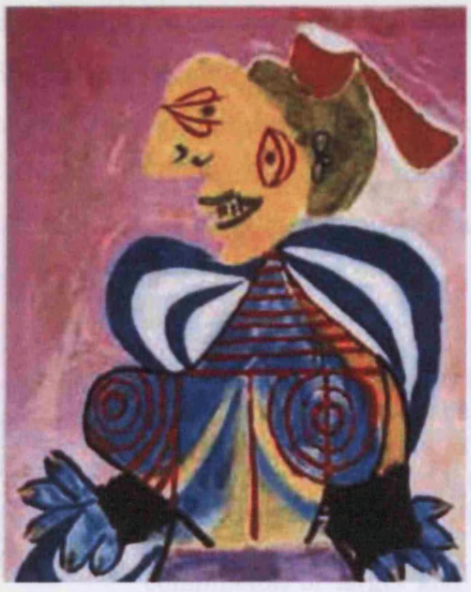
122 Rowe and Slutzky, p.25
123 Ibid., p.25

'Transparency however implies more than an optical characteristic, it implies a broader spatial order. Transparency means a simultaneous perception of different spatial locations. Space not only recedes but fluctuates in a continuous activity.'[124]

Fig.17
Cezanne, Mont Sainte Victoire

Fig.18
Workshop wing, Bauhaus, Dessau

124 Kepes, Gygory from Rowe and Slutzky *The Mathematics of the Ideal Villa,* p.23



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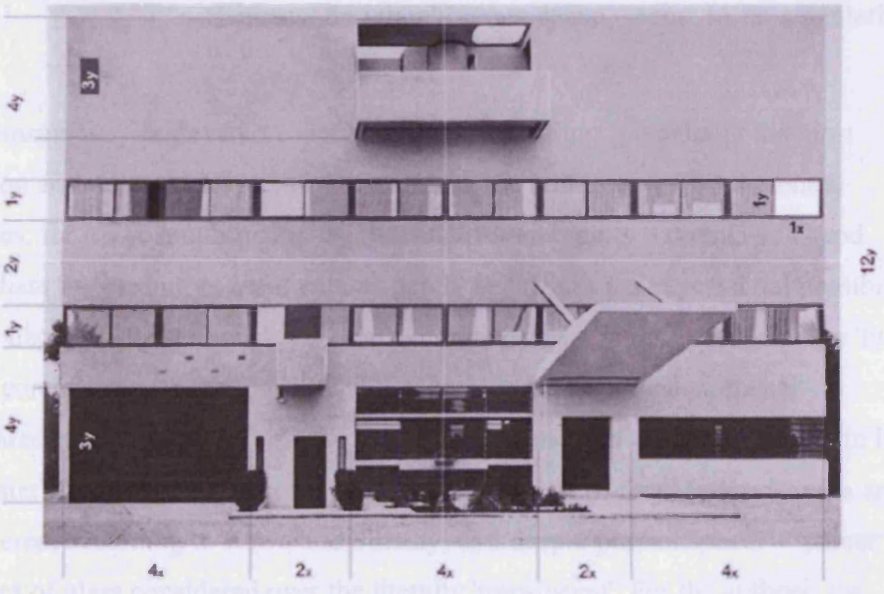

Fig.19
Picasso, L'Arlesienne

Fig.20
Villa Stein, Garche, France

Transparency, at one level, therefore implies depth, layering, multiple points of view and complexities of vision. However, this complexity is often limited to a reading of the transparent qualities of the façade in architecture, and the frontal plane in art. For Rowe and Slutzky, the opening up of the façade to the eye, to the perspective vision through extensive glass screens does not extend the complex potential of the transparent beyond a literal reading. Taking the Dessau Bauhaus *[18]* building as their object of study, Rowe and Slutzky carry out an analytical comparison with, at first, Picasso's *L'Arlesienne [19].*

> '[...] Picasso offers planes apparently of celluloid, through which the observer has the sensation of looking: and in doing so, no doubt his sensations are somewhat similar to those of a hypothetical observer of the workshop wing at the Bauhaus. In each case a transparency of materials is discovered. But in the laterally constructed space of his picture, Picasso, through the compilation of larger and smaller forms, offers the limitless possibilities of alternative readings, while the glass wall at the Bauhaus, an unambiguous space, seems to be singularly free of this quality.'[125]

The transparency achieved through glass curtain walling (potentially the most common architectural device used on high-profile buildings in Britain today) removes, for Rowe and Slutzky, the potential for ambiguity – it makes flat and immediate the reading of architectures depth, and denies the experiential possibility of spatial depth. Viewed as such, this form of transparency is for the authors the 'literal' and is contrasted with the more spatially complex quality of 'phenomenal' transparency. For Rowe and Slutzky, this phenomenal transparency is found in Le Corbusier's Villa Stein at Garches *[20].* The elevations of this Modernist villa are considered, according to Rowe and Slutzky, as a deeper play of spaces – 'planar' qualities of glass considered over the literally 'translucent'. For the authors, the layering and cuts inherent to Le Corbusier's façade contrast greatly with the singular curtain walling of the Bauhaus. Horizontal and vertical planes suggest depth penetrating beyond the literal frontal viewpoint of the Bauhaus. Rowe and Slutzky see Corbusier's transparency as lying in the phenomenal experience of entering and

125 Rowe and Slutzky, p.34

perceiving the building as a whole, contrasted with the perception of the interiority of the building from outside.

> 'In these ways, Le Corbusier proposes the idea that immediately behind his glazing there lies a narrow slot of space travelling parallel to it: and of course, in consequence of this, he implies a further idea – that bounding this slot of space, and behind it, there lies a plane of which the ground floor, the freestanding walls, and the inner reveals of the doors all form a part; [...] we become aware that here a transparency is effected not through the agency of a window but rather through our being made conscious of primary concepts which 'interpenetrate without optical destruction of each other' '[126]

Corbusier's complexity of approach to the experience of the depth of space is well illustrated by Rowe and Slutzky, and the concept of a transparency of opacity and ambiguity is demonstrated. From reading the façade, to approaching the entrance and finally experiencing the interior of the building, a set of references are built up that suggest and construct sequences of depth, both literal and phenomenal.

> '[...] the façade can be seen to effect a profound modification of the deep extension of space which is now seen to approach to the stratified succession of flattened spaces suggested by the external appearance.'[127]

Flattening and depth are thrust into an 'interpenetration' with each other, but as Rowe and Slutzky suggest, this is not to the destruction of either concept, but delivers a dialectically developed approach to spatial complexity: the literal (see-through) of the glazed façade co-exists with the phenomenal quality of experiencing a sequential flow of space, and build on each others potentials for spatial interest and engagement. For Rowe and Slutzky, transparency has two central possibilities: the flattening of experience through the all glass simplicity of the curtain wall as the 'literal' transparency; or the welcoming of ambiguity, spatial complexity and spatial experience through a 'phenomenal' transparency of layering and plan-complexity.

Architects have interpreted Rowe and Slutzky's definition of the transparent as follows: the literal – as simple, singular clarity of vision and lucidity of arrangement –

126 Rowe and Slutzky, p.38
127 Ibid., p.38

produces the Modern image of openness, technological progress and enlightenment, expressed with glass, steel and concrete technologies. What results is a Modernist hegemony, of which Foster is, as will be illustrated in the subsequent chapter, a willing participant.

Organizing the Media of Transparency: McLuhan and Martin

Having considered the position of material to the production of systems and structures of the transparent, the consideration of architecture as the medium for the production of social and cultural forms is important to this dissertation. For McLuhan, writing in the mid-twentieth century, the advent of specific technologies had dramatic social consequences that, in themselves, were the actual message to be considered emerging from the medium. Largely focusing on the rapidly developing technology of the media, McLuhan's analysis of the historic consequences of material technologies can, for this document, be extended to question the nature of architecture, and also glass, as a medium for the production of transparency. McLuhan's overly misused dictum 'the medium is the message', stated with reference to studies of the impact of technology (in all its myriad forms, old and new) on social forms, was qualified in a later publication of *Understanding Media*: 'the medium is socially the message'.[128] In this respect, understanding transparent architecture as a form of media – presented as a medium with a (superficially) specific message about democracy, openness etc., provides a means to look behind the transparent veil and question its capacity as a medium that elicits a social response.

As McLuhan suggests in *Understanding Media,* 'the meaning of a message is the change which it produces in an image.'[129] Part of the analysis of transparency carried out in the case studies below involves analysis of the production of images of social conditions. The suggestion, from McLuhan, of the productive character of a medium (be it electric light, television, or in this case, architecture) to induce social change, is critical to the argument about the organizational capacity of transparent architecture.

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128 McLuhan, *Understanding Media: The Extensions of Man: Critical Edition,* pp.18-19
129 Boulding, Kenneth in 'The Image' in McLuhan *Understanding Media: The Extensions of Man: Critical Edition,* p.43

McLuhan's key point in *Understanding Media* is that fundamental shifts in human culture occur through material changes. For instance, the invention of the sea-container did not only herald the emergence of cheap and efficient global trade, but made it possible through producing a new form of economics of scale. A cultural shift was produced through a technological invention: goods circulated the globe in far higher numbers for much lower cost, altering patterns of trade, consumption and employment. Material and technology changed culture. As Reinhold Martin, in *The Organizational Complex*, suggests, 'media organize.'

McLuhan attempts to develop a form of media studies that involved a 'real' world study of conditions. As Janine Marchessault suggests in *Marshall McLuhan: Cosmic Media*:

> 'The key to analysis of the media, which for McLuhan was always connected to the spaces and temporalities of the lifeworld, is a reflexive field approach. Oriented around the archival, encyclopaedic, and artifactual surfaces but also 'haptic harmonies' and ruptures, this method draws out patterns that render ground assumptions and matrices discernable.
>
> McLuhan's contributions to the study of communication is distinguished by an approach that is aesthetically based, highly performative and historically grounded.'[130]

Whilst McLuhan has been criticised for an a-political reading of technology, romanticising oral cultures and a lack of attention to the content of media,[131] it is principally the contribution that McLuhan makes to a structural reading of media and technology that this thesis concerns itself with. As Marchessault suggests, his study is relational:

> 'McLuhan's project, as I have been describing it, provides a method for studying the effects of the forms of communication on cognitive functions and culture, on social relations and knowledge systems, and finally on global interactions.'[132]

130 Marchessault, Janine *Marshall McLuhan: Cosmic Media* (London: SAGE, 2005) p.xi
131 Marchessault, p.xviii
132 Ibid. p.157

This focus on the productive capacity of media to produce (spatial) relations is important. Marchessault suggests that McLuhan understands space as produced in much the same way as Lefebvre does, concerning the spatialized relations between people and things, rather than things and people in an abstract state.[133] By considering the productive capacity of media to create social conditions, the material effects of architecture can be discussed in terms of their organizational force. This is not a technological fetishism, as Marchessault suggests that McLuhan's analysis provides a means to reverse the common question about technology and its use:

> 'While [McLuhan] recognised that the different uses of different technologies will produce different kinds of representations, different spatial and temporal configurations, he is ultimately not interested in how technologies are used but in the uses that technologies create.'[134]

McLuhan's significance lies in reading the social change induced by the creation of new possibilities from the development of new forms of medium: how the material reality of technologies produces an altered form of use. And, from this reading, McLuhan's significance to this study is supported by what Marchessault sees as McLuhan's understanding of the spatialized quality of ideology and its material referents:

> 'Embedded in technologies are forms of power that are never simply neutral but are imbued with the ideological contexts they grew out of. Fundamentally, language is architectural – it is both a product of physical bodies and an environment in which we live.'[135]

That materials embody ideological positions, and exercise power, is important to questioning the role of transparency in architecture's power to organize. Architecture, considered by McLuhan as a medium, is a considerable force for organizational control. Whilst McLuhan provides a position from which to interrogate how transparent material technologies produce cultural forms, his work, particularly the technically fascinated *Understanding Media*, must be viewed from the position of what Baudrillard, writing on McLuhan, terms 'a technological idealism':

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133 Ibid. p.175
134 Marchessault, p.175
135 Ibid., p.176

> 'Once more, if his vision is so resolutely optimistic, it is because his formation rests on a technological idealism which makes him disregard as anachronistic, behind the 'infrastructural' revolutions of media, all the remarkable historical convulsions, ideologies, the persistence (and even the recrudescence), or political imperialisms, nationalisms, bureaucratic feudalisms, etc., in an era of "communication and accelerated participation"'.[136]

Baudrillard highlights the limitations of reading the medium alone, outside of context and without the locating tool of a socio-cultural geography. Understanding this it is necessary, therefore, to read *Understanding Media* as a platform from which to develop, with the breadth of Lefebvre and the contextual understanding of Harvey, a considerably more contextualised amalgam of these related writers. As Baudrillard notes, the significance of McLuhan is the recognition of the complexity of the effects of technology's existence on social forms, and whilst indeed critical, Baudrillard recognizes these in the same source:

> ' "The effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without any resistance" (McLuhan 1964: 33)
>
> This is evident: the content hides for the most part the real function of the medium. It passes for the real message itself whereas the real message, of which the real meaning is perhaps only a contribution, is the structural change (of scales, models, *habitus*) which operates in depth on human relations."[137]

What Baudrillard sees as important in the writing of McLuhan is how media (as material exegesis) produces social and cultural change, effectively how technology alters patters of human behaviour. However, the a-contextual position of McLuhan must be recognised at all times, and his work validated through a situational application, much as is carried out in Martin's *The Organizational Complex*, in order to draw out the ideological significance of changes in material culture.

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136 Baudrillard, Jean 'Review of Marshall McLuhan's *Understanding Media'* in Gary Genosko (ed.) trans. By Mike Gane *The Uncollected Baudrillard* (London: Sage, 2001) p.430-44

137 Ibid., p.42. For a critique of McLuhan's dogmatic stance on the singular importance of the medium over the message, see Christopher Ricks on McLuhan, p.106, in *Marshall McLuhan: Critical Evaluation in Cultural Theory Volume 1*

Martin's publication *The Organizational Complex* (2002) draws on McLuhan. The book is an account of a close collaboration between research institutes, industrial producers, architects and artists, and the United States military that aimed to develop tactical and material responses to the threat of Communism. It provides an analysis of specific, near contemporary examples of methods of spatial organization and production, effected through the medium of architecture. Martin's definition of the 'organizational complex' lies in this collaboration, and its 'aesthetic and technological extension',[138] with the merging of systems of rational, empirical thought and planning into a system that was responsive to immediate crises and demands thrown up by the unpredictability of the cold-war. Martin suggests that architecture acted as one of several lines of communication intended to regulate and maintain this military-industrial network, that reproduced images of organization with direct affects on the physically and psychologically experienced space of 'modern' militarised capitalism, reproducing organizational forms of organizational image: organizational ideology. As Martin suggests of corporate architecture:

> 'Media organize. To be sure, they also communicate; they transmit messages, circulate signs. But to leave it at that is to fail to grasp the significance of Marshall McLuhan's dictum "The medium is the message." For in the cybernetically organized universe in which McLuhan made his home, it was precisely *organization* that was communicated – as both message and medium, image and effect, form and function – through multimedia channels that never ceased to fascinate him."[139]

The organizational capacity of architecture, as suggested by Martin, is effected through the physical manifestation of the constituent material parts of, in this case, a building. Through the use of architectural processes of design and construction, principles of rational ordering (organization) can be made manifest, and through the production of an architecture of clarity, simplicity, singularity and order the message of transparency as organization is communicated. Parallels with Fosters' work are clear. In this case the content of architectures of glass, light, openness and rationality can be argued to be that of the medium itself: transparency; or, as Martin puts it - organization. Architecture, here, can be considered as a system that enables complex organization of social forms, and as Martin suggests, this can be seen as a system that

138 Martin, *The Organizational Complex,* p.4
139 Ibid., p.15

is adaptable, yet hegemonic (i.e. 'total'.) In *The Organizational Complex,* Martin discusses the architecture of the Cold-War military-industrial complex as a form of control-system that operated as an organism that communicated ideals of a corporate nature through images. Martin suggests that:

> 'Its defining epistemologies coalesce into an organicism that operates on the model of a total, if pliant, system. Within this system architecture acts as a conduit for organizational patterns passing through the networks of communication that constitute the system's infrastructure. The system's phantasmagorias – with built architecture also counted prominently among these – likewise constitute an indelibly real system of images, with indelibly real consequences [...] architecture works here actively to integrate spaces and subjects into naturalised organizations, specifically to the degree that it is "reduced" to corporate image.'[140]

As McLuhan comments, 'light is a self contained communications system in which the medium is the message'[141] and for this argument, the material that produces buildings of light are self-contained communication systems whereby the transparency of the medium is the message. For, as McLuhan suggests, 'light is information without content'[142] and following this, the argument made by Baudrillard (outlined below) as to the illusory nature of the transparent, is supported by the notion that the medium of light is a self-referential device that produces and reproduces the very conditions of its own existence: its own transparency. McLuhan's analysis of the power of media to organize in *Understanding Media* extend to the discussion of the force of change that light brought to domestic routines, as well as its power to control. He suggests with reference to the growth in glass technologies and their integration into the home that 'with light control by glass came also a means of controlling the regularity of domestic routine.'[143] The regulation of the medium of light permitted, in this early example, regulation and control. The exercise of power over a social condition of activities within the home. McLuhan goes on to indicate the power of electric light to change the modes of interaction within the home and outside, discussing the power of the medium to elicit changes in the 'patterns' of social behaviour: '[...] the "message" of any medium or technology is the change of scale or

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141 McLuhan *Understanding Media (original edition)*, p.139
142 Ibid., p.139
143 McLuhan *Understanding Media (original edition*, p.139

pace or pattern that it introduces into human affairs.'[144] Here, the medium (the architecture that permits the admission of light and its artificial use) is generative of forms of organization. Both the pattern and pace of domestic life is altered through first the installation of glazing, then the installation of electric lighting: the medium forces the social change and creates a new material effect. At a larger scale, and extrapolating from McLuhan's thesis and Martin's analysis of organization, Richard Edwards' *Contested terrain: The transformation of the workplace in the twentieth century,* indicates the increased pace of working from the introduction of the technology of the production line and the effect that had upon workers:

> 'Struggle between workers and bosses over the transformation of labour power into labour was no longer a simple and direct *personal* confrontation; now the conflict was mediated by the production of technology itself. Workers had to oppose the pace of the *line,* not the (direct) tyranny of their bosses. The line thus established a technically based and technologically repressive mechanism that kept workers at their tasks.'[145]

The medium of the technology induced a new form of work pattern, and introduced a mechanically directed and controlled form of factory organization. The medium, here, communicated the message of advanced, technically mediated organization, and induced in the individuals affected by this technological medium a form of demonstrable change in their patterns of behaviour and ordering. The medium of architecture, conceived as productive of forms of rational ordering and technocratic organization, is central to Fosters' operation. The message of organization, here, is effected through the medium of the transparent.

The Illusion of Transparency

The texts discussed above string together a set of related discourses on transparency. In combination, they describe the parameters of how transparency is commonly understood within Western architectural culture. Lefebvre's Marxist critique illustrates the historical and structural basis for transparency's dominant position within Western thought, and how it has become an integral part of our spaces. He also

144 Ibid., p.20
145 Edwards, Richard *Contested terrain: The transformation of the workplace in the twentieth century,* (New York: Basic Books, 1979), p.118 in Hatch, Mary Jo *Organization Theory: Modern Symbolic and Postmodern Perspectives* (Oxford: Oxford University Press, 1997), p.260

indicates the obfuscatory position that this transparency holds – how the construction of a culture of clarity acts to present an illusion of transparency within a capitalist society, where potentially none exist.

This idea of the illusion of transparency is supported by both Vidler's discussion of the myth of the transparent in French society and Barnstone's critique of post-War German thinking, which uses a transparent ideology to mark a 'zero-hour'. How these work, materially, and how these cultural changes are produced through the technology of architecture, are discussed by Fierro with reference, again, to the French state. McLuhan and Martin's understanding of the centrality of material developments to changes in patterns of human behaviour, and hence transparency's organizational capacity, are crucial to understanding how Foster's architecture works. However, to critique the obfuscatory mechanisms at work in any self-proclaimed transparent architecture, we must turn to Jean Baudrillard, who sees transparency as an illusory device, one that purports to produce conditions that do not exist.

What follows will discuss texts from Baudrillard that question both the rhetorical and functional use of transparency to produce simulations and illusions. The effects of these illusions range from the importance of rationality and reason (the logos) within Western systems and its architecture, to specifics of an illusion of the centrality of vision to Modernity and to the construction of images of logocentric state power. Jean Baudrillard's analysis of post-modern social forms builds on the notion of transparency's illusory capacity, but suggests that in a pluralist society transparency presents illusions of conditions that no longer (or even never did) exist, but act to produce an image of the conditions that the simulation projects: simulacra. His analysis of the conditions of post-modernity dwell on what Mark Poster terms 'the era of high-tech capitalism'.[146] Whilst subject to criticisms of dogmatism and a 'totalizing quality'[147] in his writings (although resolutely attempting an undermining of absolutes, his text postulates many), this focus on the mechanisms of advanced systems of capitalism provides a way to critique the large-scale built projects of Fosters.

146 Poster, Mark (ed.) *Jean Baudrillard: Selected Writings* (Oxford: Blackwell, 1998) p.6
147 Ibid., p.5

Baudrillard theorizes transparency's capacity to generate the superficial projection of social conditions. His definition of these conditions in *Simulacra and Simulation* provides an interpretation of architecture's capacity to both simulate and dissimulate:

> '[To] dissimulate is to pretend not to have what one has. To simulate is to feign to have what one doesn't have. One implies a presence, the other an absence.'[148]

For Baudrillard, simulation presents a destabilization of reality – the partial production of the conditions that the simulation pretends to. As '[...] whoever simulates an illness produces in himself some of the symptoms',[149] so can be extrapolated: where the conditions of transparency (openness etc.) are simulated, some of the effects of transparency are produced. But these effects are almost chimeras of themselves (controlled, laboratory defined effects combined of the thing and its opposite, its non-existence). The 'thing', that condition, in Baudrillard's reasoning God, is replaced by a functional image (a divine icon in his terms) that produces some of the conditions of its existence (reverence, belief, faith, worship etc.). These icons, these images, these simulacra, work to obfuscate the loss of God, as Baudrillard contends. They replace the idea of God with 'the visible machinery of icons',[150] copies (simulacra) of that which never existed in the totality which the images of God suggest. The simulacrum, as image of extinct reality, has according to Baudrillard, the power to kill the condition of which it speaks. Hence images of the divine, which can also be understood, in a largely secular society as images of democracy, are:

> '[...] murderers of their own model, as the Byzantine icons could be those of divine identity. To this murderous power is opposed that of representations as a dialectical power, the visible and intelligible meditation of the Real. All Western faith and good faith became engaged in this wager on representation: that a sign could refer to the depth of meaning, that a sign could be exchanged for meaning and that something could guarantee this exchange – God of course. But what if God himself can be simulated, that is to say can be reduced to the signs that constitute faith? Then the whole system becomes weightless, it is no longer itself anything but a gigantic simulacrum – no unreal, but a simulacrum, that is to

148 Baudrillard *Simulacra and Simulation*, p.3
149 Ibid.
150 Baudrillard *Simulacra and Simulation*, p.4

> say never exchanged for the real, but exchanged for itself, in an uninterrupted circuit [...].'[151]

By replacing the ordering condition (democracy, the fair and just rule of law, etc.) which makes the representation an image of the real (hence indicating its existence), the simulacra as image produces the condition of merely referring to this image, referring to a non-existent state or being. References to a 'depth of meaning' are replaced by simulations of this depth of meaning, as the production of the image outweighs the belief in the condition of the real.

For Baudrillard, belief is replaced by an image of belief, a mediated relationship with the idea of the real. The singular ideal that underpins a social system, in this case the idea of God, is replaced by references to *references* of that idea in order to continue to support the structures that are dependent on the idea. And the reproduction of power that is reliant on this idea is contingent on the increasing density of the visibility of the image. As Baudrillard suggests: 'we require a visible past, a visible continuum, a visible myth of origin, which reassures us about out end.'[152] As these images proliferate so they become better, more integral as images than the original. They become more perfect in their condition of presenting the authenticity of the image of the idea.[153] They come to be referents not of the original but of themselves.[154]

A struggle for power surrounds the replacement of the image of God by, at first, the idea of democracy, then the image of democracy and finally, as Baudrillard suggests, by the simulacra of the democratic:

> '[...] the secret of any new power is the erasure of the scene of power [...] all of this started without a doubt in the political sphere with the democratic simulacrum, which today is the substitution for the power of God with the power of the people as the source of power, and of power as *emanation* with power as *representation*.'[155]

Baudrillard is suggesting here that democracy is the new position of power. The power within this lies in the generation of an empty, hollow, thin presentation of

151 Ibid., p.5-6
152 Baudrillard *Simulacra and Simulation*. p.10
153 Ibid., p.11
154 Baudrillard *Simulacra and Simulation*, four stages of the image, p.6
155 Ibid., p.42

democracy: democracy constructed, not of individual involvement and fair, citizen led change, but of lobbying, sophisticated diplomatic mechanisms and political machinations. The democracy that is presented, say, through the Reichstag, is not the democracy at work in contemporary Germany. It is a simulation of an image of the ideal of this form of democracy.

The visible myth of a structured society is generated, today, from the appeal to the democratic, and the presentation of the simulacra of its existence. For Baudrillard, as order and integrity decline in Western societies, as rational power declines, so the simulacra of that power proliferates, generating some of the conditions of its existence yet belying a systemic disorder and organizational entropy:

> 'Power itself has for a long time produced nothing but the signs of its resemblance And at the same time, another figure of power comes into play: that of a collective demand for *signs* of power – a holy union that is reconstructed around its disappearance.'[156]

An example of this proliferation of the simulacra of power and the collective demand for its demonstration, is provided by the methods chosen by governments to deal with the economic crisis in early 2009. Attempts to stabilize markets were made with injections of simulated currency: money that does not exist. And this simulated remedy is wielded to demonstrate power over entropy, the production of images of power over entropy. There was a collective demand calling for action, as witnessed by former Prime Minister Gordon Brown and his Labour party's climb in opinion polls following announcements of his capacity to wield power over the markets, and simulations of him doing so. Simulacra of power operate at an immense scale, at multiple-billions of dollars, pounds, euros. This was the simulation of control over chaotic, wilful forces, as carried out by chief executives, bankers, financiers and political leaders: simulation in order to generate 'confidence' through transparency. In October 2008, Brown commented in a speech to 'financial leaders' at a London press conference [my italics]:

> 'With the same courage and foresight of [these] founders [of the Bretton Woods conference], we must now reform the

156 Baudrillard *Simulacra and Simulation*, p.23

> international financial system around the agreed principles of *transparency*, integrity, responsibility, good housekeeping and co-operation across borders.' [157]

As David Harvey suggests of the Modern, a myth of rational, predictable and logical mechanistic control dissimulates the 'subterranean' force of corporate power. These are inherently undemocratic and subject to impulses, drives and desires that are product of, and productive of, power.[158] The invocation of the social and the political as control mechanisms against this 'subterranean' force is, however, in Baudrillard's terms, a simulation of control. The actions of Brown and his associates do not act to hide, but instead to simulate systems and structures of control, of agency, over chaos. These systems are referents of the idea of control, presentations of the God of rationality, reason, democracy and transparency.

The 'simulacra' is the production of an image of that which does not exist. The proliferation of these images is proportional to the decline in the existence of the condition that is lacking. The simulated condition of power is reproduced through popular calls for its existence, it is the 'object of a *social* demand' as are products or services, and hence becomes 'purged' of a political dimension, as it becomes a commodity.[159] As part of this popular invocation of images of extinct conditions, participation, involvement and accessibility, tropes of the democratic are used as simulacra to hide their lack.[160] As Baudrillard suggests, and Harvey reinforces, power as an ordering principle no longer exists. Maybe it never did. Mechanisms of social control do little, as can be interpreted from Baudrillard, to regulate the chaotic flux of human actions in the world. What these mechanisms do is generate some degree of an image of control, of regulation. So the proliferation of notions of democratic social control are simulacra: the objective reality of involvement, inclusion, participation,

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157 Winnett, Robert *The Daily Telegraph,* 13 October 2008 'Financial Crisis: Gordon Brown calls for "new Bretton Woods"' <http://www.telegraph.co.uk/finance/financetopics/financialcrisis/3189517/Financial-Crisis-Gordon-Brown-calls-for-new-Bretton-Woods.html> [accessed: 15 April 2010]

158 Harvey, David *The Condition of Postmodernity* (Cambridge, MA: 1990), p.36

159 Ibid., p.26

160 As in Lacan: from *The Edinburgh International Encyclopaedia of Psychoanalysis* ed.by Ross Skelton (Edinburgh: Edinburgh University Press, 2006) p.278, '*The lack in the subject* [in this case a less singular subject] *is a 'want' of being* [...] *in the subject which expresses itself as the desire, distinct from any biological need, for a lost object the subject has never possessed.'* The suppression of this lack (through the transparent screen, image etc.) can be interpreted in much the same way as the suppression of the lack through language. Its expression emerges, unsuppressed, in psychosis, urges, ticks etc. The awkward manifestation of the crowds of onlookers, visitors and partakers in the ritual of visiting transparent buildings.

the basis of current models of Western democracy, are but active referents to the still-born quality of this democratic *idea.* Through the proliferation of these simulations, the chance of this lack of a true democratic realm being realised is diminished. The act of making transparent and equal the site of democratic participation places the individual on both the sides of 'power' and of subject.

> 'There is no longer any imperative of submission to the model, or to the gaze "YOU are the model!" "YOU are the majority" [...] "YOU are information, you are the social, you are the event, you are involved, you have the word, etc." An about face in which it becomes impossible to locate one instance of the model, or power, or the gaze of the medium itself, because *you* are always already on the other side.'[161]

The supposed equality suggested in many media masks the existence of power, Baudrillard contends, within these systems. For example the two-sided view into and out of the parliamentary chamber; or the perpetuation of systems of 'feedback' to all forms of digital information distribution. If one has access, and appears to have – as the image presented to the viewer suggests – a degree of systemic-feedback, then one seems to have gained agency within what is in reality a radically asymmetric distribution of power.

Within this definition, therefore, simulacra are understood as images: images that present the partial simulation of order, rationality, reason, democracy; displaying the virtues of the transparent. Through Baudrillard, it is understood that these simulacra are activated through the transparent condition of the image:

> 'This is the murder of the image. It lies in this enforced visibility as source of power and control, beyond even the 'panoptical': it is no longer a question of making things visible to an external eye, but of making them transparent to themselves. The power of control is, as it were internalized, and human beings are no longer victims of images, but rather transform themselves into images.'[162]

Transparency in this instance is understood as a function of power within the individual: not the classic Benthamian notion of the centrality of power, but the

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161 Baudrillard *Simulacra and Simulation*, p.29
162 Baudrillard *The Intelligence of Evil*, p.94

indication of powers distributed the functions of control to the populace. The simulation of power is devolved, decentred and dispersed amongst the voting public. The enforced visibility through 'making things visible to an external eye', acts, as Lefebvre suggests to open to light and decrypt all that was 'hidden, dissimulated, dangerous', in order to mollify society's capacity for bringing about social, democratic change. By making 'all' visible, as Baudrillard suggests, 'all things' are turned into simulacra: like a phantom illness, to generate some aspects of the *idea*. Like vaccines, however, these 'things' contain only the dead cells of the condition, inoculating against the re-emergence of that self-same state. For instance, again with reference to the democratic: the conditions of the all-encompassing idea that has supplanted God (accountability, openness, accessibility, involvement, participation etc.) are presented as simulacra inducing a mild response in the social-body that presents the denatured symptoms of democracy. Baudrillard contends that:

> 'Images [...] ultimately bear witness, behind their alleged 'objectivity', to a deep disavowal of the real, at the same time as a disavowal of the image, which is assigned the task of representing that which does not want to be represented, of violating the real [...]. In this sense [...] all that makes up the 'visual' [...] are not true images. They are merely reportage, realist cliché or aesthetic performance, enslaved to all the ideological systems.'[163]

For Baudrillard, the site of simulation can be within the production of the image. Suggestive of objective reality, they act to convince one of the existence of God, as controlling power. These images are illusory, indicative of a presence yet generative of an absence. As Baudrillard suggests, 'behind each image something has disappeared'.[164] For Baudrillard, this is seen as the implosion of the real in the medium, and the medium being seen as visual image, as projection, as architecture. In *Simulacra and Simulation,* Baudrillard suggests that the production of simulacra, as copies of copies of a form of content effectively empties a medium of this content. As an extension of McLuhan, therefore, Baudrillard suggests that the medium loses secondary meaning, and its material existence and the effects this produces becomes the content. There is no message, only media projecting simulacra: images of meaning which in fact become absorbed into the media. This is the implosion that

163 Baudrillard *The Intelligence of Evil*, p.93
164 Ibid., p.95

Baudrillard speaks of: the negation of the distinction between meaning and medium, the blurring of the definition of what is the 'real' condition into that which the medium alludes to.[165]

Transparent Definitions: A Summary

A number of definitions are collapsed together into the notion of transparency as used by Fosters. These definitions are as follows. Transparency understood through a conventional, widely held view in the West has been defined as a concept of rational singularity. Western systems of thought, Western epistemologies equate transparency to openness, light, legibility and reason. The transparent is placed within a modern worldview, where the health giving properties of light are accepted as given. However the question, raised here by Lefebvre and Baudrillard, is what does this definition, this working model of the transparent, disguise? What does it veil? Within this question lies a definition of transparency as an obfuscatory mechanism: as a method of generating organization for the production of an image. This is an image that simulates and dissimulates the conditions that produce social, cultural and economic forms. It appears from this combination of largely Marxist sources, that within that which we call 'transparent', a game of blind hide-and-seek is taking place: the veil of glass, or other materials, belies a growing disparity of power, behind a growing simulation of involvement, participation, clarity, lucidity and openness.

Principally, therefore, this definition acknowledges that space is produced through interrelated social, cultural and economic conditions. In this Lefebvrian definition, space is not that of Kantian or Cartesian conception. It is not an empty vessel awaiting content, nor a singular realm of scientific rationality and reason. Here, space is understood as being the product of social forms, and generating spatial relations. Space is understood as being in a state of constant flux, altered and dialectically developed through daily life.

Space is also understood, following Lefebvre and Baudrillard, as being capable of dissimulation. Here, space is not singularly neutral, but subject to systems of hidden

165 Baudrillard *Simulacra and Simulation*, p.82

and overt political manipulation: hegemonies. Space (in its broadest sense as a product in flux) can be simultaneously revelatory and obfuscatory, in a process of literal, phenomenal and metaphorical reversals. The transparent can be opaque: the opaque, transparent. As this suggests, from Baudrillard, that which is necessarily presenting itself as open, clear and lucid contains the very possibility of complete obfuscation. Within this understanding of space as product, both its visual and physical existences can be used, as media, to organize, control, and regulate systems, as will be indicated in the following chapters. As part of this regulation, obfuscatory mechanisms – those aspects of space that suggest one thing yet contain another – are critical to these processes of organization, and control. Material, it has been seen (from Barnstone and Fierro) can act to produce these spaces of organization and to communicate principles of social control.

Defining Transparency

If space is produced, then transparency is also actively produced. As Lefebvre contends, transparency has been nurtured as a central narrative of Western thought, developed and exercised as a part of the production of our spaces. This is also illustrated by Barnstone and Fierro, who indicate the scale and position that transparency, within specifically architectural situations, has had in the development of the late modern. On an architectural level, it will be argued in the case studies below that the transparent is used as an organizational tool within the work of Fosters. The luminous capacity of glass combined with structural openings and framed views are used to generate clear, sequential, linear spatial connections. Within the practice, transparency – defined as clarity, lucidity, openness – is used in plan and section form to centre, order and rationalize. Through the production of built space, there is a concomitant production of images of transparency that also organize, through their sign-value, at a larger scale. Thus, transparency is understood as being generative of both clarity and openness and of images of organization. This organization is understood as being the organization of bodies in space and of social and cultural systems. Here, transparency de-crypts, de-mystifies and opens to light, rationality and reason, as Lefebvre demonstrates. Transparency is a powerful tool for the architects' task of ordering.

However, it is also understood, in this definition, following Baudrillard that transparency acts as a veil: a screening device that hides what no longer exists or that which never existed. Transparency is the screen through which the simulation of something lost is presented: the medium for the projection of simulacra. In this critique, transparency is seen as generative of, and generated by, the myth of a technocratic, positivist 'corporate-capitalist version of the enlightenment.'[166] The transparent screens of architecture are used, as Baudrillard suggests, to enlighten an audience, and convince them of the existence of a condition that never existed: the simulacra.

Transparency is seen as the technical presentation of the appearance of a thing – an ordering principle, a set of social forms, a myth of society – that acts to convince, through a surfeit of information, through the existence of the non-existent. Transparency is used to project the images of order where order doesn't exist, rationality where it has been surpassed by the irrational, democracy where it has been usurped by corporatism. Principally, this definition of transparency rests on the understanding of its capacity to generate and present images of organization in order to resist the entropic reality of a lack of rationality within systems.

These contentions, drawn largely from Lefebvre and Baudrillard, will be pursued through the three Foster projects studied below, and will be analysed with the aim of tracing the role of transparency in terms of its capacity to organize; to brand; to produce images; to develop rhetoric and ultimately to obfuscate through simulation. But first it is necessary to determine, through a close reading of the practice's published output, how Foster + Partners see the role of the transparent in their work.

166 Harvey *The Condition of Postmodernity*, p.35

CARDIFF UNIVERSITY

3 Foster and the Transparent

Foster + Partners: Content and Context

There is a vocabulary that is common to the practice of Foster + Partners: a set of rhetorical devices that are deployed by the public relations department to construct an image of the business. These devices also inform the conception and design of the physical, built structures from Fosters – structures that produce specific conditions, it is argued, of the transparent. In order to understand how this identity produces a culture of transparency within the practice, it is necessary to define and illustrate what these terms are, and where they have come from. To this end, this chapter takes the published material of the practice, the descriptions of buildings and other projects, and searches for terms that define Fosters' idea of the transparent, as well as their role in the production of spatial planning and architectural design.

This chapter is avowedly not a history of the practice. Their background and development has been covered widely and in depth by many authors.[167] This chapter focuses exclusively on the position of transparency to the development of the practice's schemes and their use of the rhetoric of transparency to construct a practice identity or brand. A close reading of the most recent published output from Fosters, in the form of their practice brochure, is used to illustrate the position of the rhetoric of ideas of accessibility, openness, clarity and transparency within the practice, and how they are relevant to the construction of a transparent agenda within Fosters.

The published material from Fosters supplements the built objects seen in the case studies as subjects for analysis. As cultural artefacts, both the built objects and the published material can be interrogated for specifics of the practice's methods of operation and the construction of their rhetoric. Criticism, journalism and discussion

167 For example: Fraser, Murray with Kerr, Joe *Architecture and the Special Relationship: The American Influence on Post-War British Architecture* (Oxon: Routledge, 2007); Sudjic, Deyan *Norman Foster: A Life in Architecture: The Authorised Biography* (London: Weidenfeld & Nicolson, 2010); Jenkins, David (ed.) *On Foster: Foster On* (Munich: Prestel Verlag, 2000); Pawley, Martin *Norman Foster: A Global Architecture* (London: Thames & Hudson, 1999); the *Norman Foster. Works* series 1-5, ed.by David Jenkins (Munich: Prestel Verlag).

of Foster + Partners in the media offer scope for interpreting the practice's involvement in the production of architectural and cultural contexts. The impact and influence on the practices' output of cultural, political, and economic contexts can be read in relation to these artefacts. What the practice builds, what they say and what is said about them is the basic material for discussion.

To this extent, what is communicated from the press-office of the practice, their public relations and publishing, provides the practice material for analysis. With an extensive publication history, and broad media coverage, Foster + Partners have produced a wide range of cultural material. Discussion of their work ranges from in-depth technical building surveys in architectural journals to Sunday-supplement coverage of the latest high-profile commission. Due to their scale of operation (both media and built), their work is as familiar on paper as of. The practice's built work is matched by their published output. Through their range of published outputs, they have reached a level of media saturation almost unmatched by other contemporary practices.[168] A recent of which, a proposal from Norman Foster to build a permanent base on the Moon published on the 22 September 2009, indicates the level of journalistic complicity in the promotion of his unique brand, as Guardian journalist Jonathan Glancey indicates:

> '[...] the European Space Agency's Aurora programme envisages a necklace of such [permanent] bases strung out across the face of the moon. It's a thrilling thought, but who – which architect – should design the first lunar structures? Why, Norman Foster, of course. Already working on Richard Branson's Virgin Galactic spaceport in New Mexico, due to open in 2011, Foster is the natural – and scientific – choice for such challenging new architecture and habitation. The European Space Agency certainly thinks so, too.'[169]

Norman Foster as author here is confused, perhaps deliberately, with Fosters the practice. The singular intent of the architect as genius is repeated by Glancey, as

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168 'Norman Foster' broad search term, Guardian newspaper, searched 23 September 2009 <http://browse.guardian.co.uk/search?search=norman+foster&sitesearch-radio=guardian&go-guardian=Search> [accessed: 23 September 2009]
Searching website of the UK newspaper *The Guardian* for Norman Foster, which covers both the weekly Guardian, the Saturday *Guardian* and the *Observer*, shows 1141 hits from 1991 onwards

169 'Man on the moon: Norman Foster prepares for architecture's lift-off' Guardian newspaper, 22 September 2009 <http://www.guardian.co.uk/artanddesign/2009/sep/22/moon-norman-foster-architecture> [accessed: 23 September 2009]

journalists often do, serving to heighten the myth of the practice's brand. Fosters' technical, rational and scientific mode of operation is clearly evident to Glancey, being the 'natural – and scientific – choice' for this project, citing past projects, such as 30 St Mary Axe (popularly known as 'The Swiss Re'), as indicators of a space-age architecture of technological and ecological fusion. Foster enters the public imagination and consciousness through this media-driven exposure. Through tracing Foster + Partner's rhetoric of transparency in published sources, an indication of the operational ideology of the firm will be established. Transparency as both generator of image and producer of organization will be defined.

Transparent Rhetoric

The current catalogue of Foster + Partners allows a working definition of the rhetoric of transparency within the practice to be read.[170] The use of transparency can be seen to operate under two distinct yet interrelated areas: organization and image. As a rhetorical tool of organization, Foster + Partner's definition of transparency rests on the association of legibility, accessibility, order and centrality with openness and light. Architecture is seen as an enabling force, opening up previously closed spatial locations to socially democratic possibilities. The following sections work through the contents of this document, published in 2008, drawing out themes related to a definition of transparency that the practice appears to use.

Transparency Organizes

In the vocabulary of Fosters', transparency and its synonyms are used to suggest methods by which the practice has organized space in a coherent, rational and ordered manner. Demonstrated throughout the catalogue, the language used to describe the architecture is positivist, technocratic and, as Lefebvre would suggest, reinforces the scientific rationality of the architectural profession. In the 2002 project for the Winspear Opera House, Dallas, USA *[21]* material properties and principles of organization come together for the aim of making 'clear'. The description of the building draws a relationship between transparent materials, literal forms of transparency and democratic ideals of openness and readability:

> 'Designed to ensure accessibility and legibility [...] In elevation the building is transparent, its soaring glass walls revealing views of the public concourse, upper level foyers and grand staircase'
>
> 'Organizationally, the Winspear reinvents the conventional form of the opera house, inverting its closed, hierarchical structure to create a transparent, publicly welcoming series of spaces [...]'
>
> '[the Winspear is] fully integrated with cultural life. [...] [it is the] focal point for the entire district.'[171]

170 *Catalogue, Foster + Partners (2008)* (Munich: Prestel Verlag, 2008)
171 Ibid., p.22

Here, in this as yet unbuilt project for Dallas, Foster + Partners draw the connection between openness ('welcoming', 'public') and the transparent, which is used to literally and metaphorically open the previously closed spatial shell of the traditional opera house. Through transparent screens, and plan ordering, a cultural condition is opened to ideals of democratic participation. Through this participation and linked to the reordering of the opera house type, the idea of legibility through transparency is used in creating a centre, a 'focal point' of 'publicly welcoming [...] spaces.'

Fig.21
Winspear Opera House, Dallas, USA

Fig.22
Museum of Fine Arts, Boston, USA

At the Museum of Fine Arts, Boston, USA, completed in 1999, *[22]* the rhetoric of transparency is also used as organizing device, and the association between light, openness and accessibility is made. The proposed building is discussed as 'open, accessible', 'a glass jewel box', 'a glazed structure, a crystal space'. These properties of the transparent are used to order, the 'jewel box' '[...] creating spaces for visitor orientation [...]', [172] and as at the 2004 project, Zenith,[173] in St. Etienne, France *[23]* 'A state of the art music and cultural facility' where '[...] a glazed foyer organizes [...]',[174] glass and its capacity to transmit light is intended to produce conditions of legibility and to organize routes and movement through a structure. Spaces of light, air and literal openness, such as atria, are used to centre, even within smaller schemes, such as the 2006 project for the Circle Hospital, Bath, *[24]* where the '[...] double height atrium [...]' produces a '[...] central focus [...]'[175]. The rhetoric used here indicates the relationship between light and spatial organization: the medium of light is used to order and rationalize. Gradually, a picture of the practices attitude to the conditions that generate the transparent begins to emerge.

172 *Catalogue, Foster + Partners (2008)*, p.20
173 Ibid., p.26
174 *Catalogue, Foster + Partners (2008)*, p.26
175 Ibid., p.48

Fig.23
Zenith Music Venue, St.Etienne, France

Fig.24
Circle Hospital, Bath

Glazed, light-filled atria recur in Foster + Partners' work as organizing elements, providing 'centres', and 'hearts', and linking structures into ordered wholes, such as at the Johnson Wax Company's 2006 Project Honour building, Racine, USA *[25].*

Here, 'the two buildings are linked by a glazed atrium [...] which connects via an under croft to the matrix of tunnels [...] the principal communications network through the campus.'[176] Glass is used to make manifest and legible the connections to this communication network, and the rhetoric of transparency is used to distinguish this organizing, open element from the old. This language of the transparent as new, as indicating a shift to a re-ordered spatial format, pervades Foster's work, and can also be seen in the Reichstag, where the association between the new, the transparent, and democracy is explicitly made. Within the Johnson Wax building, instead of transparency being used to mark a change of political order, it is used to mark a change in social order: 'In contrast to the more solid and internalized Wright buildings, Fortaleza Hall is completely transparent [...]'[177] its glazed, light-filled presence reorganizing, centring and creating a 'new social heart'.[178] The medium of transparency is used to rhetorically generate the new in this building description, which begins to indicate how Fosters' use of language that describes the organizational conditions of transparency is used.

Centring and rationalizing approaches to organization through transparent conditions are described as methods of spatial arrangement and are seen in the following projects. In the James H. Clark Centre, Stanford University, designed between 1999 and 2003 *[26]*, the building is seen to 'act as a social magnet for the university', operating as an 'open and flexible' facility,[179] the subtext being the capacity for the architecture to both order the institution and to make it legible through creating a social and physical centre. At the Petronas University of Technology, where 'the main entrance to the university is the drum-theatre, [...] the social hub of the campus'[180] the rhetoric of the 'hub' is associated with a singular centre that orders the social setting.

176 Ibid., p.662
177 *Catalogue, Foster + Partners (2008)*, p.662
178 Ibid.
179 *Catalogue, Foster + Partners (2008)*, p.176
180 Ibid., p.180

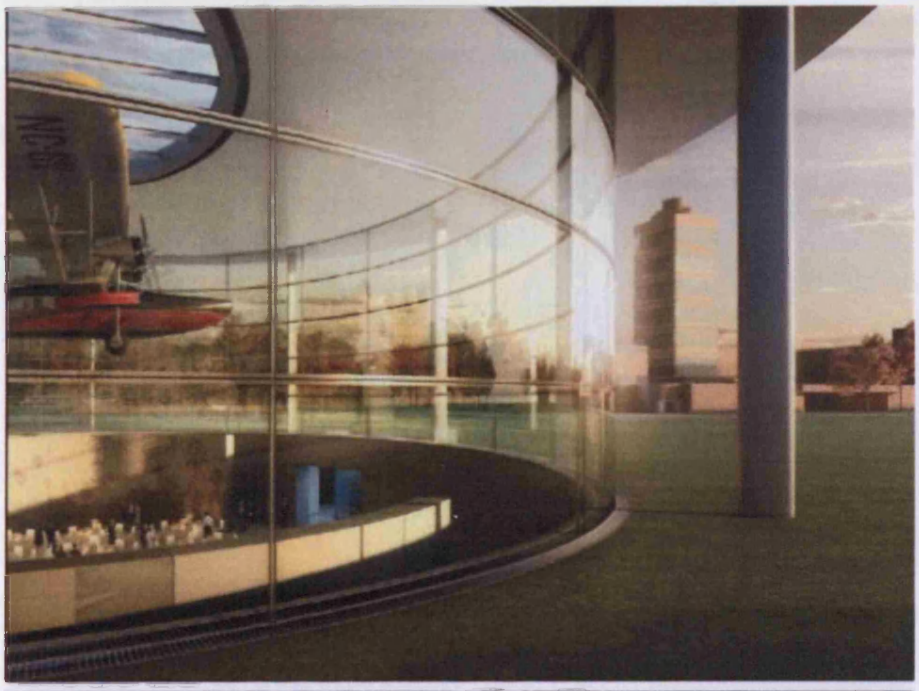

Fig.25
Project Honour, Racine, USA

Fig.26
James H Clark Centre, Stnford University, USA

Fig.27
Tanaka Business School, Imperial College, London

Fig.28
Sacklet Galleries, Royal Academy of Arts, London

At the Tanaka Business School, Imperial College, London completed in 2004 *[27]* 'the Drum stands at the heart of a space that serves as a new 'entrance hall' for the campus [...]'[181] within a fully-glazed box that permits the image of this 'heart' to be seen from Museum Mile in South Kensington, and the language again reinforces the architectural capacity to generate a centre. At the Sackler Galleries of the Royal Academy, London (1985-91) *[28]*, the space between buildings is used as both light well and central organizing device[182] and is described as a place of ordering and rationalising from a previous condition of 'wasted' space. A super-scaled atrium is used to organize space through light in Deutsche Bank Place, Sydney, Australia. Designed between 1996 and 2005 *[29]*, light is used to decrypt any potentially confusing or disorientating effects of the architecture and also to positively identify these circulation spaces as central to the performance of the architecture:

> 'Daylight is drawn into the office levels and down through the building via an atrium, which runs the full height of the tower [...]. Movement through the building is clarified and celebrated.'[183]

The 2006 project for the City of Justice, Madrid, Spain *[30]* uses a 'soaring central atrium'[184] to organize the Audiencia Provincial (the largest of the first two projects to be built on the campus), and this approach to spatial ordering is also described on smaller scale projects, such as the private house at La Voile, St. Jean, Cap Ferrat, France, 1999-200, where the 'spatial and social focus of the house is a double-height living space that looks out to sea, whose glazed walls slide back [...] to admit sunlight and fresh air'[185] where, again, the rhetorical position of light as organizing and centring media is reinforced. At Canary Wharf Underground station, London, completed in 1999 *[31]*, light is used to direct and order the flow of passengers and is described as: 'concentrating natural light dramatically at these points, orientation is enhanced, minimizing the need for directional signage' which operates to '[create] a sense of clarity and calm.'[186] The description of light, as Martin and McLuhan would suggest, as a medium that contains the capacity for organization, is made explicit here – as fundamental facet of the transparent (the admission of light, both literal and that of the intellect) is central to the vocabulary used by the practice.

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181 *Catalogue, Foster + Partners (2008)*, p.168
182 Ibid., p.104
183 *Catalogue, Foster + Partners (2008)*, p.77
184 Ibid., p.50
185 *Catalogue, Foster + Partners (2008)*, p.226
186 *Catalogue, Foster and Partners (2005)* (Munich: Prestel Verla, 2005) p.78

Fig.29
Deutsch Bank Place, Sydney, Australia

Fig.30
City of Justice, Madrid, Spain

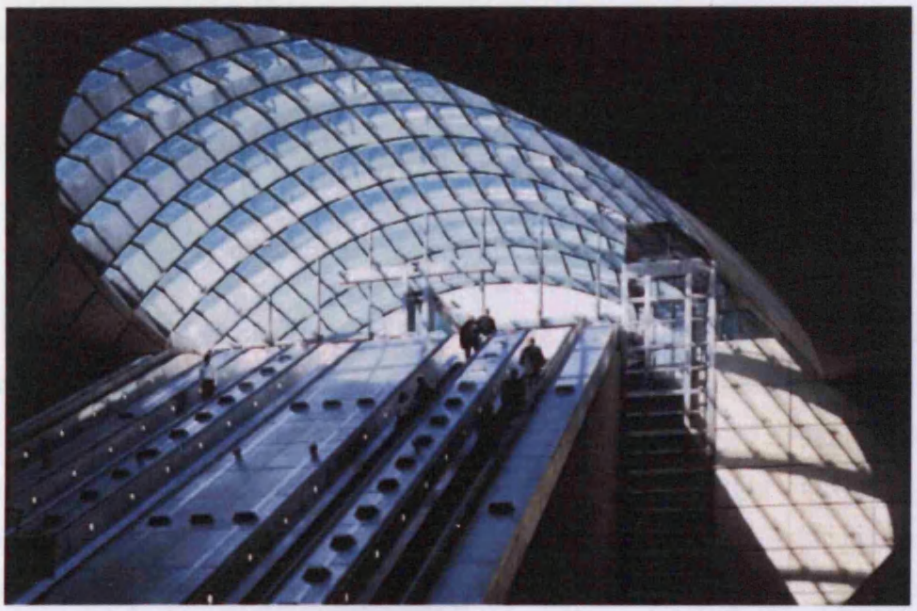

Fig.31
Canary Wharf Undergound station, London

Fig.32
Carré d'Art, Nimes, France

At the Carré d'Art, Nîemes, France, designed and built between 1984 and 1993 *[32]* Foster + Partners' present light and introduce the idea of advanced technology as organizing and centring conditions of the architecture:

> '[...] a roofed courtyard forms the heart of the building, exploiting the transparency of modern materials to allow natural light to permeate all floors'.[187]

The importance of light and technology to creating a social focus, a central ordering force within the Carré d'Art, is mentioned by Norman Foster himself, where positive social agendas and transparency as light are joined, 'I am convinced that one of the keys to the social success of the building lies in this handling of light and views.'[188] Light, transparency and progress are rhetorically linked here: a faith in the humanist potential of illumination to produce positive conditions. This luminous capacity is counterpoised, by Norman Foster in his writings on the development of the project, to darkness and the significance of light in the creative process of producing the Carré d'Art *[33]*:

> 'I can recall emerging out of the dark tunnel of trees which line Boulevard Victor Hugo into the Place de la Comédie [...] to be dazzled simultaneously by the explosion of light and by the unexpected prospect of a roman temple, [...] the central focus of the space.'[189]

Tellingly, the significance of light, rationality (symbolized by the roman temple) and centring to Foster + Partners transparent ideology are brought together in this text. Light is used to organize through its technological manifestation in atria, roofs, façades, and openings: it draws, opens, articulates, centres and makes legible. Transparency is a condition of both materials and space: used to produce rationally accessible and logical architecture *[34]*.

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187 *Catalogue, Foster + Partners (2008),* p.98

188 *Norman Foster: buildings and projects, Volume 4, 1982-1989* ed.by Ian Lambot (Basel: Birkhäuser, 1996), p.116

189 Foster, Norman *Norman Foster: buildings and project Volume 4*, p.107

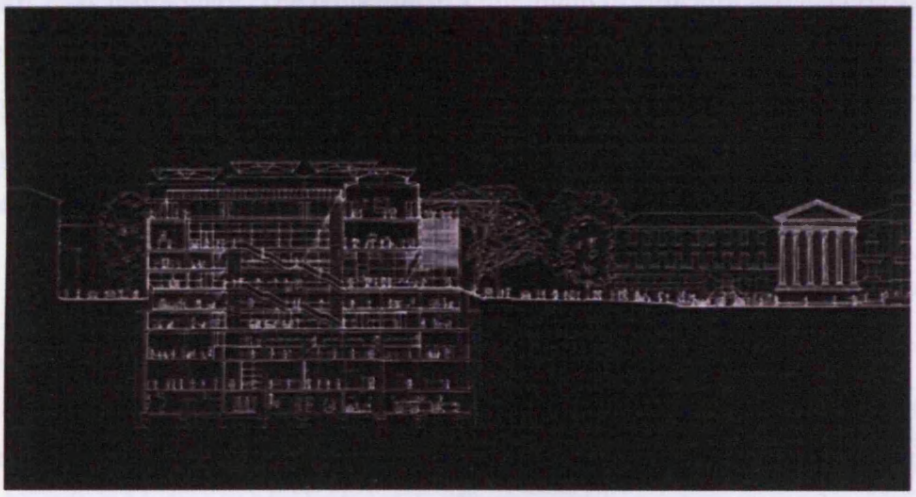

Fig.33
Carréd'Art, Nimes,

Fig.34
Carréd'Art, Nimes, section

Transparency Opens

Structure is also used as a rationalizing element in design, with its capacity to order made manifest in the language of the catalogue. At Heathrow East Terminal (2006-) *[35]* 'The structure is conceived as a coherent, legible single volume so that, despite its size, way-finding is straightforward',[190] where the transparency of the technology drives the transparency of the organization, as Barnstone suggests with respect to the transparent structure of the Pompidou.[191] Technology of glazing allows comprehensive spatial reorganization, as within the Great Court of the British Museum where 'the glazed canopy that makes all this [reorganization] possible is a fusion of state of the art engineering and economy of form',[192] which, as suggested above, rationalizes a previously ad-hoc assembly through a literal decrypting of the chaotic and dark spaces of the old British Library books stacks by the intervention of modern glass technology. The reduction to a minimum of structure and materials (a contemporary approach to advanced engineering which can be traced historically, as Neumeyer suggests, back to Paxton and the Crystal Palace) is linked in the Foster + Partners rhetoric to increases in transparent values and lightness, as is suggested in the Great Court:

> 'The aluminium glazing system and its tubular steel supporting structure are designed to minimize materials and maximize light transmission.'[193]

Here, the link between minimum of means and maximum admission of light is drawn in the rhetoric: the material becomes a necessary factor to be reduced to an absolute minimum in order to provide the best possible conditions for the information of light to enter into the space.

190 *Catalogue, Foster + Partners (2008),* p.84
191 Barnstone, p.84
192 *Catalogue, Foster + Partners (2008),* p.116
193 Ibid., p.214

Fig.35
Heathrow East, airport terminal, London

Fig.36
Great Classhouse, National Botanic Garden of Wales, Carmarthenshire

Within the Great Glasshouse of the National Botanic Garden of Wales (1994-2000) *[36]*, where the largest single-span glasshouse in the world forms the 'centrepiece' of the Gardens, structure is used to promote openness through 'flexibility'. The space, clear to the sky and free of interrupting structure is described as generating this open quality through the flexibility of literal transparency. At the Sainsbury Centre, where 'the buildings remarkable spirit of openness is seen to benefit from the uniquely

flexible quality of its roof and walls'[194] the relationship between the technological capacity of structure to reduce itself to a minimum of means and hence open and become transparent is firmly established in the practices descriptive rhetoric: materials and engineering can produce social conditions with democratic possibilities, according to the practice's rhetoric.

Structure can also connect, through its self-effacement, previously distinct zones into a unified 'whole' as suggested through approaches to skin, surface and structure relations in the 1971 Climatroffice project that Norman Foster designed with Buckminster Fuller: 'As far as possible, the division between the inside and the outside world would be dissolved'[195] – a desired condition that nearly manifests itself in the super-thin skin of the FU at Dahlem and suggests the ultimate minimisation of literal transparency: nothing at all between inside and outside, no glass, no wall, only free-flowing unified 'space'. Space in Foster + Partners work flows, and often flows with the assistance of transparency. Within the HSBC project in Hong Kong, the building illustrates on its elevation and within its plan-form 'the transparency of space that the structural form achieves'.[196] The legibility of movement within the HSBC is produced, for the practice, through open, flowing space: 'Space in a Foster building is not finite, nor static, nor sequential. [...] it is [...] constantly on the move, flowing from inside to outside, from atrium to plaza, from one level to another'[197] and here, the rhetoric of open access, movement and a transparency of architectonic idea is generated.

Transparency is used to describe connections and to produce conditions that 'open' previously closed spaces to the public, thereby promoting ideas of a democratic civic realm. At 200 Greenwich Street, New York, designed in 2006 *[37]*, a proposed

194 *Norman Foster: buildings and projects, Volume 4, 1982-1989* ed.by Ian Lambot, (Basel: Birkhäuser, 1996), p.86
195 Ibid., p.86
196 *Norman Foster: buildings and projects, Volume 3, 1978-1985* ed.by Ian Lambot, (Hong Kong: Watermark, 1989), p.174
197 Colin Davies in *Norman Foster: buildings and projects, Volume 3, 1978-1985*, p.202

skyscraper for the redevelopment of the ground-zero site in Manhattan uses glass to create relationships, 'connections with the city at ground level are reinforced by glass walls which create a visual relationship with the surrounding streets' – these are visual relationships, note, not necessarily physical or social relationships. Transparency as described is used as a form of visual connection. [198] In the Living Wall housing project in Amman, Jordan (2006) *[38]* the use of transparency to generate 'permeability' to the street network and encourage 'connectivity' is suggested in the text of the catalogue[199] and at Bishops Square, London (2001-2005) *[39]*, the speculative office development on the eastern fringes of the City, the architecture is described as being 'transparent and permeable, forming connections to the surrounding network of civic spaces and pedestrian routes'[200] and here, there is the direct, textual correlation between transparency and permeability (which can be taken as openness). The proposed BBC Radio Centre, Portland Place, London (1982-1985) *[40+41]* employ transparent rhetoric to tie the large-scale development into the urban grain of Portland Place and connect a previously 'closed' institution to the public: '[...] as the design became more and more integrated with its site, so the scope for transparency and communication at street level grew.'[201] Transparency is engaged to suggest connections, integrations, access, relationships: in effect, it becomes a rhetorical device of connections formed through a process of opening of view, movement and route.

198 *Catalogue, Foster + Partners (2008)*, p.88
199 Ibid., p.75
200 Ibid., p.288
201 *Norman Foster: buildings and projects*, p.58

Fig.37
200 Greenwich Street, New York, USA

Fig.38
Living Wall, Amman, Jordan

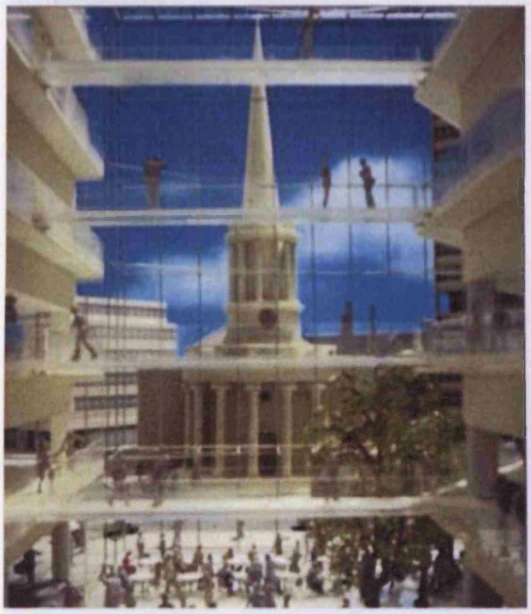

Fig.39
Bishops Sq, London

Fig.40
BBC Radio Centre, London

Fig.41
BBC Radio Centre, final scheme model

Fig.42
City Hall, London

Transparent Image

The use of language which describes conditions that are linked to ideas of transparency can also be read as a method to generate brand-images both for the practice and their clients. As Anna Klingmann suggests, outlined below, the production of corporate identity through images produced by architecture is important in today's consumer economy. As well as the production of corporate identity, there is also the production of symbolic capital through images generated by buildings that are used by the institutions of democracy.[202] The catalogue describes City Hall in London thus:

> 'One of the capital's [London's] most symbolically important new projects, City Hall advances themes explored in the Reichstag, expressing the transparency and accessibility of the democratic process.'[203]

As well as operating as an organizational device, transparency is employed by the practice as a method of generating symbolic capital *[42]*. Transparent materials, structures and organization are used to deliver an image of transparent ideals to society. As in the Reichstag in Berlin, which Barnstone critiques above as a literal icon of a 'new' Germany, at City Hall, transparency is used to indicate access to democratic processes, an 'open' society and suggests the potential of political engagement. Here, transparency presents an image of an open system, and one that is owned by the public, with 'London's living room' at the top of city hall being accessible to the general public, providing them with a view both over the capital and down to the assembly members. Again, a direct correlation is drawn between the openness of the architecture and the process of democracy. Within the City of Justice in Madrid, the project's image is 'intended to articulate the values of transparency and accountability that lie at the heart of the judicial system'[204] through the architectural openness, and at the Smithsonian Institution, Washington DC, in the practice's Courtyard scheme designed between 2004-2007 *[43]*, the national and international significance of the collections of the Smithsonian are presented through the image of a light-filled, structurally advanced glass canopy: 'At night, this canopy appears to float above the Patent Building into which it is inserted, symbolizing the cultural

202 Bourdieu, Pierre *Distinction: A Social Critique of the Judgment of Taste* (Cambridge, MA: Harvard University Press, 1987)
203 *Catalogue, Foster + Partners (2008)*, p.42
204 Ibid., p.50

importance of the Smithsonian Institution.' Light, and hence the transparency that produces this light-filled canopy, is rhetorically tied to the image of the institution, a central part of North America's enlightenment.[205] As at the Great Court of the British Museum this project operates in a similar manner as a luminescent icon for the institution.

205 *Catalogue, Foster + Partners (2008)*, p.128

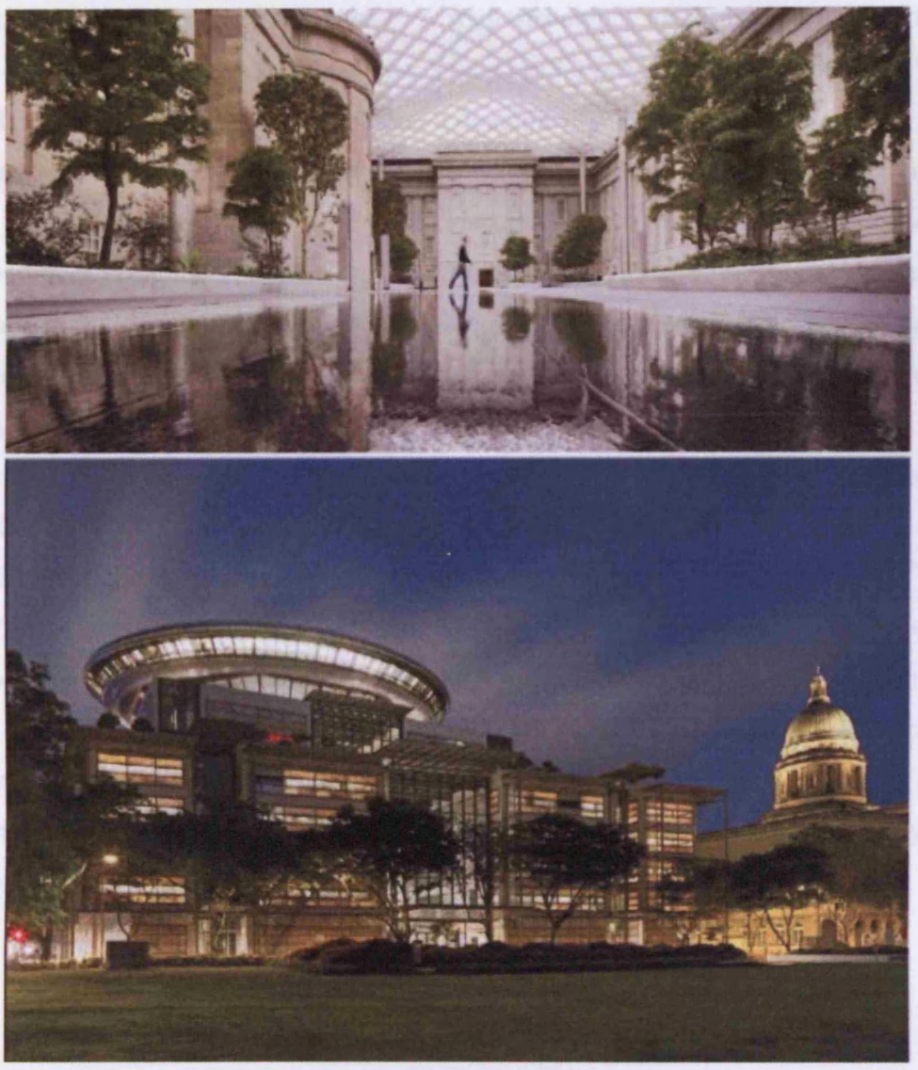

Fig.43
Smithsonian Institution, Washington DC, USA

Fig.44
Supreme Court, Singapore

The 2000-2006 project for the Supreme Court, Singapore, *[44]* '[offers] a modern reinterpretation of their colonial vernacular to convey an image of dignity,

transparency and openness'[206] linking the idea of a nations image and identity, democratic openness and transparency. Also, transparency as corporate image can be seen in the Whitney Development, New York (1978-) *[45]*, where 'at street level the building became completely transparent, a dynamically changing shop window linking inside and outside'[207] which again repeats the rhetoric of visual connections over physical and privileges sight and the visual as central aspects of transparency in the practices vocabulary. Within the BBC Radio Centre, the organizational structure is made literally visible from a public plaza, producing an image of the workings of the corporation which was previously hidden, generating 'a symbol of a new age of open communications' through 'making visible' the layers of the corporations organization 'achieving a glittering jewel-like complexity'[208] of visions of openness. The impetus behind the proposed project was to make a 'truly open building',[209] within which the 'full complexity of the BBC organization would be apparent.'[210] At the Radio Centre, the relationship between openness, transparency and participation is rhetorically made, as the BBC 'was a public institution, and the public could claim to have a right to be involved in the process of broadcasting.' The image of a new era of an open BBC would have been projected with this project, the architecture acting as transparent medium for the institution's message, but again one where the visual was the pre-eminent site of agency.

206 *Catalogue, Foster + Partners (2008)*, p.198
207 Ibid., p.72
208 *Catalogue, Foster + Partners (2008)*, p.43
209 Ibid., p.58
210 Ibid.

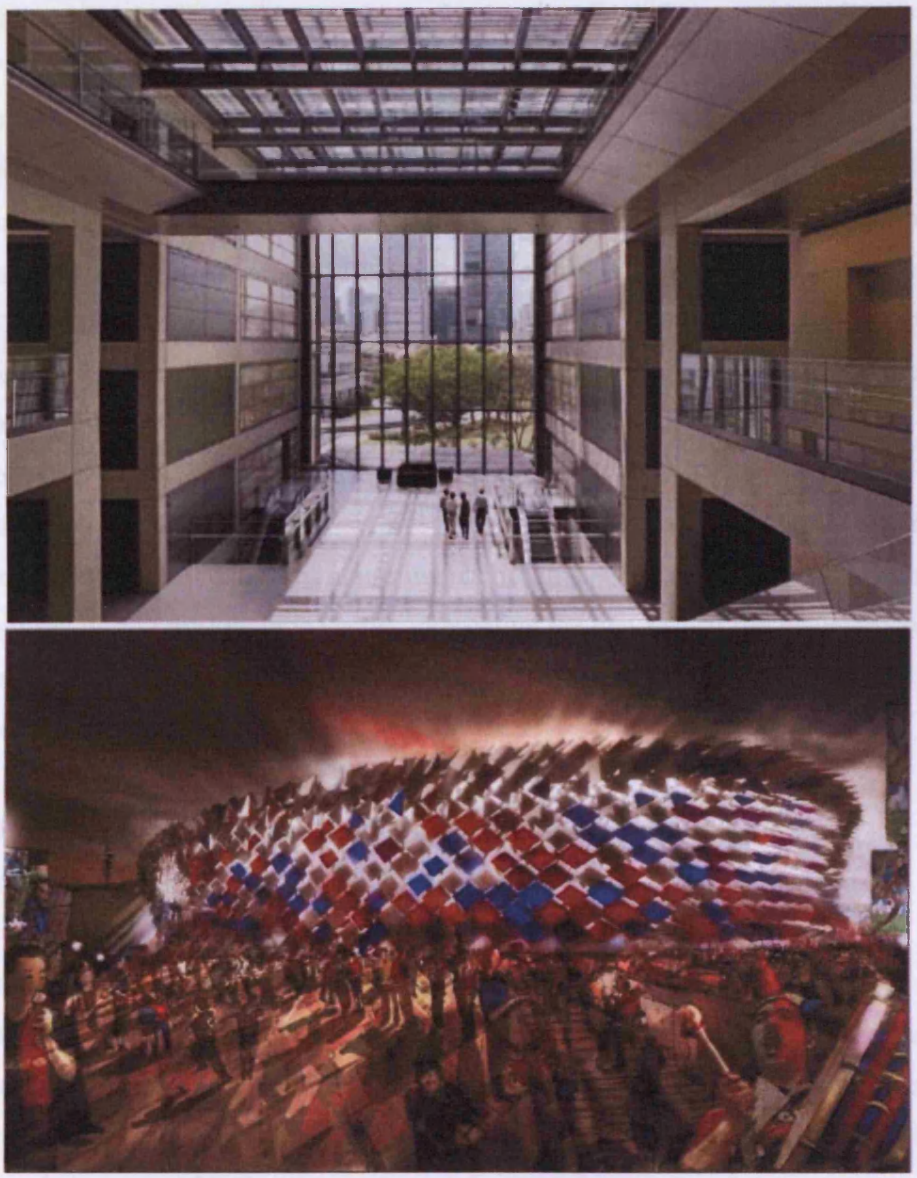

Fig.45
Whitney Development, New York

Fig.46
Camp Nou Stadium, Barcelona

Light and luminous structures are used to present images of progress, markers of place and icons of significance. At Camp Nou Stadium, Barcelona, Spain (2007) *[46]* the extension to the existing stadium is intended to produce a 'symbol of the pride of

the fans [...] a landmark of the city.' Which 'on match nights [...] will glow vividly, providing a bright new architectural icon for the city and defining emblem for the club's thousands of fans'[211] the corporate image literally projected across the city for all to see. At Wembley Stadium and at the Alcañiz Motor City, Spain (2007-) *[47+48]*, a race-track and stadium with a 'sleek aerodynamic aesthetic', light and newness in the vocabulary of Fosters is linked, as they suggest these stadia will 'when illuminated herald a new era.'[212] The Torre de Collserola, Barcelona (1988-1992) *[49]* satiated the briefs 'desire for a monumental technological symbol' with a 288 metre high radio-mast over-looking the city, complete with observation deck. The concept, from Norman Foster's sketch notes, 'the only constant is change / a new symbol / not a conversion / the new age, the future [...].'[213] With Kevlar cables, which are 'transparent to radio signals'[214], the Torre de Collserola presented an image of technology, a symbol of the 'future' which became an icon that was internationally recognised during the Olympic Games, presenting the newness of the reconstruction of Barcelona in a similar manner to how Fierro suggests the Eiffel Tower ushered in the era of a new, socialist France.

In the Milleau Viaduct project, France, designed between 1993-2005 *[50]*, engineering is presented as transparent to landscape: 'A cable stayed, masted structure, the bridge is delicate, transparent and has the optimum spans between columns.' It presents a 'minimum intervention in the Landscape' which when 'at night, [...] will trace a slender ribbon of light across the valley.' The tallest supports, to the bottom of the road, are higher than the Eiffel tower, and extend ninety meters above the road deck, and in the language of the 2008 catalogue, the link between this technical mastery and light, illumination and a transparent form of structure is rhetorically made.

211 *Catalogue, Foster + Partners (2008)*, p.66
212 Ibid., p.64
213 *Catalogue, Foster + Partners (2008)*, p.46
214 Ibid.

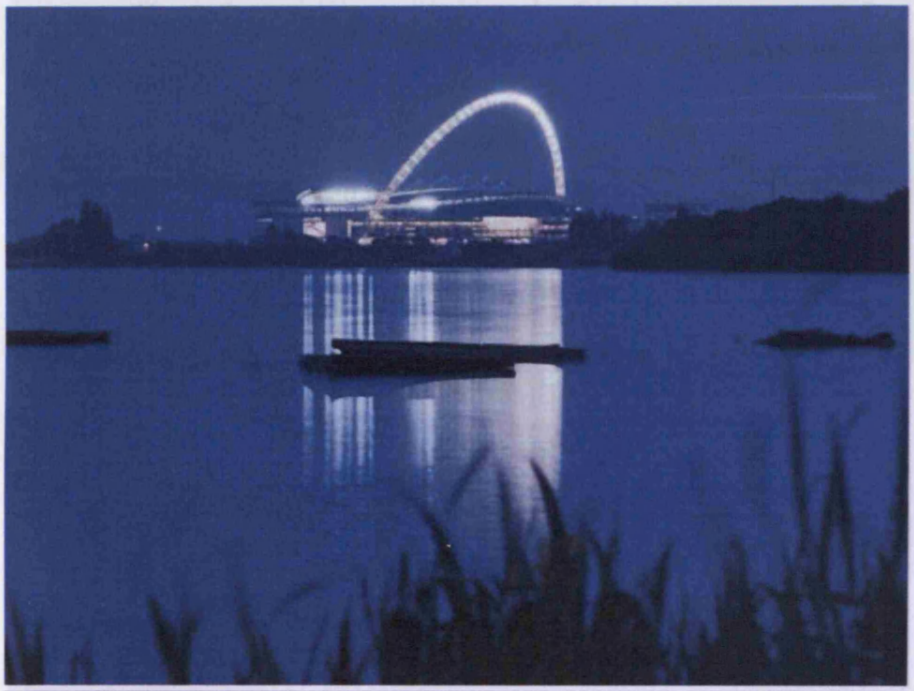

Fig.47
Wembley Stadium, London

Fig.48
Motor City, Spain

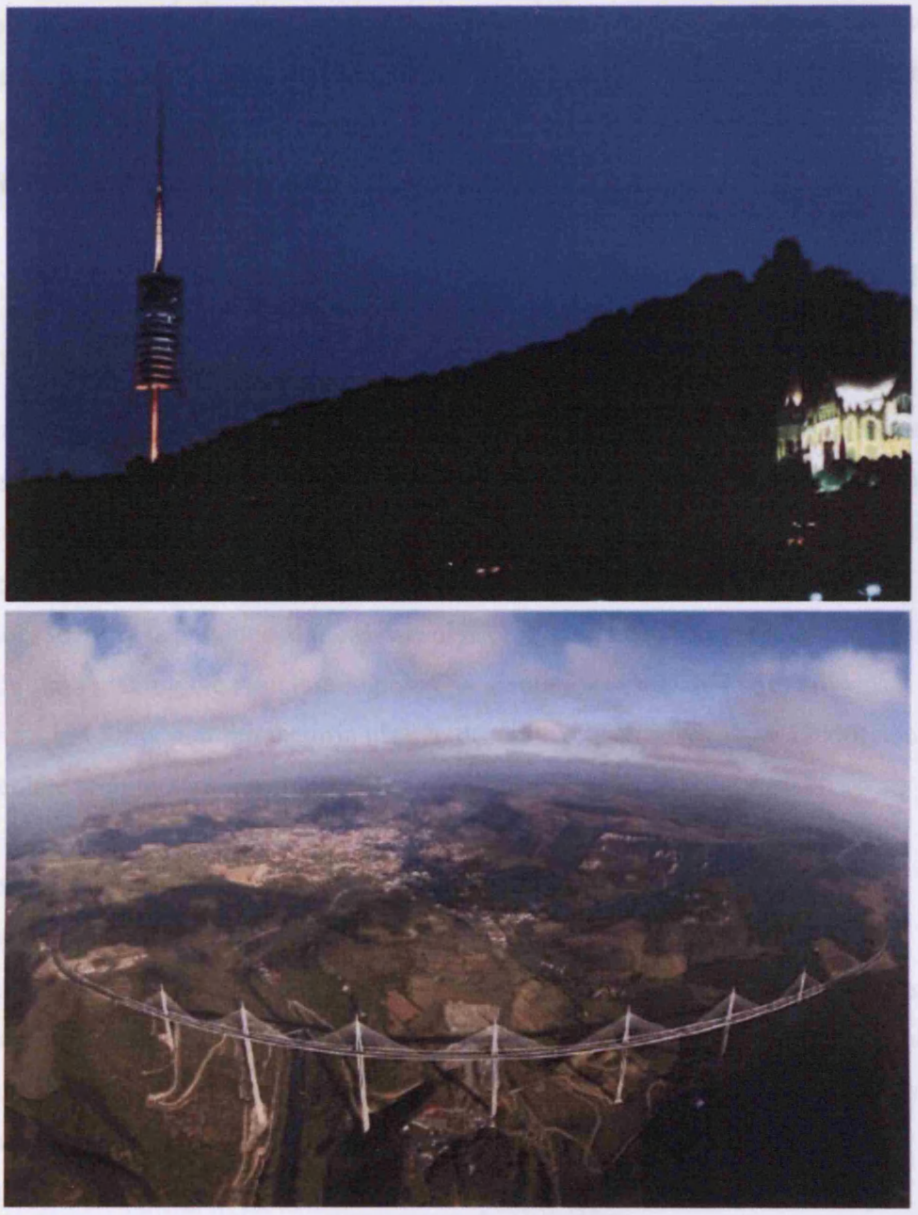

Fig.49
Torre de Collserola, Barcelona, Spain

Fig.50
Milleau Viaduct, France

Transparency as illumination and decrypting force is presented in the 2003 to 2007 Academies Projects, in Peterborough and Folkestone *[51]* in relation to the projection of an image of new models of education, with 'the concept of a visionary, light-filled school that would be open, democratic and flexible [...]'.[215] This use is also seen in

215 *Catalogue, Foster + Partners (2008)*, p.162

the Lycée Albert Camus, France completed between 1991 and 1993 *[52]*, where closed institutional structures and their associated closed building types are opened through the use of transparent technique, and the language used to describe the old (heavy) and the new (flexible, open) presents the structural possibilities of a transparent approach to changing a schools social ethos:

> '[...] the school's design challenges the heaviness of the established educational building standard with a flexible and open structure.'[216]

Form is used to establish identity through image, even at a small scale, as in the series of Repsol Service Stations throughout Spain *[53]*. Here, a clarity and continuity of colour and form are established to project a corporate identity: 'the brightly coloured combination creates a strong three dimensional image [...] Even from the air, Repsol's identity is announced unmistakably.'[217] The image produces a brand identity and through making the structure legible this identity is associated with an architectural form, and the rhetoric used to describe this closely relates identity and immediate architectural recognition.

The Reliance Controls project, Swindon (1965-1966) *[54]* combines an organizationally open structure with the creation of a corporate identity, a brand, projected through visibility and integration. In the factory building, '[...] there was a uniform structural grid, subdivided by glass partitions into its separate functions and arranged in such a way that both offices and assembly spaces were visible from the reception space. Through planning and construction a single workforce, company and building identity was achieved.'[218] The idea of the creation of identity through minimum means and transparent symbols is developed early in the practice, as at the proposed 1979 project for the Granada Entertainment Centre, Milton Keynes where '[the] physical aspect of the building, required to create a sense of identity and place, was thus reduced to the thinnest of structural supports and the various advertisers signs.'[219] Identity is expressed more through advanced technical achievement than

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216 Ibid., p.160
217 *Catalogue, Foster + Partners (2008)*, p.262
218 *Norman Foster: buildings and projects, Volume 1, 1964-1971* ed.by Ian Lambot (Haslemere: Watermark, 1991), p.77
219 *Norman Foster: buildings and projects, Volume 2, 1971-1978* ed.by Ian Lambot (Hong Kong: Watermark, 1989), p.192

architectural scale, and this technological transparency and its associated description can be understood in a similar manner to the structural transparency that Fierro attributes to the Eiffel Tower.

It can be seen, therefore, that the language used by Fosters is intended to produce a practice identity that places the rationalised and technocratic ideal of the transparent to the fore. These descriptions of rational planning can also be seen in the early work of the practice, which has been discussed as a form of 'systems thinking.'

Fig.51
Folkstone Academy, UK

Fig.52
Lycée Albert Camus, France

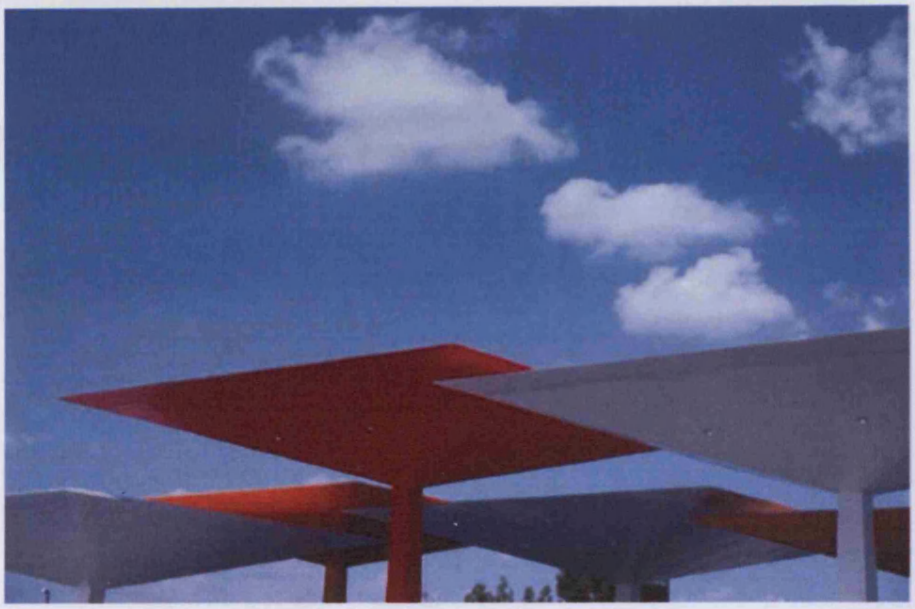

Fig.53
Repsol Service Stations, Spain

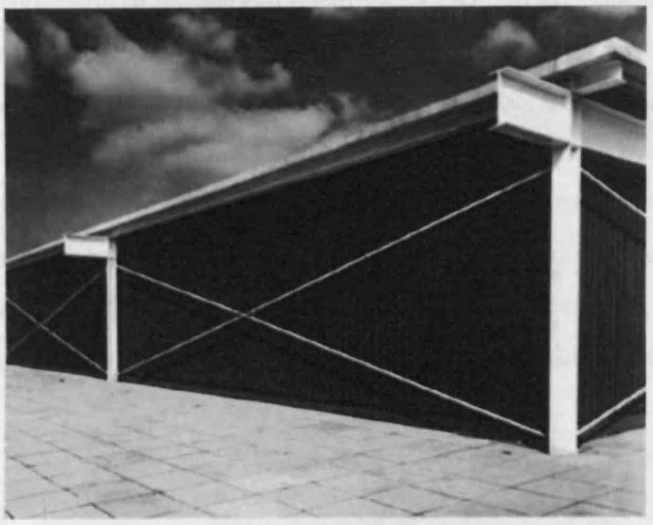

Fig.54
Reliance Controls factory, Swindon, Team 4

Brand Identity

The production of an 'aura of meaning', as Klingmann suggests in *Brandscapes*, is necessary to the marketing of the technologically sophisticated design package that is architecture from Fosters, and that is demonstrably evident in their practice brochure. The production of a brand is important to this discussion, because a brand operates at the intersection of the thing, the object, the physical manifestation of an idea, and the image produced of that thing. By necessity, the brand produces meaning through the combination of rhetoric and reality into the production of an image of the desired state of a thing: a brand is an effective simulacrum. As Klingmann suggests:

> 'A brand can [...] be defined as the meaning both of substance and surface. For places and things, as for people, the most basic function of brands is to say, "Here I am," signalling a distinguished identity. Before we reveal anything in conversation, we assert ourselves through a self-constructed image: 'this is who I am; I'm not like that. I connect with these; I don't relate to those others.' Thus, a brand is both a personal and a social identity, an expression both of who we think we are and with whom we want or expect to be compared.'[220]

In terms of the relation between the thing and the image of the thing, as in a simulacrum, it is Klingmann's suggestion of the brand being 'the meaning both of substance and surface' that is interesting. The brand as a producer of transparent meaning takes some element of the identity of the substance and generates surface (image) based identity from it. In the examples discussed further in this thesis, the architecture is used as a form of brand, communicating both the identity of the practice, the client and the wider identity of a nation. As Klingmann goes on to suggest, the brand turns the material into the image, and the image into the material – the two interact in an intriguing form of metonymy, producing added value for those responsible. Klingmann refers to Aaron Betsky who writes: 'the Nike sneaker is neither a product nor an image, but both in one. It has become a universal symbol in material form.'[221]

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220 Klingmann *Brandscape: Architecture in the Experience Economy,* p.56
221 Ibid., p.57

Clearly, the Nike sneaker is much more universal than the architectural output from Fosters. However, within both architecture, and broader cultural discourses on architecture and building, the work of Foster has become a form of universal symbol of contemporary architecture (see the press coverage of the 30 St Mary Axe project for example). The practice builds a brand for itself, and clients buy into this brand whilst simultaneously branding the project as part of their own identity. And, as a form of culturally interchangeable modernism, Klingmann's suggestion of the universality of the brand seems appropriate:

> 'In the search for identities people use brands as universal signifiers, because brands bring into play means of identification that transcend cultural, traditional and local differences. In this regard, a brand signifies a kind of platonic ideal to identify a system of values that is shared in the minds of many people irrespective of their nationalities.'[222]

There are various cultural identities that become signified by Foster's architecture. The notion of democracy, for instance, becomes a brand that is, in the eyes of Western and other democracies, associated with a certain architectural environment, and the programming of the expectation of democracy has been, in part, carried out through the work of the practice in congruence with the organization of the state. Transparency, through the association of democratic institutions with this material and organizational form, has become indelibly linked to democracy, and the environments within which democracy takes place have become 'branded environments', to use Klingmann's term. Places such as the Bundestag in Berlin become literal icons of transparent democracy, and act as themed environments for the production of the image of democratic participation. Klingmann suggests from Betsky that the brand'[...] creates something we can see that condenses and makes physical the invisible or the unnameable forces that control our world [...] Icons are objects that represent the unpresentable.'[223] The unpresentable here can be taken as the transparent: ultimately, as outlined previously, a set of social and cultural ideas (an ideology of sorts) that is presented through the branded icons of the society that creates it. And, in this sense, transparency, democracy, accessibility and the other traits that Foster's architecture produces are the 'forces that control our world', made

222 Ibid., p.56
223 In Klingmann, p.57, Betsky, *Icons: Magnets of Meaning* (San Francisco: Museum of Modern Art, 1997), p.23

not just visible, but actively *made,* in part, through the architecture of the practice. In the case studies below, transparency is used as a technique for creating, in part, the notion of a branded product and environment will be discussed, using Klingmann's analysis of architecture as both product and producer of brand identity.

Transparency: The Foster + Partners Definition

The examples above define Fosters' approach to transparency through the language used and the methods of architectural design employed to produce conditions that generate the effects of the transparent. Within the practice transparency has become defined as an organizational device. But this device also operates as a generator of image, as a form of brand-identity: the projected identity of a corporation, institution or country. For the practice, transparency is expressed through materials (a literal or tectonic presentation of technical capability); it operates in plan and section form to make legible, clear and accessible; it is a condition for generating rational models of planning through openness and light. Through both organization (atria, courtyards, hubs, drums, glazed screens etc.) and the production of institutional and corporate image (icons, and objects with symbolic capital) it is used to generate centres, hearts and *foci* at a variety of scales. Transparency produces spatial conditions of openness within institutional systems, as well as indicating their democratic status. It is also a necessary condition for democracy to operate, both as rhetoric for the practice's description of democracy and a material quality of its built fabric. Transparency is a condition of both material and spatial planning that produces conditions of order and organization and that is also used to produce images of democratic institutions. It is used rhetorically to convince of the capacity of space to induce social change and is closely linked, as both Barnstone and Fierro suggest, to a modern programme of enlightenment and, as Lefebvre's historico-geographical survey of spatial production would have it, of decrypting.

For Foster + Partners, transparency comprises openness, rationality, reason, light, clarity and democracy and can be sited within the western epistemological tradition of logical positivism[224] and methods of systems thinking, which can also be read as the

224 The logical positivists, (also known as logical empiricism) were a Vienna based group of thinkers, scientists and philosophers known as the Vienna Circle, formed in the 1920s. The notion of

production of a technologically mediated form of branding. Vision is placed to the fore – an ocularcentric paradigm exists in the practice's rhetoric – and spatial relationships are described with visual similes. A faith in the capacity of technology to induce change and progress is made, the logically positivist and scientific approach to design correlate with a Lefebvrian view of the production of abstract technocratic spaces and these are related through both Martin and McLuhan to the production of spaces of a highly organized and rational nature.

However, the production of this rhetoric, these spaces and images of the transparent present to us one perspective on the architecture of clarity and transparency: the critique, following Baudrillard, problematizes the singular relationship between the transparent and systems and structures of democracy, openness, clarity, legibility. What is presented through the transparent screens of Fosters' work can be seen as a simulation of conditions that purport to exist – simulacra – and it is for evidence of these that this thesis will now examine the historico-geographical materialism of three case studies.

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logically, empirically observable states being the only way to constitute an understanding of the world. From the Oxford Dictionary of Philosophy, *'The most characteristic doctrine of logical positivism was the verification principle, or denial of literal or cognitive meaning to any statement that is not verifiable: 'the meaning of a statement is its method of verification.'* Effectively, the system of thinking requires that any observable state be logically verifiable through empirical evidence.

"logical positivism" The Oxford Dictionary of Philosophy. Simon Blackburn. (Oxford: Oxford University Press, 2008). Oxford Reference Online. Oxford University Press. <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t98.e1872> [accessed: 12 April 2010]

4. Analysing the Transparent: Three Studies of Foster + Partners' Work

Having developed a critical definition of transparency based on political, social and cultural readings of existing conditions from Lefebvre, Baudrillard, Martin and McLuhan, and having determined how the practice develops the rhetoric and technique of transparency within their design output, it is necessary to illustrate in greater detail how these tactics operate within specific cases.

Three projects studied below are considered in relation to their political and cultural contexts that have informed the architectural response. The alliance of material and organizational transparencies, and the production of images of transparent systems, are illustrated in these projects, chosen for their global distribution, material attributes and political significance. They have also been chosen for their relationship to the practice's construction of transparent rhetoric used as a tool to build the brand identity of Foster + Partners.

These projects are not necessarily canonical Foster structures, however they offer a broad range of examples of structural, material and organizational uses of transparent technologies and techniques. They also offer, in their respective ways, an indication of the capacity for things that are intended to be clear, logical, rational and open to be obfuscatory; to present a simulation of conditions of the transparent. The three projects – the Palace of Peace and Concord, HACTL and the FU library – discussed in sequence here are understood, as suggested by Lefebvre's spatial analysis, as productive of, and produced by, the contexts outlined.

4.1 Fostering Relations in Kazakhstan

Astana in mid February is cold. A relatively mild -16 centigrade greeted my arrival on the first day. Temperatures dropped to a chill -21 during my stay. The harsh climate conditions life dramatically here. The temperature ranges between winter lows of -40 and summer highs of +40. Social and cultural life is controlled by these swings. New year celebrations are dragged out for as long as possible: an antidote to the sub-Siberian cold and darkness. Spring is welcomed with joyful abandon in the streets of the country's capital. It represents a brief period of respite from the freezing winter before the fierce onset of summer. Travelling from the airport to the hotel, on the horizon the image of a steel and concrete pyramid, sitting on a mount, can be seen. This is the Palace of Peace and Concord, a meeting place for the world's religions and the centrepiece of a program to rebuild this post-Soviet city *[55]*.

Kazakhstan is a young country: independence from the USSR was gained in 1991. It is also a young population, with a median age of 29.1 years.[225] Following ten years of political and economic turmoil, Kazakhstan has experienced a period of dramatic growth. Political stability has lead to economic development and a middle-class is establishing itself, following the economic success of oligarchs and oil barons. An initial free-market rush has calmed and the nation's financial model is based on that of Norway with vast reserves of oil and mineral deposits securing the country's economic future. This is also a large country. Its total area, at 2.7million sq km, is approximately the size of Western Europe; its population was 15 million in 2008 *[56]*.[226] This context – of a young nation state, attempting to create a form of democracy – is important and will form the basis of this study. It is intended, through looking closely at the context in which this particular Foster project sits, to indicate the particular rhetoric of transparency that has been decisive in developing the current identity of the country, its economy and, by association, its President. It is also an important context from which to identify how Foster's approach to transparency as the production of an image and a brand works.

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225 Central Intelligence Agency, *The World Factbook*, <www.cia.gov/library/publications/the-world-factbook/geos/kz.html> [accessed: 09 April 2008]

226 Central Intelligence Agency, *The World Factbook*, <www.cia.gov/library/publications/the-world-factbook/geos/kz.html> [accessed: 09 April 2008]

This case study will analyse, following Harvey's historical-geographical method, and based on the Lefebvrian understanding of space as both product and productive of context, how the architectural organization of the Palace of Peace and Concord establishes a certain transparent identity for the relatively recently established nation of Kazakhstan. Transparency, here, being that condition which, as Lefebvre suggests, acts to decrypt, to make open and accessible and presents spatial conditions as being free of traps and dissimulations.

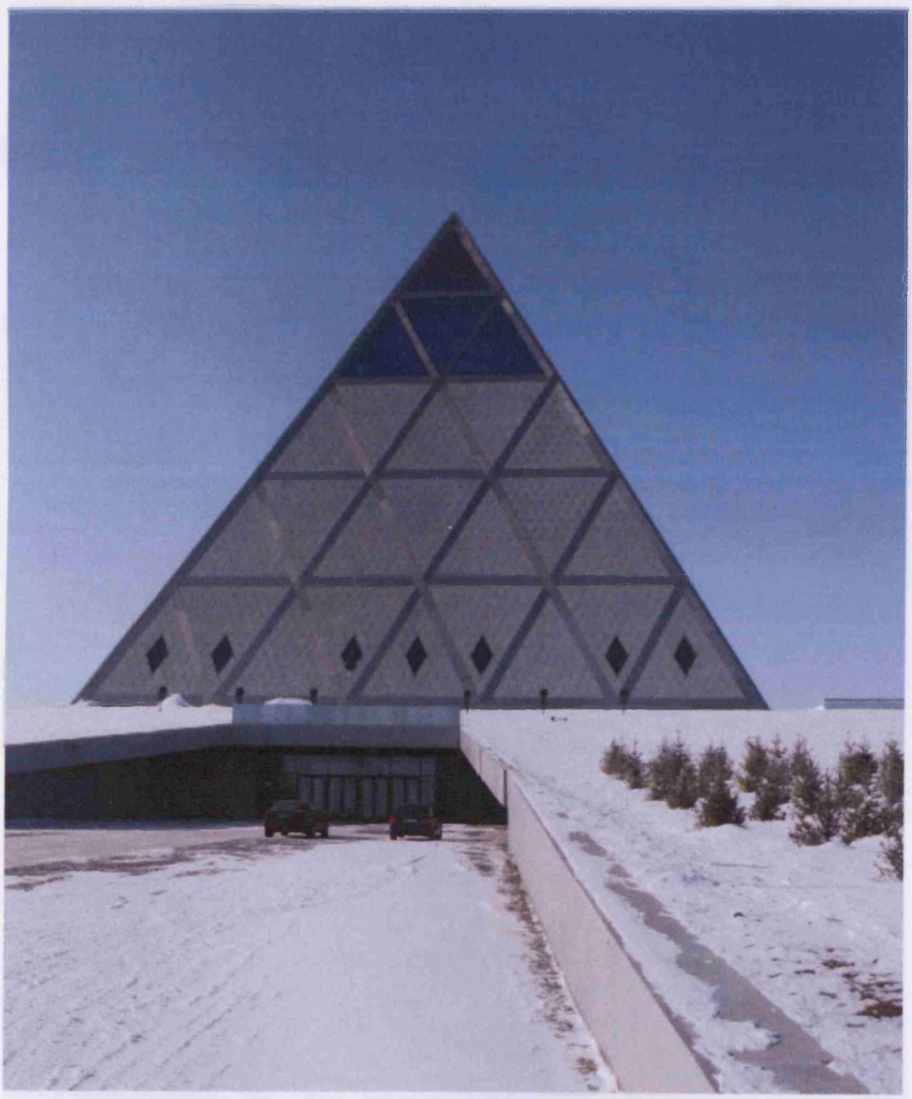

Fig.55
Palace of Peace and Concord, Astana, Kazakhstan

Fig.56
Map, Kazakhstan. Astana, the capital, can be seen in the top centre-right. Almaty, the old capital, bottom right

Fig.57
View of Almaty, old capital, from foot-hills of the Tien Shen mountain range

Background

'Managed democracy' is the political approach adopted by the incumbent president, Nursultan Nazarbayev. An uncontrolled move from Soviet centralized control to wholesale participative democracy would lead to social and economic chaos, according to the country's premier. A 'gradualist' approach to the nationalizing of

Kazakhstan as an independent unit is mirrored by his governments approach to 'free' democratic elections. Support for the president at the last election was high,[227] and popular opinion of the president 'on the street' seems equally buoyant.[228] Steadily, according to official channels, things are improving for the population of Kazakhstan.

The country is ethnically mixed. Under the Soviet system, northern Kazakhstan became part of the Gulag prison network. Ethnic groups from almost all of the Soviet empire were interned here. Following independence, these groups have stayed and made Kazakhstan their home. A large but declining population of ethnic Russians are based here, joined by Koreans, Germans, Ukrainians, Uzbeks, Tatars and Uygurs. Ethnic Kazakhs make up fifty-three percent of the population.[229] But the definition of an 'ethnically' Kazakh individual is problematic as the populations of the Central Asian steppe were largely nomadic. Boundaries were fluid, flexible and subject to change. Nomadic lifestyles were typified by movements related to the seasons. 'Kazakhstan' and the 'Kazakh' peoples were defined as a specific regional distinction during the 19th century. This distinction was largely a matter of developing regional centres of control for first the Russian Empire, then the Soviets.[230]

> 'Immediately prior to Russian conquest, the single most important division in Central Asia was the socio-economic and political distinction between the sedentary populations of cities, towns and villages *(Sarts)* located primarily in Transoxiana [...] and the nomadic populations [...]. The complex religious, cultural and economic organization of the region ensured, however, that Central Asia was ordered by overlapping gradations based upon, among other factors, ethnic, political, geographical, linguistic, religious, and economic distinctions.'[231]

Arbitrary distinctions and unities based on *apriori* demarcations of territory – effectively Lefebvrian abstract spaces, did not exist. There was not a defined homogeneity to the peoples of Central Asia, or a division into regional entities. As James Hughes and Gwendolyn Sasse suggest in *Ethnicity and Territory in the Former*

227 See Times Online <http://www.timesonline.co.uk/tol/news/world/article746011.ece> [accessed: 19 April 2010]

228 Through discussions with members of the public during research carried out in Astana and Almaty. March 2008.

229 Central Intelligence Agency, *The World Factbook*

230 Hughes, James and Sasse, Gwendolyn eds., *Ethnicity and Territory in the Former Soviet Union: Regions in Conflict* (Frank Cass: London, 2002) p.167

231 Sasse & Hughes, p.166

Soviet Union, delineations of identity were created through 'overlapping' factors. The most rigid identity definition was created through the distinction between static (urban) and nomadic (pastoral) cultures. But even these were subject to blurring, with inter-group mixing common. It is necessary to understand this early context in order to read the significance of the Pyramid to the act of nation building within this recently post-tribal society, and the construction of spaces of a more technocratic and abstract nature.[232]

'Tribal confederations' controlled regions outside of Transoxiana. – the pre-Russian name for central Asia.[233] These areas were not strictly defined geographically:

> 'The organization, functions and membership of tribal units was, however, fluid and the geographical area controlled by individual tribes was, on occasion, subject to rapid change.'[234]

Ordering of Kazakh tribes to come under the protection of the Russian Empire led to the gradual centring of power to the colonial elites. Regional centres were established to regulate and order these distant territories. To the south of the Kazakh steppe, a centre of regional power was established in Almaty. In the north and east, power was concentrated in urban areas established as European and Slavic migratory zones.[235] For Hughes and Sasse, the line of control shifted from the Silk Road based east west, to the Russian dominated axis of north south.

Progressively, regional centres were established. Within these centres, ethnic distinctions are more pronounced. Centralized control grows under the Russian Empire, and is increasingly solidified under the Soviets. The establishment of a set of singular identities tied to a nation state are initiated under Communism:

Smaller, autonomous groups with strong religious and cultural ties are harder to control and as in modern Iraq, these groups can easily become factious. The

232 Harvey, *The Condition of Postmodernity,* p.35; Lefebvre, *The Production of Space*, p.41-45
233 Sasse & Hughes, p.167
234 Ibid.,
235 Ibid.

establishment of a secure, stable and homogeneous nation state is critical to implementing control, a factor of managing the USSR that the Soviets knew well.

Control had to be established over these fluid, autonomous and destabilising groups which had also begun to form a kind of notional regionalism of their own: 'pan-Turkic nationalism.'[236] The resistant nature of these varied ethnic groups posed a threat to the Soviets. Their potential collaboration into a nationalist unity forced the Soviets to reformulate the geopolitical structure of Central Asia and this process became known as 'national delimitation': the process of designating specific national boundaries.[237]

The Central Asian process of producing understandable, homogenous nation states under the banner of the Soviet Republic continued up until 1936. Centralized command of these republics was established through the use of migrant European/Slavic settlers. The involvement of the central Soviet command in the affairs of regional politics was also used to control ethnic nationalism. Whilst homogenized nationhood was encouraged, the historically diverse cultures were not.

In the case of Kazakhstan, this regional capital was established as the ethnically Kazakh city of Almaty. Control could be exercised over this more ethnically homogenous region, better to halt drives to national independence from the Russian 'Motherland'. The establishment of Soviet control in Almaty enabled the ruling elite of the party to be in a position of influence over places of 'political importance' in the region. The north had a higher percentage of Russian settlers, therefore required less direct involvement from the elite. Almaty contained the possibility of independence due to its history, trade connections and geographical location. It was in a position to forge ahead with a pan-Turkic nationalism in a way the north could not have achieved:

> 'The republican laws on language and sovereignty passed in the final years of the Gorbachev era demonstrated that Almaty was increasingly in a position to project a predominantly

236 Sasse & Hughes, p.168
237 Ibid.

> southern defined Kazakh cultural identity onto the Russified areas of the north.'[238]

Independence in 1991 left Kazakhstan ethnically divided. Russians in the north and east, Kazakhs in the politically significant south. The northern contingents of Russians and Slavic's lacked unity. They were disparate groups of migrants, inhabiting an outpost of the Soviet system. Resentment at the strength of Kazakh nationalism in the south grew to a political movement. Suppressed by the independent government in the south, this attempt at recognition of the North as a regional entity faded. The process of national delimitation in the 30s had led to an artificially developed national consciousness. A Kazakh identity has been forged from simple assumptions and stereotypes although, in actuality, the identity was still that of fractured groups:

> 'Although Kazakh ethnic identity had been consolidated during the Soviet years, division rather than national unity was the leading characteristic of the titular population at independence.'[239]

Scale and dispersion of populations makes power nervous, according to Sasse and Hughes. The centralized government in Almaty needed to control regional politics in a country the size of Western Europe. With a country of this scale, regional autonomy posed a threat to the concept of a single nation and the context of strong clan and family loyalties influenced the politics of the regions. To counter this, exercises in nation building were critical.

A country with a history of flexible boundaries and nomadic behaviours needed a strong contemporary narrative to bind it together. The possibility of disunity between the north and the south posed considerable concern to the authorities and the establishment of a stable, united country was critical to encouraging investment from western companies. A unified identity, Kazakh based, was also crucial in drawing fixed boundaries. The threat to the sovereignty of the Republic of Kazakhstan from the Russian Federation was very real. China in the south is a country of 1.3 billion[240]

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238 Sasse & Hughes, p.174

239 Ibid., p.175

240 Central Intelligence Agency *World Factbook* . Exclusively, Nazarbayev can *'initiate constitutional amendments, appoint and dismiss the government, dissolve Parliament, call referenda at his discretion, and appoint administrative heads of regions and cities.'*

and if Kazakhstan was unable to project and image of unity and attract the right international investment and support its existence would be severely compromised. Through relocation of finance and the construction of a new capital, an image of a new Kazakhstan, united and with a Kazakh identity, was established.

Capital Cities: From Almaty to Astana

Since independence in 1991, Nursultan Nazarbayev has held office and, with adjustments to the constitution through referendum in 1995, he has extended the president's executive powers.[241] This constitution also extended the powers of centralized control. It concentrated 'power in a network of regional prefects *(akims)*, directly subordinated to the president.'[242] In 2007, constitutional amendments were again made by Nazarbayev, allowing the president to stand for re-election indefinitely.[243] The Organization for Security and Co-operation in Europe observed the 2004 elections that saw another substantial majority for Nazarbayev. They had concerns regarding harassment, restrictions, involvement of authorities in election campaigns and an 'atmosphere of intimidation' surrounding the polls.[244] This constitutes Nursultan Nazarbayev's approach to 'managed democracy.'

The authoritarian stance of Nazarbayev enabled him to take the radical decision to move the capital.[245] The old capital, Almaty *[57]* is cosmopolitan, relatively prosperous, and mild, whilst the location of the new capital, Astana, is almost the opposite. However, it was not simply strategic necessity that forced the move: identity politics and nation building were critical in the relocation of the city, and as Shonin Anacker suggests writing in *Eurasian Geography and Economics*:'[...] this is nothing less than a centrepiece of the official nation-building project in Kazakhstan.'[246]

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241 Central Intelligence Agency *World Factbook*

242 Hughes, Sasse *Ethnicity and Territory in the Former Soviet Union*, p.177

243 *BBC Asia-Pacific. Profile: Nursultan Nazarbayev*

244 OSCE/ODIHR *Republic of Kazakhstan Presidential Election, 4 December 2005,* <www.osce.org/item/18133.html> [accessed: 10 April 2008]

245 Schatz, Edward 'The Politics of Multiple Identities: Lineage and Ethnicity in Kazakhstan' *Europe-Asia Studies* 52, no.3, (2000) 489-506 (p.492)
'Ignoring broad public criticism, Nazarbayev initiated construction of a new capital at Aqmola (later renamed Astana) in north-central Kazakhstan, depicting the 1997 move as a strategic necessity. The logic was that just as Kazakhstan was uniquely situated at the crossroads of continents, Astana enjoyed a singular location at the heart of Kazakhstan and could therefore ensure stable and effective transport, communication and defence.'

246 Anacker, Shonin 'Geographies of Power in Nazarbayev's Astana', *Eurasian Geography and*

Immediately post-independence, Almaty sat as Kazakhstan's economic, cultural and political heart and policies of Nazarbayev help to cement this in the popular imagination of free 'Kazakhs' as Anacker suggests. [247] The capital city was turned into an emblem of the new nation state. The efforts of Nazarbayev erected monuments to Kazakh culture and the city became home to the infrastructure of independent government. However, this focus on Almaty was short lived. The capital moved to Aqmola (later renamed Astana), following the decree 'On the Moving of the Capital', in 1995.[248]

> 'If there was one fact that all citizens of Kazakhstan could agree upon, it was that Aqmola, as it stood in 1995, was a totally inappropriate site for the capital of a modern state. Most saw this industrial city of roughly 200,000 inhabitants as a remote place with a deteriorating infrastructure and a lack of obvious historical or cultural importance.'[249]

The city known as 'White Grave' holds little of the appeal of Almaty. Astana sits in the central north-east of the country, is located in thinly populated rural Steppe territory, and is subject to some of the most dramatic changes in temperature in Kazakhstan. A fierce wind blows unimpeded across the Steppe, buffeting the city and reducing temperatures further. The city does not suggest itself as the obvious location for a modern capital city. Construction efforts are limited due to the weather conditions and permafrost. Yet Nazarbayev regards this location as the ideal place to construct his capital.

A 'technocratic functionalism'[250] is used to legitimise the move to Astana by the elites and Nazarbayev. Its position in the centre of the country is also used as a reason for the relocation: Almaty does not address the central expanses of the Steppe, and could appear isolated on the Chinese boarder. Officially, the reasons for the move are given as being based around quantitative factors: earthquakes, infrastructure, resources, economy.[251] Subsequently, the capital has grown to approximately 700,000 inhabitants and it is expected to grow to 1.2 million by 2020 as expansion plans are realised. The capital is now firmly established as Astana, and since 1995 large-scale

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Economics, 45, no.7 (2004) pp. 515-533 (p.515)

247 Ibid.

248 Anacker, p.518

249 Ibid.

250 Anacker, p.519, but also see Lefebvre, *The Production of Space* , p.41-45, on technocratic production of space and abstract spatial planning.

251 Ibid., p.518

construction work has taken place in the city. Conservative estimates place the cost of relocation and construction at $10 billion.[252]

Building International Relationships

The relationship with Russia is more than military: it is necessarily economic. Relations with Russia are critical to the financial future of Kazakhstan, but its homogenising characteristics and scale are an obvious threat to a country that is striving to generate an independent identity. Establishing broader networks of international cooperation is necessary in the light of Russian claims to Kazak territory, as Olcott suggests. [253] She sees the potential for instability in the Kazakh region. Senior associate at the Carnegie Endowment, Washington, DC, Olcott's analysis of Kazakhstan's geopolitical threats suggests the plausibility of claims and counter-claims on Kazakh territory. Greater Chinese involvement in security issues and economic dependency is likely, if Russian hegemony in the region abates:[254] Although currently stable, Kazakhstan's investment in external relations is intended to bolster its territorial integrity, and a well-courted and seduced West offers necessary investment opportunities.

Cordial relations with the United States[255] have been central to Kazakh foreign policy since US involvement in the decommissioning of ex-Soviet nuclear weapons.[256] From early independence, Kazakhstan has obviously been tied Russia's economic system with exports in the first years of independence going largely to Russia: imports equally so.[257] Economic independence from Russia increased after Nazarbayev took the Kazakh nation out of the rouble zone in 1993, but as the largest regional trading partner, this was only partial emancipation. Further gains in national independence have been part of a policy of 'internationalisation'. Policy decisions from the

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252 Ibid.

253 Olcott, Martha Brill *Kazakhstan: Unfulfilled Promise* (Carnegie Endowment for International Peace: Washington, DC, 2002) p. 25

254 Ibid., p.234

255 Embassy of Kazakhstan in Israel, 'President Bush Calls Kazakhstan's Stability and Prosperity a "Model"' <http://www.kazakhemb.org.il> [accessed: 21 April 2008]
'President George W. Bush called Kazakhstan's stability and prosperity "a model for other countries in the region" and urged "bold democratic reform" to buttress the country's economic achievements while pledging continued support from the United States.'

256 Olcott *Kazakhstan*, p.273 '"The United States"' Nunn-Lugar Cooperative Threat Reduction Program oversaw the denuclearization of Kazakhstan, including the 1994 airlift if weapon-grade uranium to the United States, dubbed Operation Sapphire'.

257 Ibid., p.46

president have been guided by advice from international groups, including the International Monetary Foundation (IMF) and the World Bank,[258] and a 'proactive foreign policy' has been taken, led by the President who has suggested that 'Kazakhstan's key foreign policy principles remain unchanged and are based on a proactive approach, balance, pragmatism, dialogue and multilateral cooperation'[259]

This proactive foreign policy is intended to balance regional relations with those outside of the CIS and Central Asia. The establishment of these multiple relations allows Kazakhstan to further its independence from Russia. They also enable an extension of trading partners, most importantly in the field of oil exploitation. [260] As Olcott suggests, the country has both strengths and vulnerabilities in its energy sector, not least the quantity of oil it has beneath its ground, and the lack of resources to extract it. [261] The imperative for Kazakhstan in 1993 – two years post independence – was establishing an independent oil processing and extraction system. This required inward investment from established oil extraction and processing companies. But for inward investment, stability and an indication of a rule of law is required. The projected image of a unified nation is therefore critical to the economic success of the country, as the President suggests:

> 'Kazakhstan's development strategy has been to try to balance the two options, seeking to promote Western investment and involvement while institutionalizing close economic ties with Russia.'[262]

As Olcott notes, these are opposing ambitions. Russia's pre-eminence in the region, and its current climate of renewed neo-Imperialism stands at odds with Western investors. The establishment of a settled identity becomes of crucial importance within this climate. [263]

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258 Ibid., p.47

259 Embassy of Kazakhstan in Israel, 'Kazakhstan to Continue Proactive Foreign Policy"' <http://www.kazakhemb.org.il> [accessed: 21 April 2008]

260 US Energy Information Administration <http://www.eia.doe.gov/emeu/cabs/Kazakhstan/Oil.html> [accessed: 19 April 2010]

261 Olcott *Kazakhstan,* p.47 *'Kazakhstan was particularly vulnerable in the energy sector, where Russia has most vigorously claimed equity rights because of prior Soviet investments. Kazakhstan's refineries were not linked by the USSR pipeline system to its principle deposits, nor did the refineries possess the technical capacity to process most of the country's oil. So, although an oil- and gas-rich state, Kazakhstan imported 28,299,700 tons of energy from the Former Soviet Union in 1993, the majority of which came from Russia.'*

262 Ibid., p.19

263 Bugajski, Janusz *Cold Peace: Russia's New Imperialism.* (Oxford: Greenwood Press, 2004)

Stability and Nation Building through Architecture

Commenting in the Washington Post in September 2006 in an article entitled *Don't Play Politics with Kazakhstan*, S. Frederick Starr, comments:

> 'In the chaotic days following the Soviet collapse, corruption was endemic in nearly all of the new states. Since then Kazakhstan has made serious efforts to promote transparency.'[264]

The demonstration of stability is central to Kazakh development policy. Democratic 'progress' and a progressive transformation to an 'open society' have been drivers in the creation of this stable image. A stable nation is a profitable nation: Kazakhstan needs investment to exploit its oil wealth and stability in political systems is seen as a method by which to attract this investment. As a 'new' country, the establishment of a politically controlled and stable capital city acts as a marker for investors. The superficiality of systems of democracy appeals to this context of stability. President George W. Bush, writes in a letter to Nazarbayev in August 2005:

> 'Recent events in the region underscore the importance of balanced economic growth, accountable governance, and the expansion of democracy. Kazakhstan's economic performance has been impressive, and we remain committed to working with you through USAID [...] to pursue Kazakhstan's accession to the World Trade Organization.'[265]

Stability, not participatory democracy is key, here, particularly when it come to attracting inward investment. Whilst economic growth is linked to democratic reforms, this relationship is rhetorical. It is the concept, not the event, of democratic involvement that is important. Invoking an open society as a goal presents an image of a country fast attaining the status of European democracy; however, the reverse is considered the case by external geopolitical analysts, particularly Olcott.[266] As a news bulletin from the Embassy of the Republic of Kazakhstan to the State of Israel on the 15 July 2004 states:

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264 Starr, S. Frederick, *Don't Play Politics with Kazakhstan*, The Washington Post, 28 September 2006 <www.silkroadstudies.org/new/docs/publications/2006/0609Starr_WP.htm> [accessed: 10 April 2008]

265 Embassy of Kazakhstan in Israel, 'President Bush Calls Kazakhstan's Stability and Prosperity a "Model"' <http://www.kazakhemb.org.il> [accessed: 22 April 2008]

266 Olcott *Kazakhstan*, p.20, 'Trapped between Western Pluralism and Asian Autocracy'

> 'Political pluralism and multi-party democracy have become reality in Kazakhstan. Large political parties, possessing real influence, have been formed. Their role and influence on the election process is clear and certain. Liberal electoral legislation has been adopted by the parliament.'

The rhetorical terms used in President Nazarbayev's press release on July 15 2004 are growth; investment; development; modernization; competitiveness; globalization; pluralism; democracy; reform; equality; transparency. These descriptors of liberal society are the effective marketing material for the Kazakh state. Acting in opposition to the perceived and actual qualities of the Soviet system, this rhetoric is used to drive the country's economic openness. But rhetoric it is: the country's December 2005 elections returned a significant majority victory for Nazarbayev, when over ninety percent of the electorate voted for the incumbent President. The Organization for Security and Co-operation in Europe's (OSCE) Office for Democratic Institutions and Human Rights, monitoring the 2005 Presidential elections, found evidence of coercion and democratic anomalies: [267]

In 2005, and into the latter half of the decade, democratic reforms are taking place: but these are largely a rhetorical exercise. The maintenance of stability in a country whose very definition of its boundaries is unstable is critically important. Functional, universal involvement in the state apparatus is of secondary concern. The capacity to demonstrate this political openness is key. The maintenance of a centralized and family based political structure has been cited by Nazarbayev as being crucial to attracting inward investment. The Nazarbayev clique has a singular, consolidated hold on power maintained through various mechanisms. Its goal is to retain power in the hands of the incumbent President, and establish a settled economic environment:

> 'Ironically, the government's strong commitment to pursue macroeconomic change was initially used to justify a consolidation of power in the executive branch. President Nazarbayev argued that without such a consolidation, Kazakhstan would fail to develop the legal infrastructure necessary to secure private property and attract foreign investment.'[268]

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267 OSCE/ODIHR *Republic of Kazakhstan Presidential Election, 4 December 2005,* <www.osce.org/item/18133.html> [accessed: 22 April 2008] *'Shortcomings included undue involvement of the authorities in the election campaign, undue restrictions on campaigning, cases of harassment of campaign staff and an atmosphere of intimidation.'*

268 Olcott *Kazakhstan*, p.21

A firm hand at the top holds power throughout the system. The importance of Nazarbayev's policies of 'managed' democracy cannot be underestimated. There is a degree of truth to the assertions made by the President that Kazakhstan is a young and unsure country. Fully-fledged Western style democracy has not been established in this region. But it is more the 'consolidation of power' within the Nazarbayev clique that is the Presidential ambitious and his desire to develop an identity as a modern diplomat and statesman contribute considerably to policies of Kazakh government:

> '[...] Kazakhstan's leaders now feel that its valuable resources and the heightened Western interest in them give the Kazakhs the freedom to establish their primacy and to benefit personally from Kazakhstan's vast wealth. This has led the government to adopt a state-building strategy that emphasizes the need for political stability over political participation.'[269]

That rhetorical emphasis on stability is grounded and made manifest in the new capital. Astana builds the image of the country to the model developed by the president. '[...] the capital move has been the most visible of the initiatives of the government [...]'[270] and its visibility is of central importance. As suggested, embedded in the move to Astana are a myriad of geopolitical, ideological and egotistical ambitions.

Various reasons are espoused for the move of the city, from a centralized tactic to resist Russian annexation of northern Kazakh territory;[271] the establishment of regional identity;[272] nation building;[273] to ego, family ties and post-Soviet power networks.[274] These disparate grounds for moving the capital to the ice bound depths of the northern Steppe are also related to the establishment of the valuable commodity of stability. The segregation of ethnic Russians and Kazakhs in the region of Aqmola –the *oblast* where Astana is located – is problematic.[275] Northern Kazakhstan, geographically closer to Russia, has the country's highest ethnic Russian population.

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269 Ibid., p.20
270 Anacker, 'Geographies of Power' p.515
271 Wolfel, Richard L,. 'North to Astana: Nationalistic Motives for the Movement of the Kazakh(stani) Capital' *Nationalities Papers,* 30, no.3 (2002) pp.485-506
272 Anacker, 'Geographies of Power' & Schatz, Edward 'What Capital Cities say about State and Nation Building' *Nationalism and Ethnic Politics,* 9, part.4 (2003) pp.111 - 140
273 Anacker, Schatz, Wolfel, Olcott
274 Anacker, Hughes & Sasse, Olcott
275 Wolfel, 'North to Astana', p.490

The irredentist[276] desires of ethnic Russians in the Aqmola *oblast* pose a threat to the integrity of this region and the Kazakh government must take this threat seriously. Kazakh cultural hegemony in this region would otherwise be lost, its identity separated from that of the Kazakh nation state. [277]

Richard L. Wolfel notes in 'North to Astana' that the capital city can act to regulate the possibility of national disintegration. By moving the capital, the activities of north Kazakhstan's Russian population could be monitored. The population density of ethnic Russians in this *oblast*[278] could also be controlled: the ruling elites of Kazakhstan are largely ethnic Kazakhs. As Shonin Anacker suggests, moving the city north entails moving the administrative and political class north, increasing the population density in Astana of ethnic Kazakhs.[279] Although small in number, Astana's population of Kazakhs are powerful, politically, as Anacker states:

> 'The mere presence of these elites in Astana gave the northern capital a new sophisticated veneer. Fancy restaurants, car dealerships, and private schools began to appear. [...] Mayor Dzhaqsybekov [...] suggested that the local inhabitants were quite happing in the new capital [...] Aqmola "... was now a centre of government ... the main city of a large country.'[280]

Astana becomes established as a place in the north of considerable importance. It is the seat of regional power, the home of Kazakh autonomy: a poignant statement of independence within the lacklustre fabric of an industrial post-Soviet city. It also makes the point that the north is not insignificant to the Kazakh nation. Annexation now becomes almost impossible. The capital city acts as an anchor point for a potentially divisive region.

For Wolfel, positioning the capital in Aqmola works as a method to control 'entropy resistant traits.'[281] Patterns of behaviour, cultural imperialism and rigid nationalism are traits that resist the breakdown and assimilation of different cultures. These traits

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276 Moves to annexation of a territory or territories by groups who consider themselves not part of a dominant culture.

277 Wolfel, 'North to Astana', p.492 *'First, the Kazakh government must keep any potential separatist movements under control. This could be accomplished by moving the capital into a separatist stronghold in an effort to control or reduce the irredentist sentiment. Second, the Kazakh government could attempt to make the distribution of Kazakhs and Russians more equitable. [...] this could be accomplished by moving the capital, associated with Kazakh government officials, into the northern regions of the country.*

278 *Oblast* in Kazakh refers to the administrative region, akin to a State, or more fittingly a county, as regional autonomy within this centralized system is limited

279 Anacker, 'Geographies of Power', p.526

280 Ibid., p.527

281 Wolfel, 'North to Astana' p.489

prevent the assimilation of Russians into the nation of Kazakhstan: principally, ethnic Russians see their language, culture and politics as tied to Moscow. Due to the definitions of the boundaries of independent Kazakhstan, they find themselves within a state that they do not regard as theirs.[282] Hence the potential for instability, and within this context, the move of the city can be seen as a regulating device:

> 'In order for surveillance to succeed, it must be continuous and in close proximity. Therefore, in order for a country to keep control of its population, especially a subsection of the population that is geographically concentrated, a group that has lost political power during the post-Soviet era and does not share an identity with the leadership it is necessary to keep this section of the population under continuous surveillance in close proximity.' [283]

Drawing on Foucault's 'Panopticon' model[284], Wolfel suggests that the city acts as a monitoring device for a region that is distant from the previous capital, Almaty. Locating the capital in the centre of the country establishes this form of 'panoptic' control: no longer is the centre of control and command of the nation perceived as being distantly located in a far southern corner of an area the size of western Europe. This form of control is not direct, literal observance of the population from a specific location or even through specific technologies. It is tied to an idea of the perception of a centralized capital city. The production of the image of the location of the city is crucial. How it is seen as being centralized, concerned with the totality of the Kazakh territory, is as important as the density of ethnic Kazakhs to balance Russian irredentism. The visual significance of the capital move – the literal demonstration of State authority and centralism – and its continued growth act as stabilising measures in this region of the country. Visual identity is key and the production of an identity that is transparent, in the sense of clarity and lucidity, is critical:

> 'The Nazarbayev regime has not been eager to utilize architecture and monuments to turn Astana into a vivid representation of Kazakh national identity. The planners of Astana have built a city that is meant to speak to an international audience: the goal here is *external* legitimacy.'[285]

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282 Olcott *Kazakhstan*, p.14
283 Wolfel, 'North to Astana' p.496
284 Foucault *Discipline and Punish*, citied in Wolfel, 'North to Astana', p.496
285 Anacker, 'Geographies of Power' p.530-31

This external legitimacy also aims at stability, through regulation of internal geo- and ethno-politics, as Anacker suggests:

> 'On the other hand, the regime often has employed less concrete representations of the capital in its ongoing nationalization project. Here the focus is much more on *internal* [sic] legitimacy. The capital move represented a unique way of changing the demography of the north and re-territorializing the Kazakh nation without inspiring much immediate resistance from either inside or outside the country.'[286]

Nazarbayev uses Astana as a tool in the establishment of his own identity. The success of the city is related to the success and popularity of its leader. The president has a necessarily close link to reconstruction and new-construction in Astana. It differentiates his identity from that of the Soviet era elites. Economic success and 'openness' is marked onto the surfaces of the re-clad ministries in the old Communist centre. The architect Tsubokura Takashi worked on master planning Astana with the established Japanese architect Kisho Kurokawa *[58+59]*. Nazarbayev worked closely with Kurokawa and established what Takashi describes as a client relationship. The city of Astana was almost a private project between patron and his architect:

> 'The architect likes to speak eloquently on his thoughts, but at the same time he can become fully pragmatic as the need arises. In this proposal he [Kurokawa] concentrated his attention on the president from the beginning and designed the new capital as if it were a building whose client was Nazarbayev. It is a complete contrast to the master plan of 1962 both whose client and planner were faceless organizations or groups.'[287]

The relationship between architect/planner and president seems almost personal. The guiding hand of the 'fatherly' president is felt from the procurement of the planning of the city, its execution and the design of specific buildings. This marks a considerable shift in identity from Soviet methods, and the 'faceless organizations' are replaced by the image of a benign patriarch, yet someone who still has a complex relationship with a 'democratic' ideal. As a superficial demonstration of change, the visual facelift of the old city of Tselinograd (the Russian name for the city post 1961)

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286 Ibid., p.531

287 Takashi, Tsubokura 'Astana as the New Capital - Master Plan by a Japanese Architect KISHO KUROKAWA' December, 2003 <http://www.astanamp.kepter.kz/sub4.html> [accessed: 29 April 2008]

moved the architectural type away from Soviet imperialism. The aesthetic dictated from Moscow is replaced by a mixed bag of stylistically incongruous post-modernism crossed with Islamic details and a hint at Kazakh historicism *[60+61]*. The attempt to transform a Soviet city into a Kazakh Capital was initiated through the move of administrative elites to Astana but it is the visual significance of the changes that are immediately obvious. Superficially, political systems and structures have changed; equally superficially so have the building surfaces. Takashi demonstrates the surface covering of Soviet architecture through contrasting photographs of the administrative buildings in the city centre and notes:[288]

> '[...] although the older buildings of Akmolinsk period (-1961) were mostly preserved [...] all the buildings of Tselinograd period (1961-1991) were reconstructed [...]. [...] the method of "reconstruction" is covering whole building facades with mirror glazing and aluminium [sic] cladding plus some extension work. In such a way these buildings were changed out of all recognition.'[289] *[62+63]*

'Out of all recognition' is an overstatement – the general massing, planning and urban impact of these Soviet era structures still defines the spatiality of Astana. But as a gesture, an indication of 'change', these modifications fulfil important roles. As Takashi suggests, they operate as markers for a 'new' Kazakhstan to the world's media (focussed, to an extent, on the city at the time of its inauguration as capital).[290] These 'new' motifs are stage-managed effectively by the president. The architecture of 'his' country becomes an essential part of his identity. Astana and its development are products, at least partially, of the construction of the Nazarbayev myth. Construction and planning are tools used to legitimise the position of the president, build his identity and strengthen the position of his specific clan-identity in the country.

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288 Takashi, Tsubokura 'Astana as the New Capital - Reconstruction of Central Square in 1997' December, 2003 <http://www.astanamp.kepter.kz/sub3.html> [accessed: 29 April 2008]
289 Takashi, 'Astana as the New Capital - Reconstruction of Central Square in 1997'
290 Ibid.

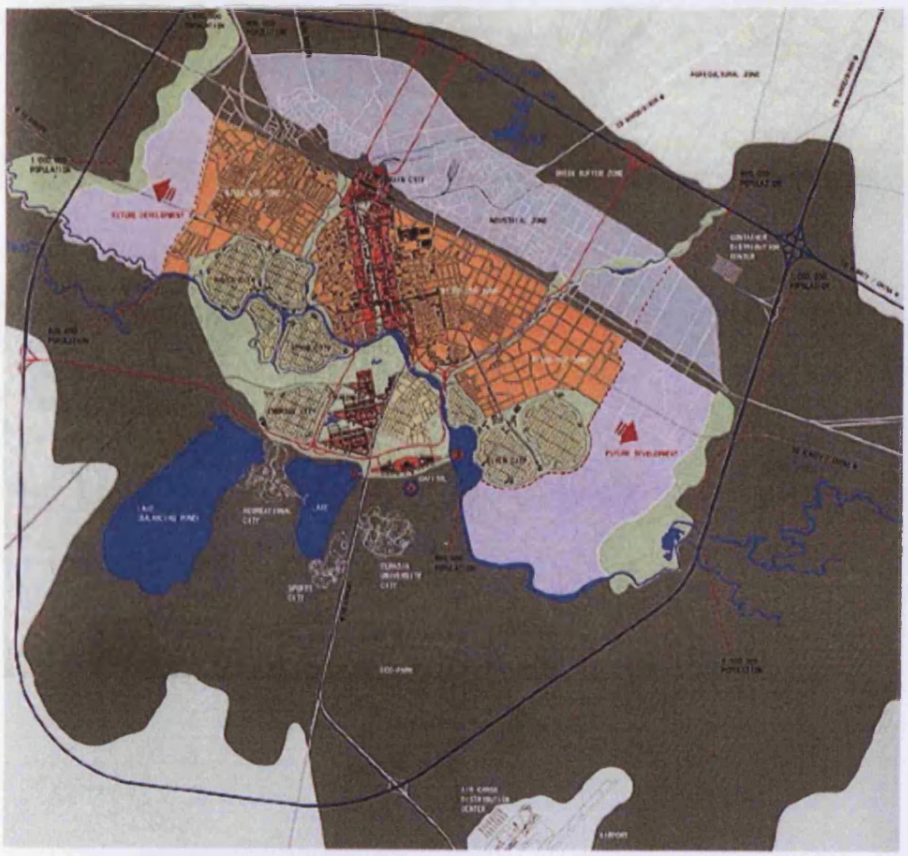

Fig.58
Master Plan, Kisho Kurokawa (1998 version)

Fig.59
Master Plan, Kisho Kurokawa (2001 version)

Fig.60
Presidential Palace, main axial route,new administrative quarter, Astana

Fig.61
Bayeterk symbol of Kazakhstan, flanked by administrative offices, Astana

Fig.62
Former Soviet Design Institute, now the Parliament

Fig.63
Former House of the Soviet, now President's Administration

Architecture and Identity: the President's City

The identity of the president is communicated through his building programme to an international audience, much as Mitterrand's *Grand Projects* in 1980's France attempted. Nazarbayev as statesman, as mature leader, is visualised through his relation to architecture. Holding the centre frame in this image *[64]* commissioned to mark the 'presentation' of Astana as Kazakhstan's capital city, Nazarbayev is indicating his prominence in the establishment of the Kazakh national identity. 'His' is the guiding 'genius' behind major projects.[291] The imperative to construct and reconstruct is often laid at the door of Nazarbayev, and he accepts and encourages the image of the 'architect' of Kazakhstan.

This painting reveals more about the construction of national identity than it does the construction of the Nazarbayev identity. A coalition of Kazakh folk arts is represented, and whilst a few Russian/European faces are visible (the Western style singer in the top right for instance), the predominant ethnic background appears to be Kazakh. The ubiquitous 'Golden Man' of Kazakh archaeology/mythology[292] is visible in the mid-centre of the pictorial plane, vigorously illuminated through a dramatic sunburst of light rays. The Soviet icon of a woman carrying a sheaf of wheat is absorbed into the array: the wheat replaced by a bunch of flowers, a sure sign of the future prosperity of the nation and a marked and obvious break from Soviet iconography. Sitting as the backdrop to the ensemble of pastiches of Kazakh identity is the renovated architecture of Astana. The signs of the newly emergent democracy (the picture was painted in 1999) are manifestly architectural. The cultural implications of independence, and unity, are shown through the people. However, implicit in this scene is the indication that this cultural unity and political independence is supported by the architecture of the city: 'Look at Astana', the painting implies 'change is here.' The re-conditioned Soviet era blocks pictured have been covered in standardized, post-modern styled cladding panels.[293] The initiation of

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291 Comments made by two sources during field research in Astana. Nazarbayev was praised as the design source behind the cities layout and some of its object buildings, including the Palace of Peace and Concord.

292 The Golden Man is an artefact of considerable importance to the establishment of a Kazakh history. Discovered ouside of Almaty, it is a suit of jewel encrusted gold dating from the 5th century and would have been worn by a Scythian Prince/Princess. The School of Russian and Asian Studies, 'The Golden Man' <http://www.sras.org/news2.phtml?m=445&popup=1#Golden> [accessed: 19 April 2010]

293 Takashi, Tsubokura 'Astana as the New Capital - Reconstruction of Central Square in 1997'

the transformation of Astana in open, 'World' city has begun. The monolithic block pictured centre was the Soviet Design Institute, the *Giproselhoz [62]:* now, the Parliament. The lower, yet similarly styled block to the left was the House of the Soviet: now the President's Administration *[63]*. The symbolic changes in the infrastructure and building of the previous administration have been made centre stage, along with the President and his familial entourage. The suggestion: with political change comes infrastructural change; this is not the Soviet administration, this is a Kazakh administration. And this President has led this, flanked and supported by his nation's architecture. The production of the cultural conditions of the country becomes closely allied with the procurement and construction of architecture: as Lefebvre suggests, cultural production is inherently spatial, and here space is used to indicate a change, a cultural shift: space becomes transparent.

December, 2003 <http://www.astanamp.kepter.kz/sub3.html> [accessed: 29 April 2008]

Fig.64
Painting commisisoned to mark the 'presentation' of Astana as Kazakhstan's capital city, Kamille Mullashev, "The Presentation of Astana", oil on canvas, 1999

The visual oscillation between the President in black-tie (black jacket flanking white expanse of shirt) and the Parliament building behind him in its new suit of cladding (jacket of reflective, black tinted glass flanking white expanse of cladding) suggests a close relationship between the 'man' and his 'architecture': a relationship that is more than tentative, as Ellis Woodman of Building Design magazine suggests:

> "'I am the architect of Astana,' president Nazarbayev once told a journalist. ' I am not ashamed to say that'"[294]

This relationship is central to Nazarbayev's image: at home and abroad. And Astana represents an international billboard for Kazakhstan. The identity of the city is wrapped up in the identity of the man, and in Kazakh nationalism. As well as functioning as an indication of the success of the President in maintaining ethnic unity the city opens its doors to potential investors.

Western and middle-Eastern companies are, and have been, vying for access and control of the oil reserves in this landlocked country. Opening to potential investment is, as discussed earlier, critical to the success of the Kazakhstan. Astana works as the economic, political and cultural magnet for this investment, and its architecture has been carefully developed in order to promote this, and other 'stability' inducing goals. And, for Anacker at least, this has partially been achieved by the establishment of a 'trans-national capitalist aesthetic':

> 'The planners of the new Astana imagined that his [Kurokawa's] design would effectively convey the "economic openness" of Kazakhstan to an audience of international investors. In the mayor's words, every foreign visitor should be able to see "his own native city" in the built form of Astana."[295]

The 'international' quality of the city, in planning terms at least, is established through the overarching designs of Kurokawa. The appeal to 'fluidity' and 'organicism'[296] representative of a new 'market economy', as Anacker suggests, is demanded by the elites in Astana, and is embedded in plans by Kurokawa. The intention – to create a city that at once represents and constructs Kazakh identity, and is transparent enough in its visual identity to communicate an international quality to potential investors. An identity that is antagonistic (to use Lefebvre's terms) to the hidden and secret realms of a country struggling with a post-Soviet identity.

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294 Woodman, Ellis, Building Design Online, 'Palace of Peace & Accord, Kazakhstan by Foster + Partners', <http://www.bdonline.co.uk/story.asp?sectioncode=428&storycode=3073828> [accessed: 10 April 2008]
295 Anacker, 'Geographies of Power' p.519
296 Ibid.

For Anacker, monumentality was out. The demands of 'trans-national' capital are not met through heavy-handed attempts at the construction of a cult of personality, or even personal politics. The 'fluidity'[297] of capital is appealed to, and any potential areas of controversy and radical difference (resistant or nationalist) are avoided at all costs. Safe symbols, like the Golden Man as Anacker suggests, are acceptable: potentially divisive icons and monuments are not. In the structures and symbols of the city, universality, openness, and accessibility are searched for. In the master planning, the impression of international significance is developed through this approach to creating an almost 'ad-hoc' type development: a city that emerged through the twists, turmoils and successes of the world-economy. Effectively, a significant distortion of the truth:

> 'Whereas the stylistic chaos of Beijing and Hong Kong developed over many years as the result of sporadic waves of domestic and foreign investment, the stylistic chaos of Astana is the product of a single, tightly managed state plan. The chaos, in other words, is artificial, mobilized by the state in order to *manipulate* [sic] foreign investors into thinking that Astana is on its way to becoming a "global city".[298]

Astana is a manipulative city: externally and internally and it operates across a multitude of political, cultural and social platforms. It attempts national unity through addressing a range of potential ethnic concerns; it manipulates the impression of foreign investors; it develops the identity of its patron, the President; and it constructs a national identity of stability, unity, and openness.

Architecture and Identity: The President's Pyramid

Positioned on an axis with the Presidential Palace and governmental offices is a structure that works on all these multiple levels. The Palace of Peace and Concord is a project conceived by Nazarbayev and designed by Foster + Partners. Opened in 2006, the project was commissioned as the permanent home of the Congress of World and Traditional Religions.[299]

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297 Anacker, p.519
298 Anacker, p.520
299 The members of the congress are representatives of the world's religious groups. These are not necessarily the appointed leaders of religious organizations. For a full list of attendees, see <http://www.religions-congress.org/index.php?lang=English> [accessed: 24 May 2010]

The First Congress of World and Traditional Religions was held in Astana in September 2003. Initiated by Nazarbayev, the Congress was intended to occur on a three-year cycle and was intended to function as an international forum for religious leaders to meet and discuss ways of encouraging tolerance and understanding between faiths. A press release from The Embassy of Kazakhstan in Israel, September 2003, reads:

> 'This was the first ever Congress of Leaders of World and Traditional Religions. The Congress, held at the initiative of President Nursultan Nazarbayev in Kazakhstan's capital, drew widespread support from political leaders of both Western and Asian nations' [300]

The Second Congress was held in the newly constructed Palace of Peace and Concord in September 2006. The Congress was attended by delegates from Islam, Christianity, Buddhism, Judaism, Shinto, Taoism and Hinduism[301] whose focus at each event is to produce a united declaration that progresses the Congress's aim of improving stability and security.[302] The Congress' home – the Pyramid – is located on the southeast periphery of Astana. It currently forms a visual termination to the newly constructed 'mall'; the home of much of Kazakhstan's recently relocated government *[65+66]*. Standing isolated on a small hill the Pyramid strikes an aggressively isolationist pose. It forms a part of this new 'city of the Steppe': the city that is the 'centrepiece of the official nation-building project' in the country.

From their second declaration, the Congress seeks to 'strengthen mutual understanding'; 'prevent conflicts'; 'abandon enmity, discord and hatred' among other stated goals.[303] Its position in the country, and in Astana, was initiated by the President. His ownership of the scheme, and its conception, is marked into the mythologizing of the institution and its home[304] and a relationship between the goals of the Congress and the state institution of the president is made, explicitly, within Kazakhstan. As Nazarbayev suggests in an address to the Kazakh nation:

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300 Embassy of Kazakhstan in Israel, 'First Congress of World and Traditional Religions' <http://www.kazakhemb.org.il> [accessed: 22 April 2008]

301 Embassy of Kazakhstan in Israel, 'Second Congress of World and Traditional Religions.' <http://www.kazakhemb.org.il> [accessed: 22 April 2008]

302 BBCNews.com, 'Kazakh stage for religious event' <http://news.bbc.co.uk/1/hi/world/asia-pacific/5341822.stm> [accessed: 22 April 2008]

303 Embassy of Kazakhstan in Israel, 'DECLARATION of the II Congress of Leaders of World and Traditional Religions' <http://www.kazakhemb.org.il> [accessed: 01 May 2008]

304 From observations and field notes made during a research visit to Astana, February 2008.

> 'Consistency is the main rule for our fast development in the modern world for the next ten years.
> All prerequisites are available to us.
> We possess vast territory, favourable geographic, transport and communications locations, and considerable natural resources.
> We have achieved a leading role in the regional economy, constructive relations with international partners, political, social and economic stability.'[305]

Leading roles with international partners are only achievable with degrees of stability. The programme of 'comprehensive accelerated modernization of Kazakhstan'[306] requires the tacit acceptance of the ideals of modernization by the populous, as well as the continued confidence of Western investors in the country. This confidence is established through both policy and projects: project implemented and projects built.

305 Embassy of Kazakhstan in Israel, 'Part 1. New Kazakhstan in a New World' <http://www.kazakhemb.org.il> [accessed: 01 May 2008]
306 Ibid.

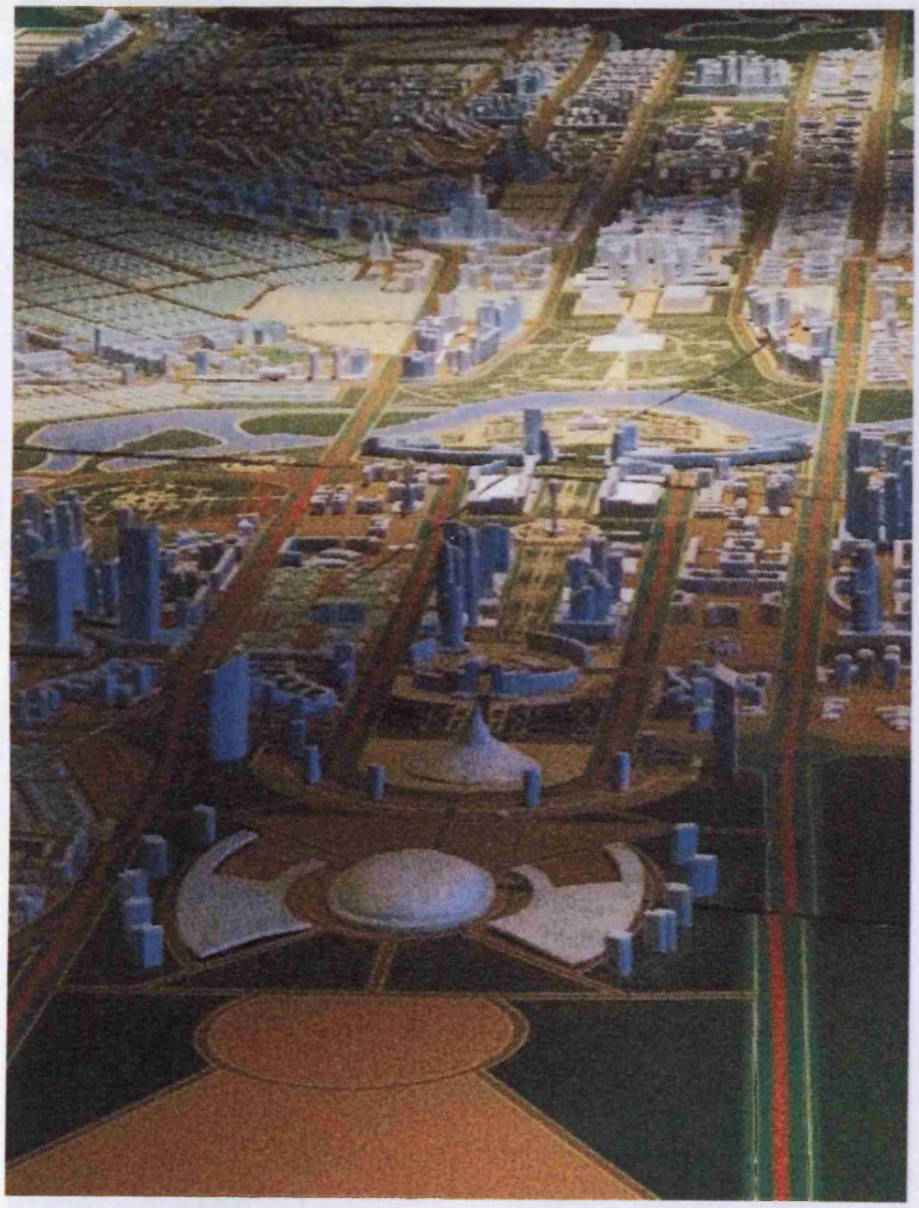

Fig.65
Planning model for the new administrative quarter, Astana

Fig.66
Ariel view of the axial positioning of the Pyramid and Presidential Palace

Entering the Pyramid

The home of the Congress – the Pyramid – lies on the eastern side of the Isihm River. Positioned at the current extreme edge of the city, development is promised to continue eastwards. Eventually, this development will engulf a set of small villages lying outside the boundary of the city and it will have expanded from its current size

of 600,000 to approximately 1.2 million. Conceived by Nazarbayev as a Pyramid, the project was awarded to Foster + Partners after being approached by the construction company Sembol Construction.[307] Foster + Partners accepted the formal premise that Nazarbayev insisted upon. A Pyramidal form mimicking the exact proportions of the Great Pyramid of Cheops was proposed. This was a scale that was capable of accommodating 80,000 people in its base, fourteen times larger than the final scheme. The project was initiated in the summer of 2004, and hosted its first congress in September 2006. Design development and construction was rapid, with the final stages requiring the mobilization of members of the Kazakhstan army to assist with the construction.[308]

Structurally, the building is supported on a concrete sub-frame, buried in the artificial hill on which the upper Pyramid sits *[67]*. Within this subterranean space is the 1,500-seat orchestral hall. Access to the hall and congressional areas is through Mayan like cuts into this mound *[68 +69]*.[309] The Pyramid is based around a steel frame in-filled with granite faced concrete cladding panels and low-level glazed diamond-shaped windows admit light into the central atrium hall. Other than these, the sides of the Pyramid are un-penetrated, until the apex where twelve glazed panels form the upper-most chamber of the congress.

307 Woodman, Building Design Online, 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'
308 Ibid.
309 Observations and recordings on the Palace of Peace and Concord made in February 2008, during research visit to Astana. From authors own notes and sketches. February/March 2008

Fig.67
Entry-way to Pyramid on landscaped 'hill'

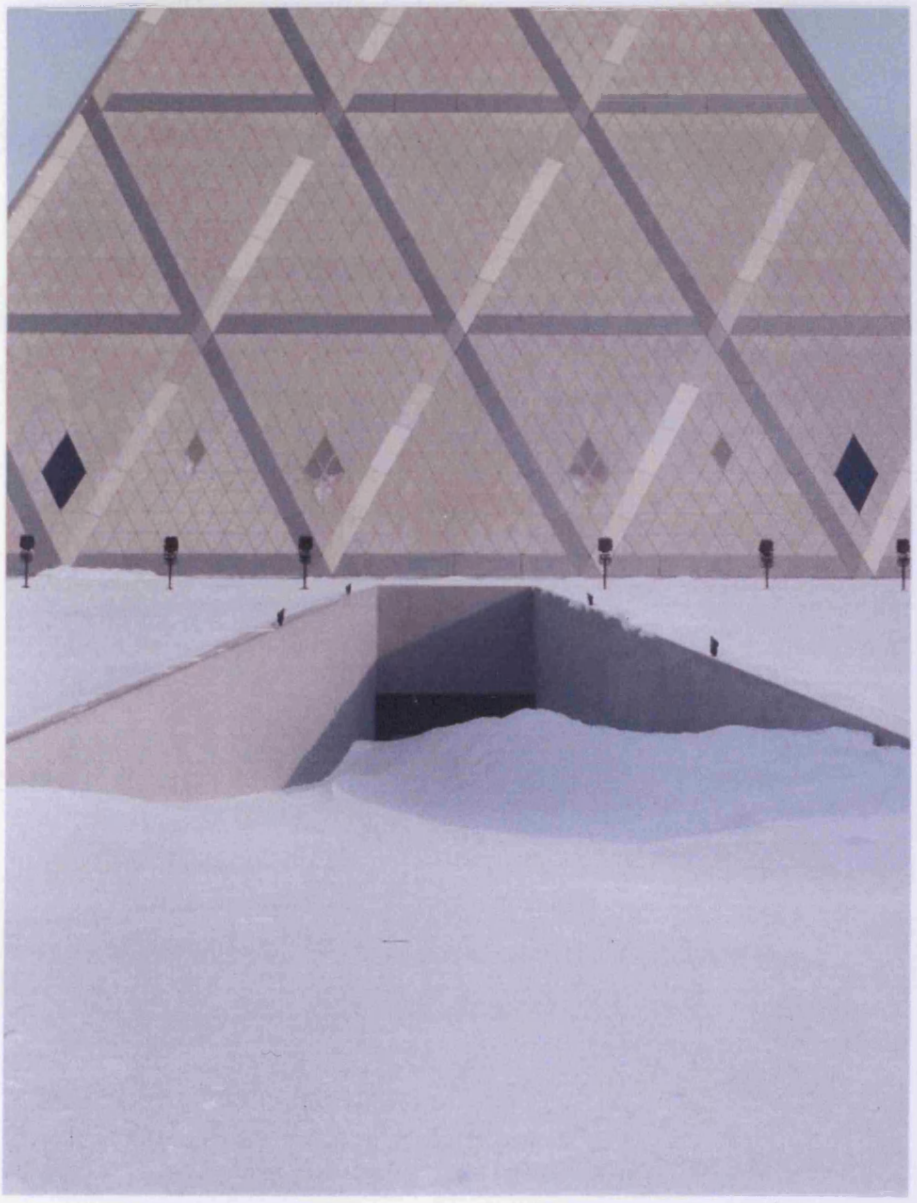

Fig.68
Entry cut into hill, backstage access

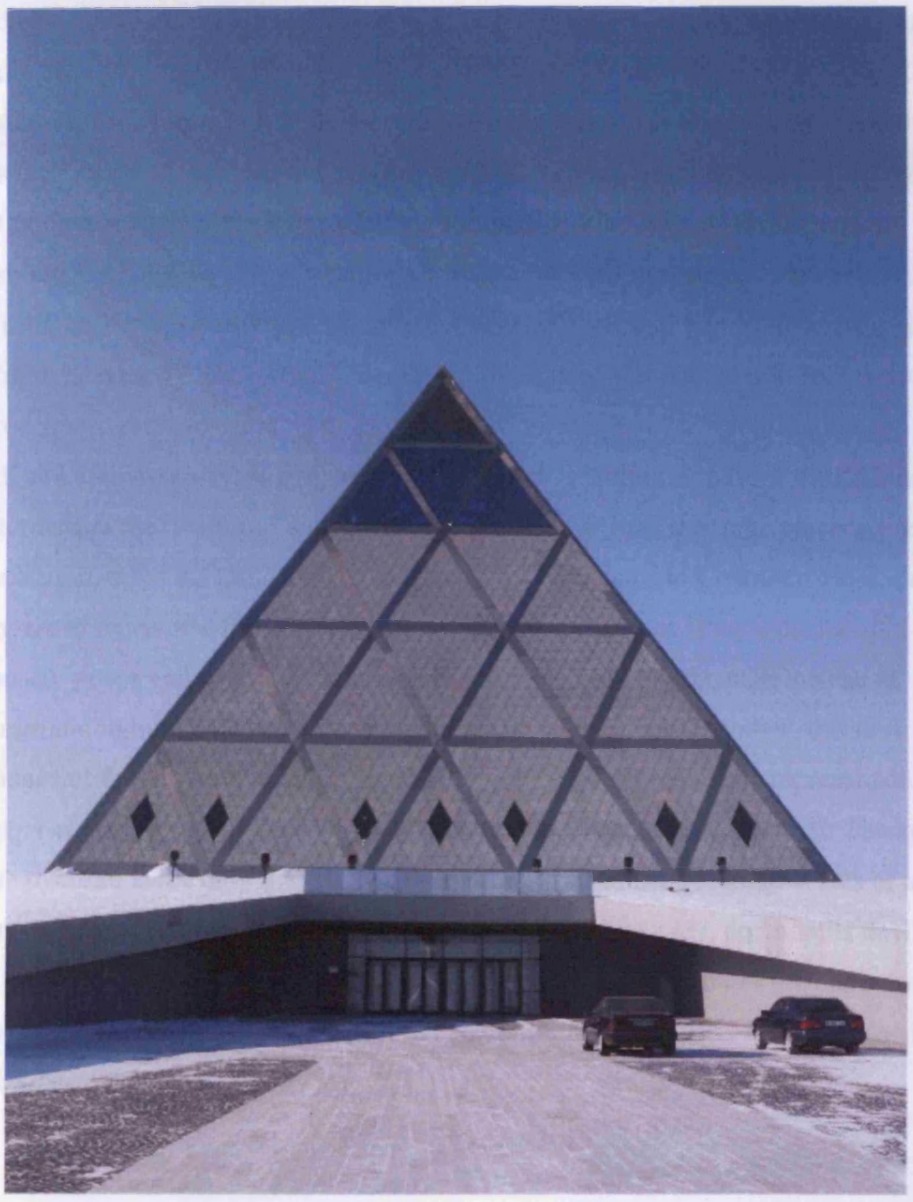

Fig.69
Public entrance

The approach to the palace is from a snow-blown road into the concrete cuts *[69]*. Visitors proceed towards the darkened entrance and through tinted glass swing doors *[70]*. From here, the contrast of light and dark is immediately blinding. The reflective

quality of the light grey, snow covered concrete court outside contrasts starkly with the dark-wood and black-granite glad interior *[71]*. Eyes take time to adjust. For a minute after entering, details gradually swim into focus, until the scale and depth of the subterranean lobby is visible. Generic corporate darkness is pervasive here. But it is used to set up a hierarchy of contrasts from the subterranean darkness to the apex of light at the pinnacle of the Pyramid. This set-up, this hierarchy of brightness, is constructed, according to the building's guide, to present the 'shared views that all life and religions have, of darkness being hell, the middle ground being life and the top, the light, heaven.'[310] The explicit narrative (which uses a positivist and redemptive approach to light – an example of an overt relationship between illumination and the good, as Lefebvre analyses transparent conditions[311]) is the route from the dark under croft, through the 'learning' and shared experiences of 'life' that take place in the main atrium, up to the almost epiphanic space of the Congress Chamber. Here, the members of the World Religions meet and through consensus issue a declaration of supposed 'peace and concord.' This is choreographed mainly through the use of contrast and lighting. When one eventually reaches the upper Chamber, the stark brilliance of the snow reflected light streaming through stained glass representations of super-sized Doves of Peace, by glass artist Brian Clark is blinding *[72]*. The apex of the pyramid is the only materially 'transparent' part of the building. It acts as a glowing indication of the presence of the Pyramid by night *[73]*, and admits daylight into the atrium. Diffuse, pale blue and yellow/white light illuminates the central void of the Pyramid by day *[74]*: the effect likened to being underwater by Ellis Woodman of *Building Design* magazine *[75]*.[312]

310 Comments made by the buildings tour guide, 19.02.08, and similar theme reiterated by the buildings security manager on the return visit, 20.02.08

311 Lefebvre, *The Production of Space*, p.243

312 Woodman, Building Design Online, 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'

Fig.70
Main swing doors to public foyer

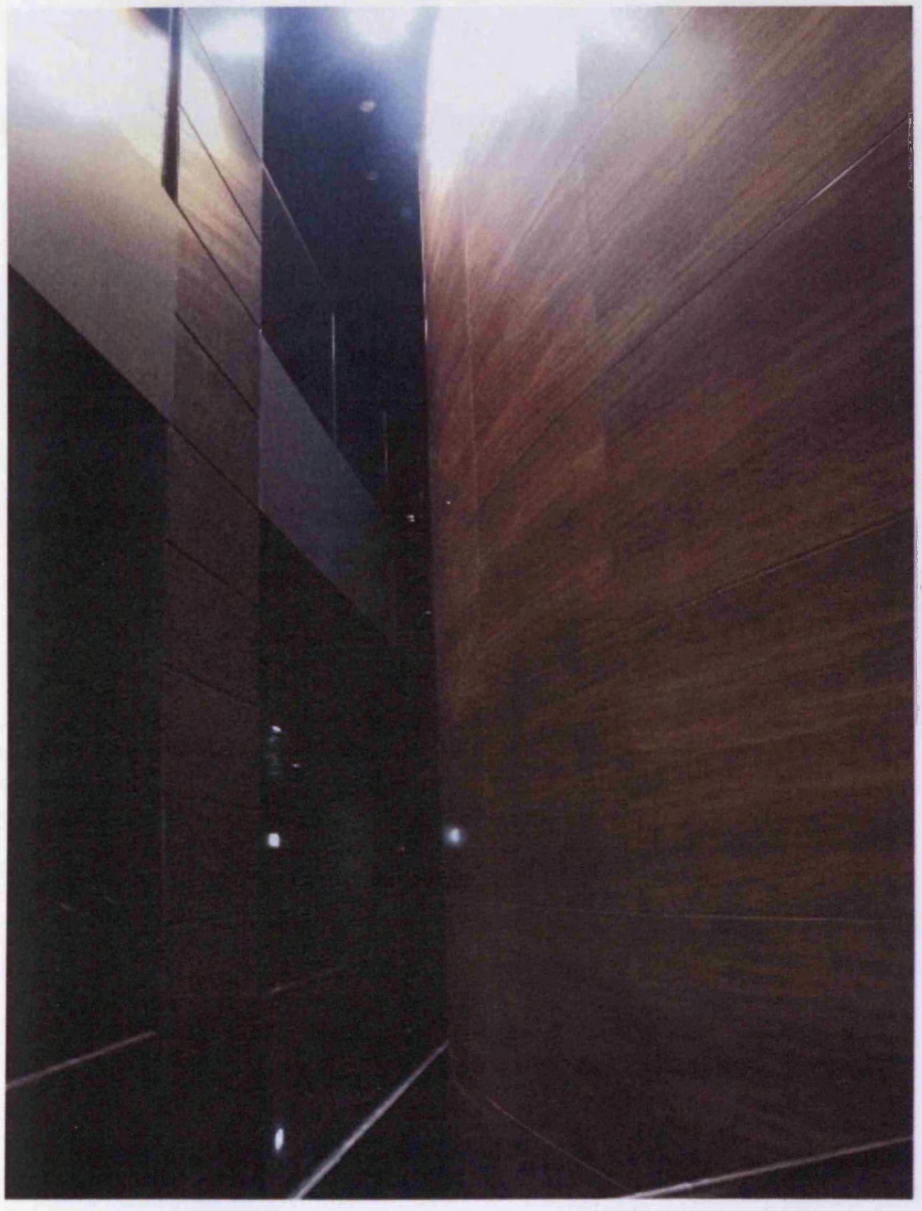

Fig.71
Drum of the auditorium in public foyer

Fig.72
The Congress Chamber, apex of the Pyramid. Doves by Brian Clarke can be seen on the glazing

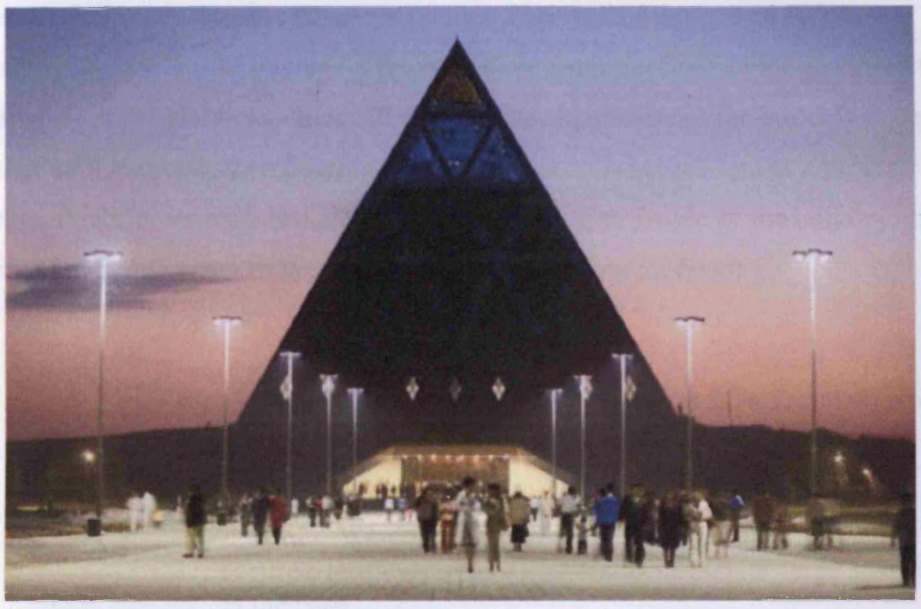

Fig.73
Entry to Palace, from Foster and Partners website

The Pyramid is conceptually and programmatically defined by this central void *[76]*. Sixty metres above is the mechanism that brings light into this space: the oculus, the structure that holds the round-table for religious discussion. This is supported at four

points by what the guides call the 'hands of peace' *[77]*: structural supports in the frame that hold the Congress Chamber oculus. The void of the central atrium is echoed by the void of the oculus – framing a view from the floor of the atrium to the bright glow of the glass-clad upper Chamber. The experience of the building is tied together by this progressive filtering of light in the central core. And as a progressive filtering, it reinforces what is claimed as an organizing principle of the building: the diagrammatic organizing of hierarchy through the pyramidal form:

> [David] Nelson's [senior partner in Foster + Partners] point is a functional one. "We liked the hierarchical disposition of the pyramid," he explains. "The top is clearly the most important part and the base is broader. It is a perfect hierarchical diagram. We could therefore dedicate a space at the top to a focused religious activity and accommodate large gatherings at the base."[313]

The architecture here is used to generate a physical manifestation of an organizational diagram. As much as the city itself is a diagrammatic presentation of a 'new' Kazakhstan, the hierarchical quality of the pyramid is an ideological tool – the president presides over this building, and the culminating position – the apex – is dramatically transparent. This 'perfect hierarchical diagram' is made manifest through the progressive dimming/brightening and associated contrast of light/dark within the core *[78]*. Through its brightness, the logical pinnacle of both the structure, the purpose of the Congress, and the superficial philosophical content of religion's appeal to light are made operative. The activity of the congress that takes place in the atrium at a broader scale is focused (both metaphorically and literally) up into the oculus above. From this point of focus, the agenda of the Congress is concretized into its declarations: proclaimed to the World through media sources. Symbolically and practically, the messages of unity, peace, stability, security that are the outcomes of the Congress, are broadcast from this beacon: signals of a progressive liberalism that originate from the host country of the Congress - Kazakhstan.

313 Woodman, Building Design Online, 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'

Fig.74
Side wings of the central space visible in rear of photograph

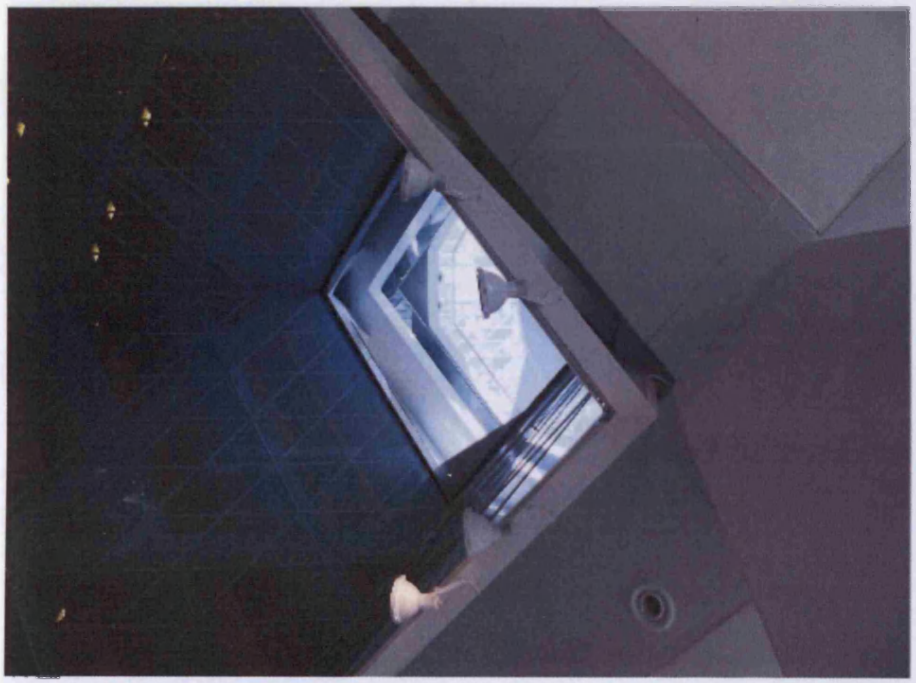

Fig.75
View up into the Congress Chamber, Apex of Pyramid

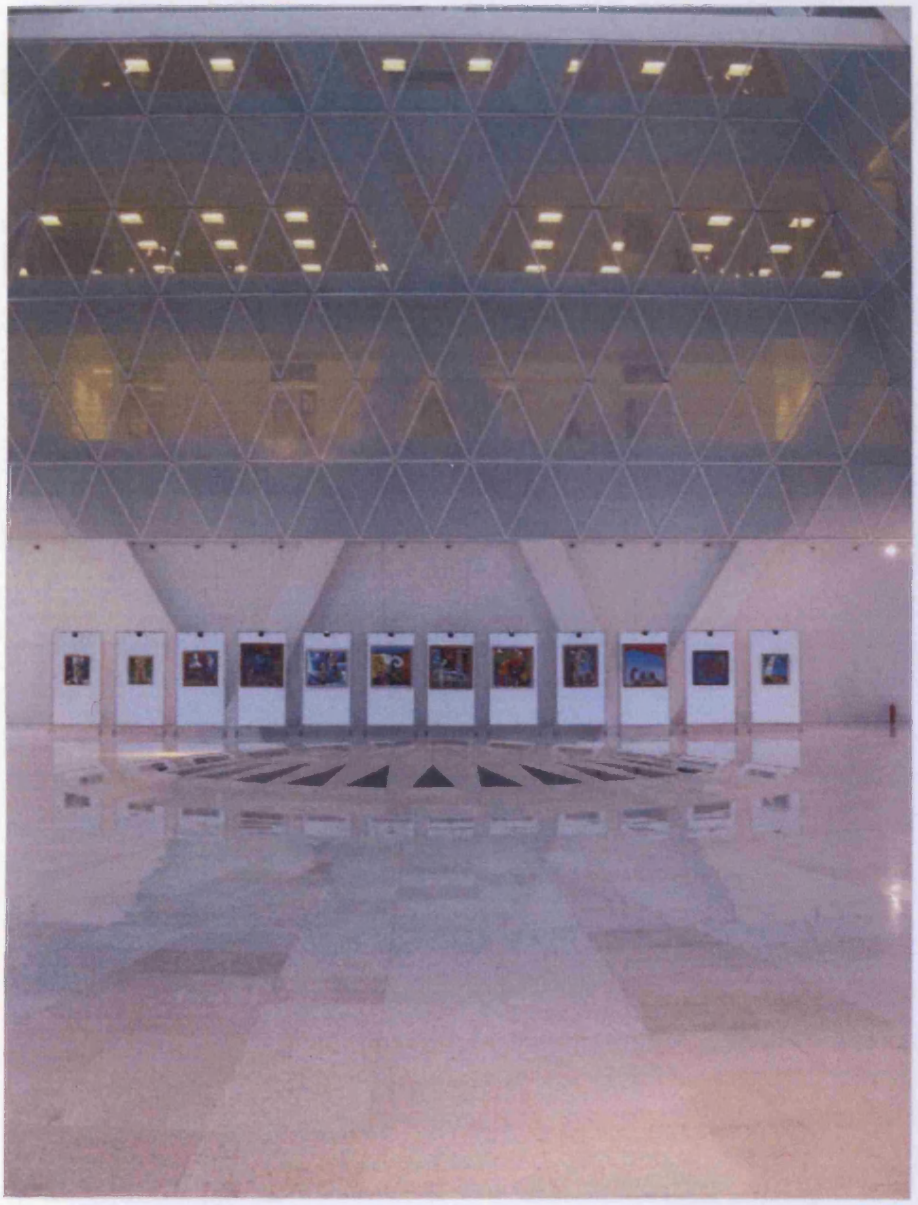

Fig.76
Central void with temporary exhibition of Kazakh Art

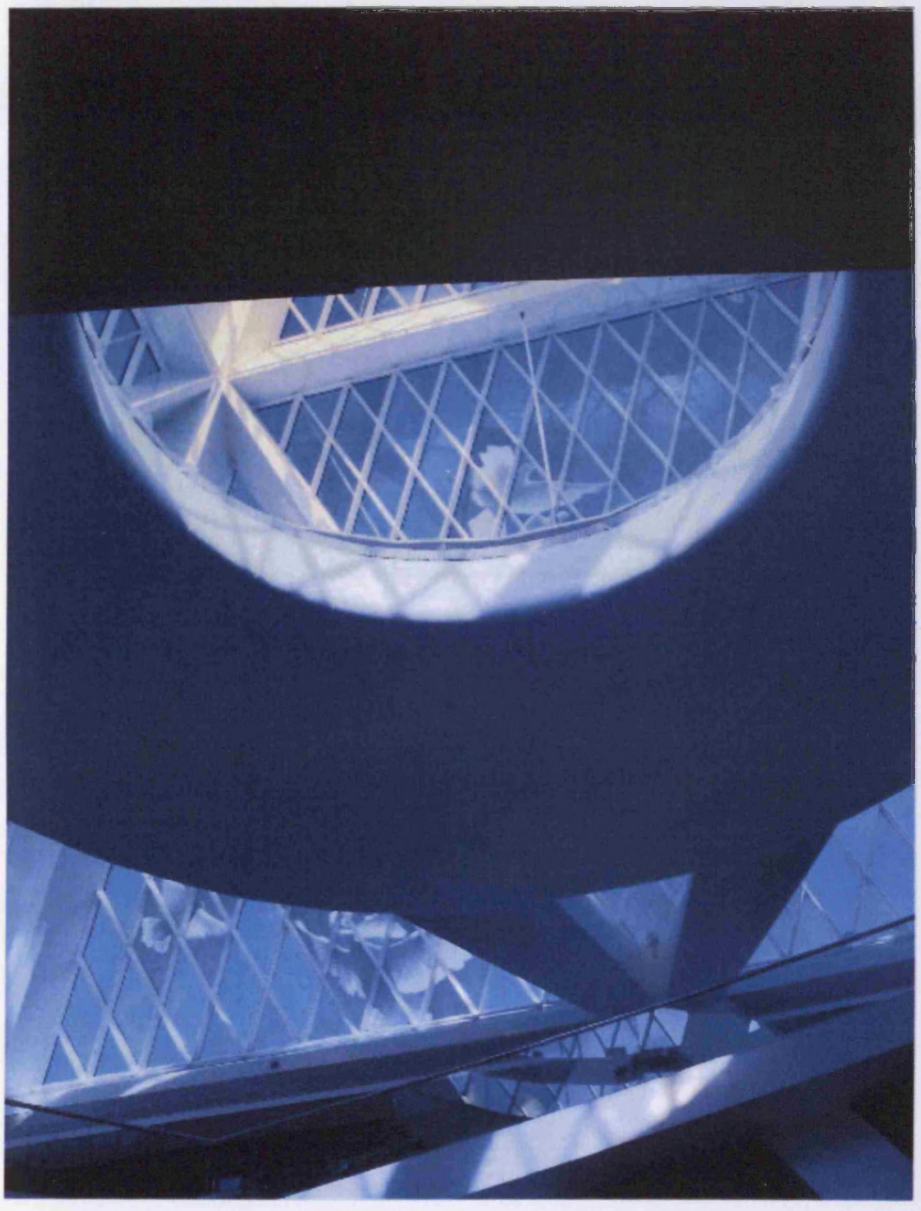

Fig.77
One of 'hands of peace' supporting the seating ring of the Congress Chamber

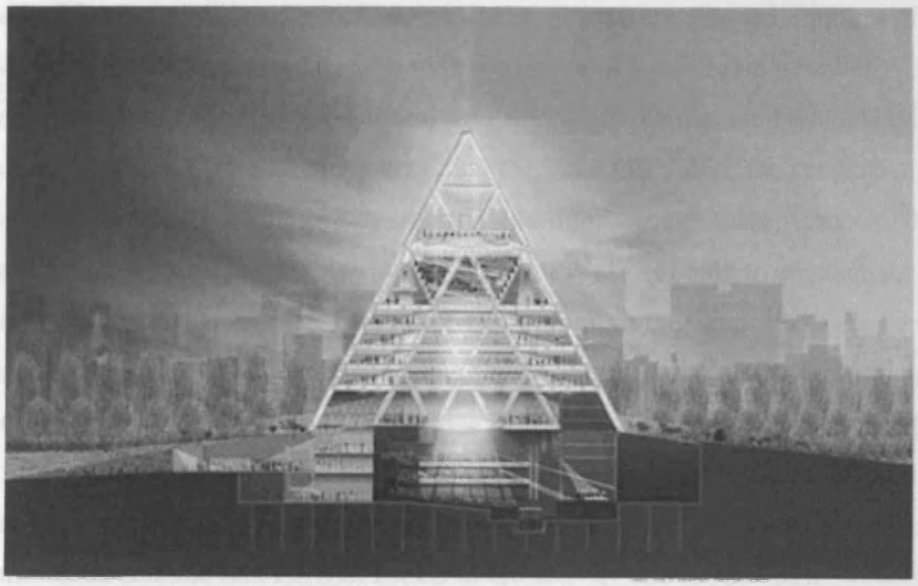

Fig.78
Sectional drawing of the Pyramid. Progress of light from Apex to Auditorium is presented

The void of the atrium is accompanied by small side halls *[79]*, where exhibitions of models of future developments in Astana and Kazakhstan are situated. Pictures of the president again invoke his relationship with the future of Kazakhstan's built infrastructure. Flanking these models and exhibitions are the diamond windows, admitting an ethereal white luminescence into the halls *[80]*. With the snow covered mound outside reflecting a large quantity of white light through these windows, the contrast between inside and outside is heightened: the effect being to enhance the interiority of the atrium through a denial of views through the windows. Attention is focused on the weaker light descending into the atrium from the oculus above, and a slight domed rise in the flooring in the centre *[81]*, together with a tiled star motif with inset glazed panels, denotes the auditorium below. The centrality of the void conceptually runs into the auditorium. From the oculus above, light is supposed to fall through the atrium and link the auditorium to the activity above *[81+82]*.
Symbolically connected is the space of reverie and entertainment in the bowels of the building, the interstitial space of the auditorium and the enlightened realm of the Congress Chamber *[83]*:

> 'The assembly chamber is elevated at the peak of the pyramid, supported on four inclined pillars – the 'hands of peace'. Lifts take delegates to a garden-like reception space from where they ascend to the chamber via a winding ramp. A broad glass lens set in the floor of the atrium casts light down into the auditorium of the opera house and creates a sense of vertical continuity from the lowest level of the building to the top.'[314]

Light is used as an organizational device in the Pyramid. Not in an approach where light is used to functionally illuminate a space: light here is used to demarcate the hierarchy of programme, function and space. Light is symbolically tied to the activities of the Congress, to the conceptual demands of the programme and the implied philosophical ordering of the building. It defines, through its presence and progressing absence, the significance of particular areas of the Pyramid. The core – the void – complements the light-gathering architectural emptiness of the oculus (necessarily empty at its heart to transmit light into the centre). This empty core forms the central focus of this project, which is effectively a loose-fit structure supporting a loose-fit programme.

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314 Foster + Partners *Catalogue: Foster + Partners (2005)*, p.40

Between the skin of the pyramid and the void lies the suite of ancillary accommodation. Planned, initially, to accommodate the possibility of a 'University of Civilizations', these secondary spaces now accommodate offices and galleries *[84]*. Secondary in their conception and design, the significance of these spaces is in the demonstration of the symbolic over the programmatic. Narrow, with no exterior glazing, and opening onto the void through fretted glass panels: these are spaces designed to fulfil the need to be spaces generated by the creation of the central void. Their artificial lighting makes these rooms on a par with the service space hidden in the undercroft. Lighting in these spaces is not significant in the hierarchy set up within the major spaces of the Pyramid. And their spatial type is most closely allied to that of speculative offices. Low floor to ceiling heights, services hidden behind ceiling panels and neon-strip lighting contribute to this quality. They serve to establish the primacy of the voided core to the programme, function and structuring of the pyramid. They are the 'low-grade stuffing required to pad out the pyramid form.'[315] But, more than this, they provide a degree of functional thickness to the skin, defining the interior emptiness through an exterior fill. Accommodated within these rooms is a sparsely attended commercial gallery of modern Kazakh and Russian art, covering two rooms; a museum space showing Kazakh historical artefacts and a mock-up of the ubiquitous 'Golden Man', replete with replica gold armour; and an exhibition of archaeological discoveries from the Steppe *[85+86]*. Cultural artefacts are packaged around the cultural void of the atrium: the only content that speaks of a specifically 'Kazakh' identity is contained in these three rooms. The symbolic and organizational significance of this transparent identity should not be missed: whilst this is a Kazakh project, national identity as a defined image is unimportant. What is key to the functioning of the Pyramid is a similar identity to that of the city as a whole: an easily appropriable international aesthetic, and a weak national identity wrapping a core of conceptual emptiness.

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315 Woodman, Building Design Online, 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'

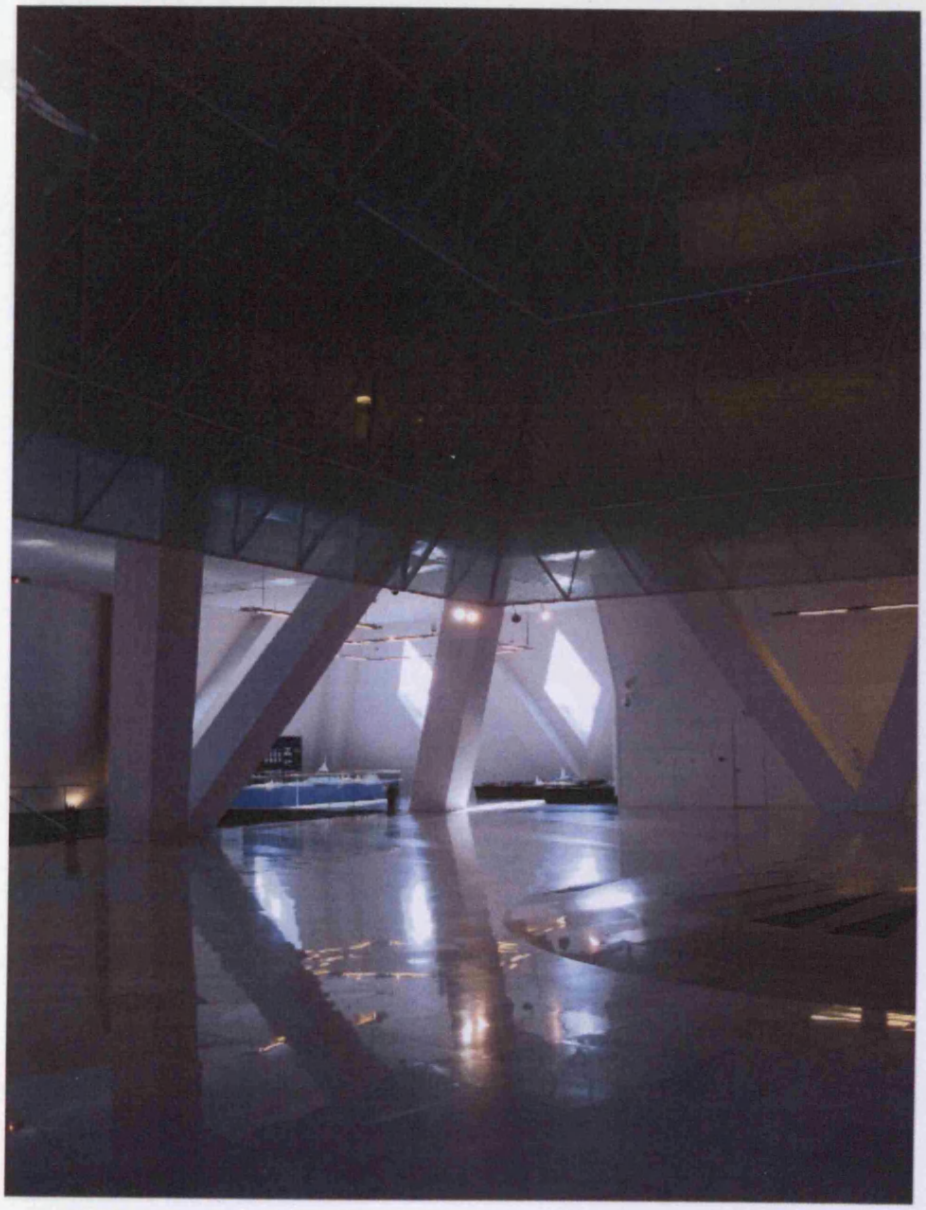

Fig.79
Central chamber with occulus to auditorium set to right of image

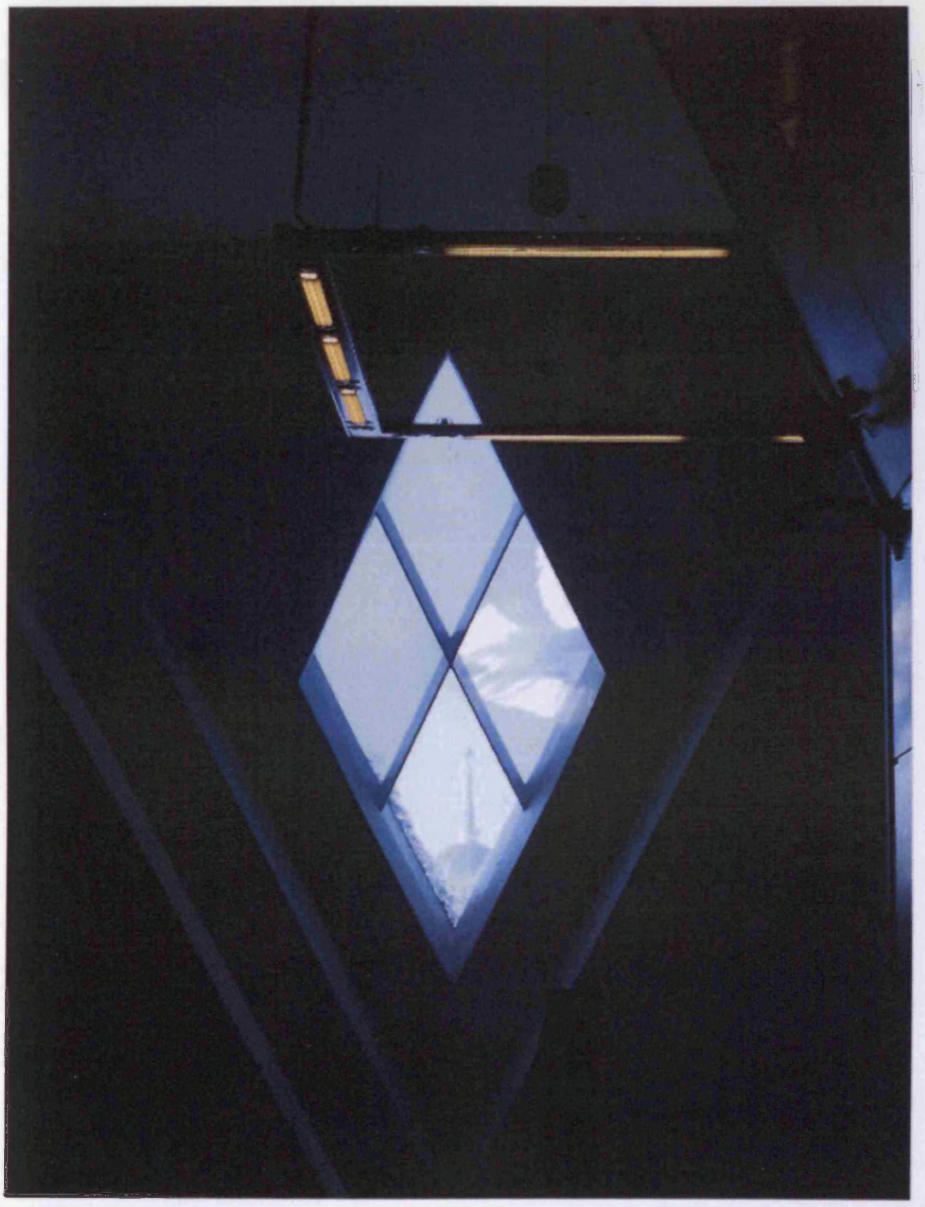

Fig.80
Window to outside from the base of the Pyramid

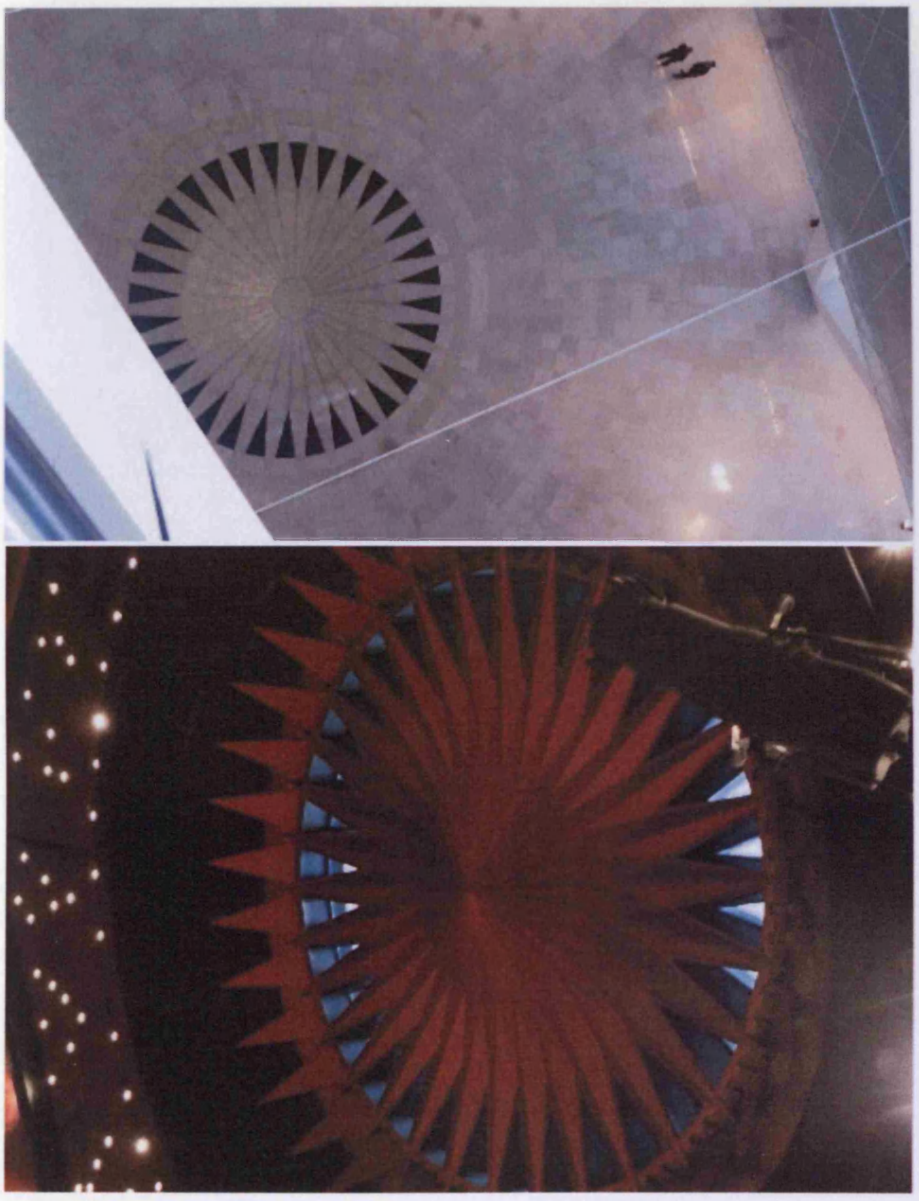

Fig.81
The occulus to the Auditorium view from the Congress Chamber

Fig.82
The occulus viewed from inside the Auditorium

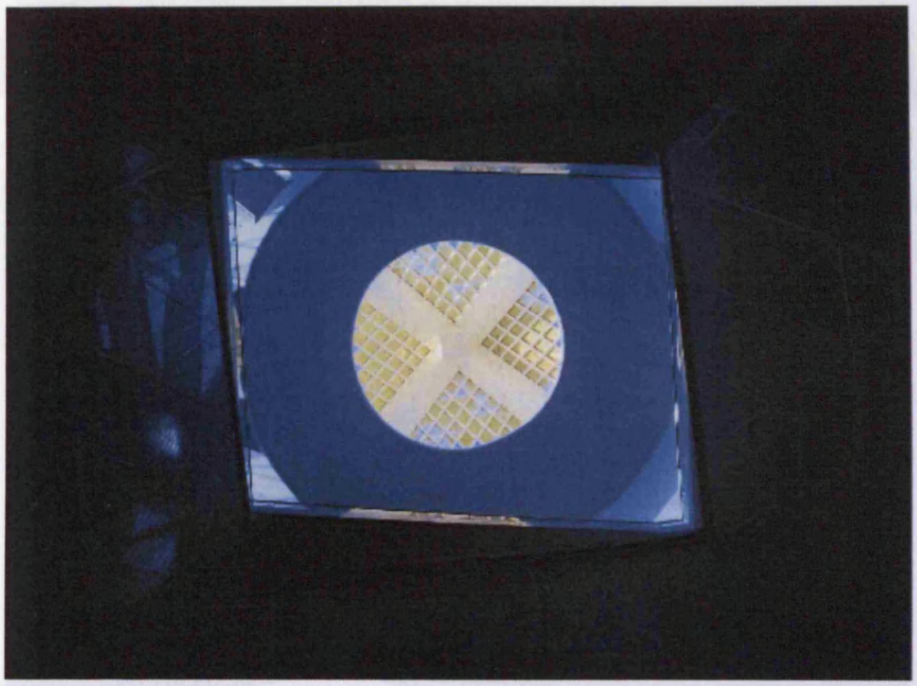

Fig.83
The ring holding seating in the Congress Chamber viewed from the floor of the main chamber

Fig.84
Exhibition space between the main chamber and exterior walls. Main chamber to the right of image

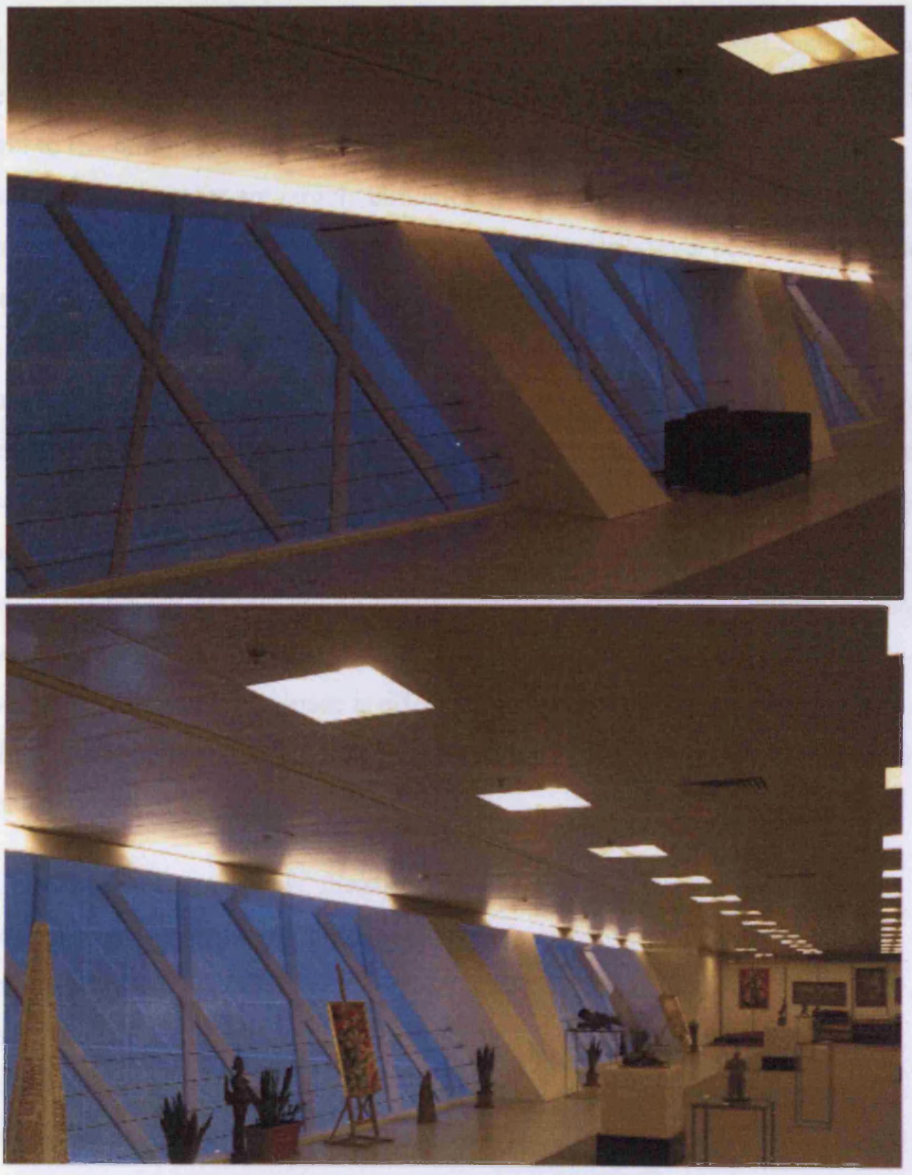

Fig.85
Exhibition space

Fig.86
Exhibition space, with exhibition of contemporary Kazakh art

International Aesthetics

This international aesthetic – this combination of the corporate Foster material palette (steel, glass, stone) with a 'generic, universal symbol, as the president would see it - is central to the buildings function. And it is liberally applied. Materials and construction techniques are largely climatically unresponsive. Formally, it is radically a-contextual: it responds in almost no manner to the micro-level context of the Steppe and addresses the city principally through its position on a line of axial symmetry with the Presidential Palace. Internally, the climatically controlled environment is maintained at a constant temperature: external, dramatic swings in the weather are not noticed inside the building to any extent. And on the upper levels, prior to reaching the sanctuary of the Congress Chamber, a winter garden provides the backdrop to a set of intertwined ramps leading to the oculus *[87+88]*. Supposedly a 'hanging garden', this houses generic indoor plants against a plastic-leaf backing of the kind found in shopping malls. Bleached pale blue-white by the light falling from the stained glass windows, this space is effectively empty of symbolic content, readying itself for an international event that occurs triennially: an event manufactured at the behest of the President.

Clad in white fireproof panels, the structure – where it is expressed in a tectonic announcement of the framing of the building – is receptive to the application of international identities *[89 +90]*. Glass sits next to white painted steel and stands on marble flooring. External, visible details are seamless meetings of textureless materials. But open a door to a fire escape, or enter into a service void and the superficiality of this perfection becomes clear. The details that permit a smooth, homogenous aesthetic surface belie the pragmatics of construction in a country with a workforce unskilled in the production of technically challenging architecture. Roughly rendered masonry block walls are indicative of on-site, wet trades carried out rapidly with a view to the surface appearance of the finished object. Mechanical services are not dimensionally coordinated and modularized in the fashion of Stansted or Chep Lak Kok. Service areas and back-stage provisions for the auditorium are poorly finished with cheap materials and equipment. The technically advanced and structurally challenging elements of the building are used to maximum effect in places where this is most evident.

Fig.87
Winter Garden and ramps leading to the Congress Chamber

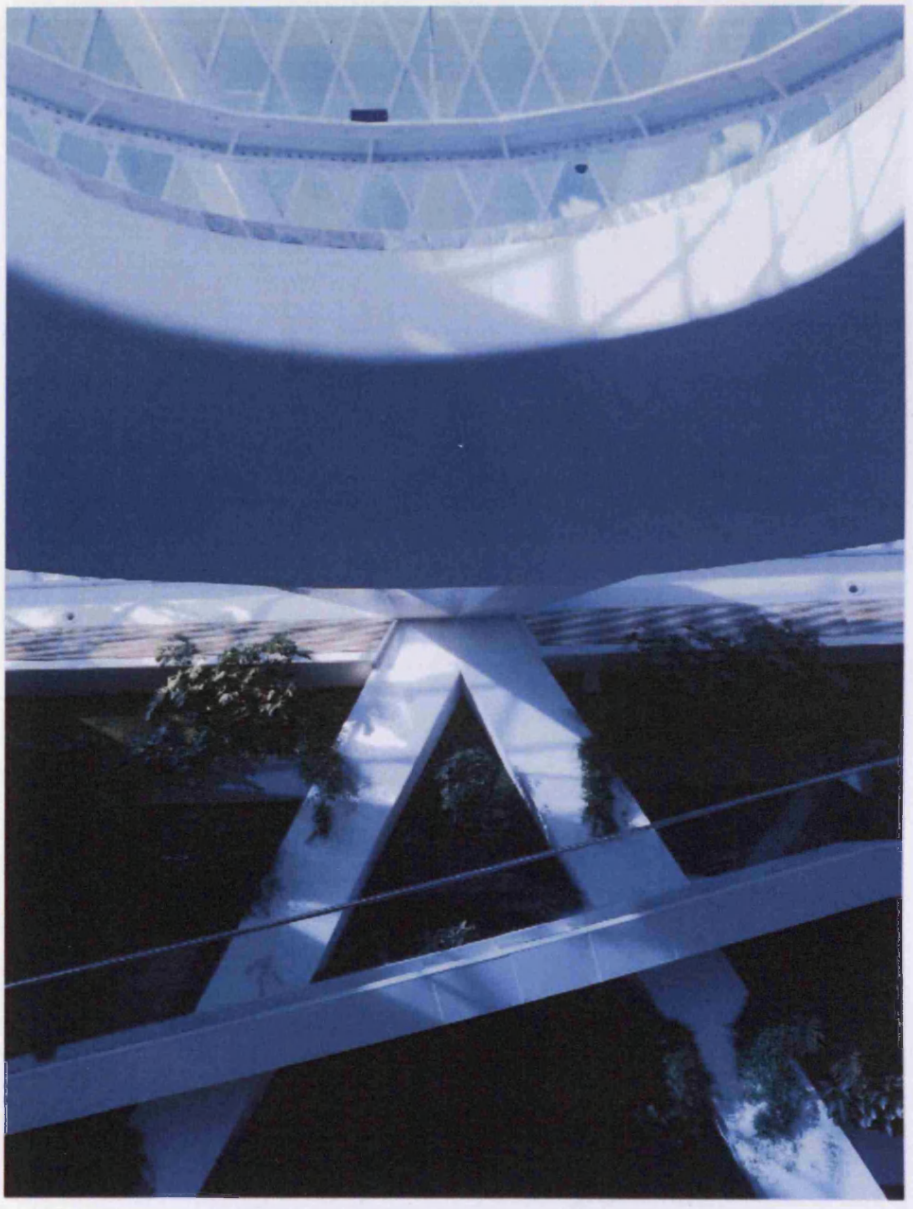

Fig.88
Winter Garden and structure supporting the 'hands of peace'

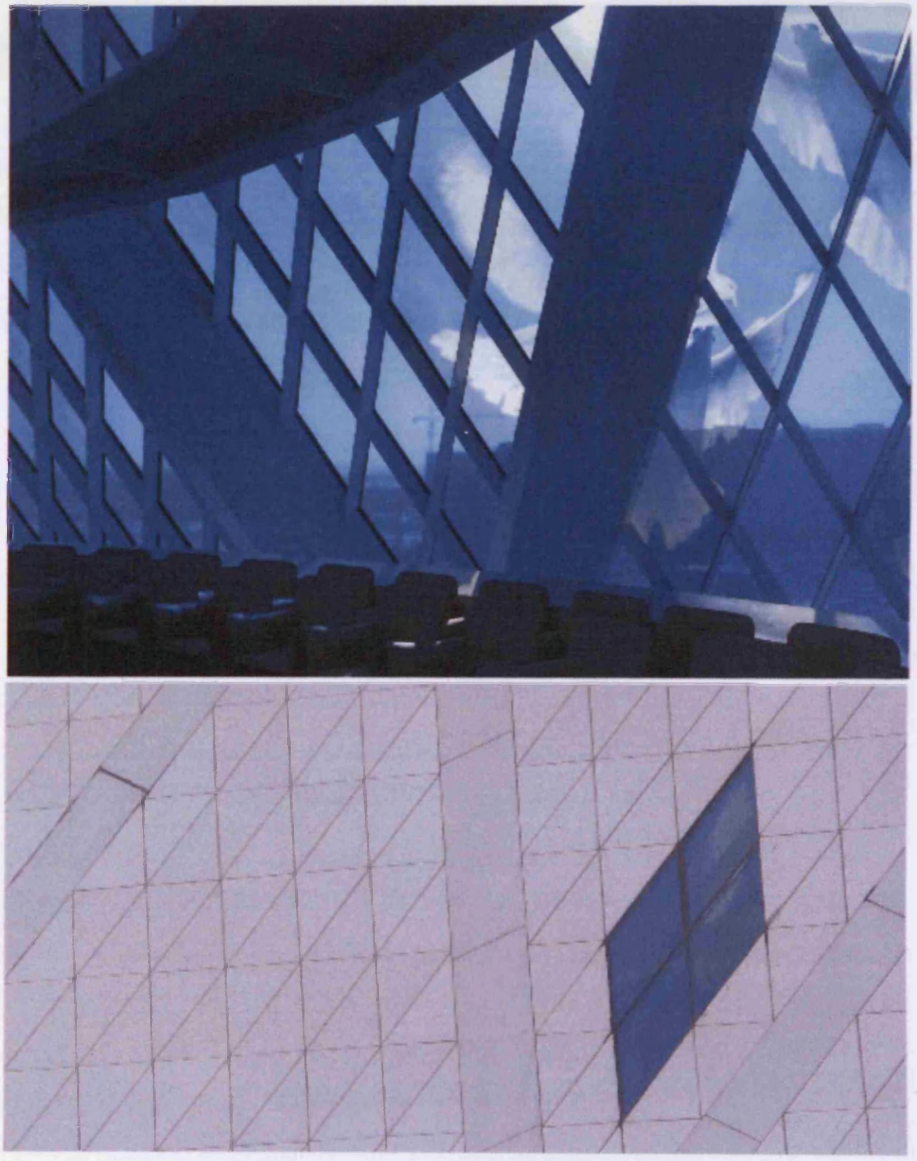

Fig.89
'Doves of Peace' in Congress Chamber

Fig.90
External cladding and window to main chanber

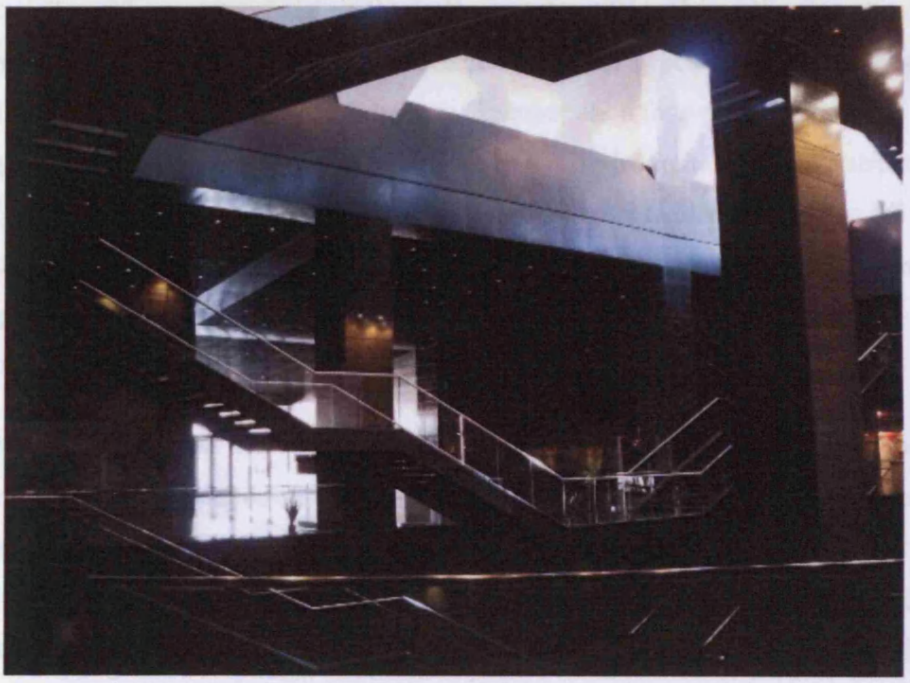

Fig.91
Stairs leading from entrance (main doors can be seen in rear of photo) to main chamber

From the entrance, the stairs leading from the under croft to the atrium hall level are structurally self-supporting, and aesthetically seamless *[91]*. They hang from the floor above and have been engineered to be as structurally thin as possible. At the apex, the 'hands of peace' that hold the Congress Chamber are a four-point support, designed to unobtrusively allow the round-table to hang from the pyramid's structure. *[77]* Through a connecting ring-beam, they allow the table to also function as the oculus: the conceptual pinnacle of the project. In these two examples, technical and design effort has been applied where it will be most operative, its functional symbolism most evident.

Likewise with material. The most tactile and rich material detail is reserved for the areas that will be most accessed. The subterranean foyer has a dark-wood veneered panelling surrounding the drum of the auditorium. Richly dark polished granite is applied to the supporting columns and a dark marble floor expensively laid. But step into the office and gallery spaces between the exterior and the void and the material choice is evidently much cheaper. And so too is the spatial experience. Located in the dark under croft is a generically corporate, dark-leather chair equipped bar/lounge. A business-class airport lounge aesthetic is reproduced: bought off the shelf from a Foster + Partners style-sheet. These spaces echo the attention to aesthetics and structure that are evident on the exterior. The tessellating, coordinating scaled panels that form the four sides of the Pyramid have a material and formal attention to detail that is immediately readable, and perceived as elegant by some commentators, such as Woodman:

> '[...] the structure is faced in granite — pre-mounted on large concrete panels — save for a run of small, diamond-shaped windows at low level. With so little glazing, the building presents an enigmatic, not to say forbidding, image. Yet, watching the light calibrate the relationship between the stainless steel and grey granite, I had to admit that it had a beauty, however chilly.'[316]

There is a universal, rigid and organized quality to these facades. And as a pyramid, isolated in a landscaped park, the surface quality of these facades is multiplied, repeated four times; nearly identically save for a slight change of window position. Difference in aspect is eradicated through the dominant form of the Pyramid. From whichever aspect it is photographed, the iconographic potential of the building

316 Foster + Partners *Catalogue: Foster + Partners (2005),* p.40

remains the same. In this form, there is no front, no back, no sides. All is front. All is façade and all sides work to their maximum visual impact. They all operate to communicate symbolically. Through this form, the symbolic content of transparent meaning is sure to remain: a Pyramid on a mound cannot be built up against; its form necessitates its independence, enforces and maintains its visual significance in the city *[92]*.

Fig.92
Pyramid on mound: each side repeats the other

Visualising the Pyramid

The centrality of the visual impression of the project is played out in the published material from Foster + Partners *[78].* The key drawing of the project, widely published, and in Foster + Partners 2007 catalogue,[317] shows an inhabited perspective section. Set in a generically international looking city of medium-rise blocks with a darkening sky, the interior of the building appears to be focusing light down into the auditorium, through the central atrium void. The cut-plane passes centrally through this void, and there appears to be a glowing, almost gaseous cloud of light floating in space. The apex glows and extends a luminescence outwards, into the early-dusk sky.

What is most evident in this depiction of the project is its inherent dualities: the contrasts between brightness and darkness; belowground and aboveground; interior and exterior. And the central position of empty-light to the conceptual stance of the programme. The glowing voided core takes centre stage in this image: content is evacuated to make way for formal, appropriable emptiness. Any semi-permanent active or functional content of the building is pushed to the periphery of the void and effectively used to define and hold the void in place. The project is structured around this void that continues up and out of the building, taking the vacuity of formal, appropriable emptiness out into the city, through the transparent apex. This drawing is used to communicate at once the technological qualities of this building as well as the openness to appropriation by an international audience. There is noting alienating to transnational capital in the presentation of this project: nothing notably Kazakh, or distinctly 'other' in its qualities, the pyramidal form being supposedly a 'universal' signifier of the spiritual, according to the President.[318] The image actively makes transparent the glowing heart of this project – the atrium – and opens to view the inner workings of the idea (a place for peace, concord, beneficial discourse) to the world's press media. The image is the first and most singularly transparent aspect of the project.

The Pyramid, on an axial alignment with the administrative centre of the capital, extends itself out, through the Mayan cuts, indicated in plan view. *[93]* These entry cuts pull the Pyramid into an extension along the line of axial development and

317 Foster + Partners *Catalogue: Foster + Partners (2005),* p.40
318 Woodman, Building Design Online 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'

physically as well as symbolically link it to the new Astana.[319] Even though it is currently positioned on the edge of the new city, the Pyramid is a crucial part of the identity of Astana, and functions as a marker for the progression of the capital. Its image forms a key part of branding exercises on the city, and is evident throughout Astana, on billboards and digital displays.[320]

319 It is suggested that a presidential tunnel will link the Presidential Palace and the Pyramid, for private access. Indicated on plan is an axial bridge, linking the Presidential park to the park surrounding the Pyramid. Woodman, Building Design Online 'Palace of Peace & Accord, Kazakhstan by Foster + Partners'

320 Observed during the research visit to Astana. Displayed outside a shopping mall and within the city centre.

Fig.93
Map of the landscaped Presidential Gardens surrounding the Pyramid

Fig.94
Presidential Palace, on axis with the Pyramid and main administrative 'Mall'

Within the context of the city, the Pyramid is unique for its formal homogeneity. The dominant form of building in Astana is a Kazakh form of post-modernism: minarets mingle with reflective gold mirror-glass and western architectural motifs. The Presidential Palace, sitting in front of the Pyramid, attempts this fusion of Kazakh and Western *[94+95]*. The base, an exaggerated copy of Washington's White House, is topped with a Capitol like blue-tiled dome and golden spire. The Presidential Palace offers an attempt at a statesman-like presentation of Kazakh democracy: its form, however, conveys more resonance with a Russian and Central Asian audience than a Western one. The commissioning of the Pyramid is an overtly Western piece of architectural procurement: its form supposedly redolent of a non-denominational religious structure. Its construction is lodged within a Western architectural epistemology, rooted in a form of a sub-Miesian logic, superficially rational planning and technically driven design that constitute one of the models of transparent architecture defined above. Rationality, singularity of focus, clarity and homogeneity are central to this project, and the Lefebvrian notion of transparency as rationality and order are played out here. However, the idea of a traditional, semi-tribal Kazakh identity that Nazarbayev uses as a regulatory device is still integrated into the design, albeit in a reduced, abstracted and symbolically safe way, through the icons of the Golden Man, the sun-burst and the incorporation of the museum and art gallery.

In their axial relationship, the Pyramid and Presidential Palace contain formal similarities. Both taper to a pinnacle, are raised on domed mounds; both are finished with explicit and implicit cultural references that echo each other. The materially unified base of both buildings (both grey) is topped by a materially and formally symbolic moment. In the case of the Presidential Palace, a blue Islamic like dome: echoed in the Pyramid with the blue-tinted stained glass of the congress chamber, inscribed at closer inspection with gaudy representations of doves. On closer inspection still, uncharacteristically ornamented for Fosters, the very top of the Pyramid is finished by a golden sunburst - a Kazakh motif and part of the iconography of the Kazakh flag.[321] Finishing the Presidential Palace is a golden spire, topped with a golden Steppe eagle, carrying a golden orb. *[96+97]*

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321 World Flags 101.com *Country: Republic of Kazakhstan*
<http://www.worldflags101.com/k/kazakhstan-flag.aspx> [accessed 5 May 2008]
'The flag of Kazakhstan consists of a light blue base. There is a golden sun with 32 rays in the center of the flag, and below the sun there is an eagle. There is also a golden webbed pattern running vertically down the left side of the flag.'

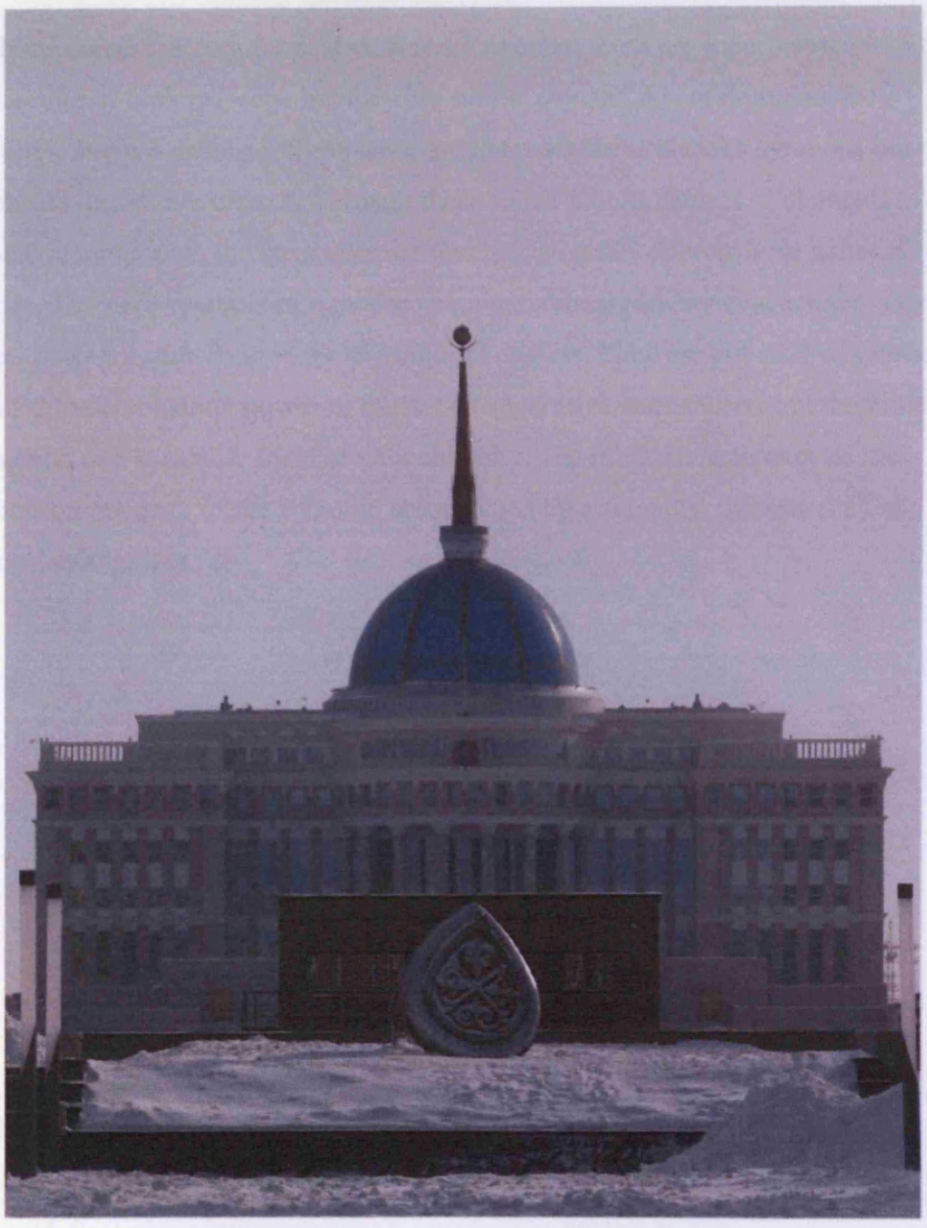

Fig.95
Presidential Palace

'Kazakhstan Flag Meaning:
The pattern on the flag represents the artistic and cultural traditions of the old Khanate and Kazakh people. The light blue symbolizes the various Turkic peoples who make up today's population of the country - including the Tatars, Mongols, Uyghurs and others. The blue has a religious significance, representing the Sky God to many of these people. A modern interpretation states the blue background stands for Kazakhstan's broad skies, and for freedom. The steppe eagle and the sun represent freedom and the flight toward greater heights and fulfillment of aspiration.'

Symbolic content is communicated; Kazakh national icons are incorporated into the architecture of both projects, but they are subtle, coy and do not dominate the structures. From a distance, these icons are not readable as Kazakh symbols, but more as delicate decorative effects. Through these subtle incorporations of elements of national iconography, the structures are tied into an easily appropriable national identity. They are symbols of a modern nation: national identity evacuated of any radical potential, thin references to a cultural context. They are not a set of symbols intended to demonstrate power or muster an aggressive nationalism, but the visual production of a symbolic form of national unity. The literal transparency of the symbols on the apex of the Pyramid are matched by a symbolic transparency of appropriable images.

Fig.96
Detail topping the Presidential Palace: The Kazakh Steppe Eagle and Sun

Fig.97
Apex of Pyramid: Sun Burst emerging from the 'Doves of Peace'

Fig.98
Kazakh Flag

Fig.99
The Pyramid on the Horizon, flanked by new housing complexs

The Transparent Pyramid

Astana's position in the north-central area of Kazakhstan is crucial at all levels to the establishment of identity: national; regional and personal; economic; political; social. Within Astana, architecture and infrastructure is the critical mode for implementing these changes to identities established under the Soviet system. And architecture is used, following Martin's argument,[322] as a regulating device: specifically, through the medium of material, structure and space, geopolitical goals and ambitions can be partially realized.

The Pyramid sits at the confluence of these goals and ambitions. The architecture of the Pyramid is used to transmit a form of symbolic content: content that is effectively transparent to itself, empty, as Baudrillard would suggest;[323] the minimal identity needed to establish an image of stability, economic potential, modernity and accessibility. Through the emptying of specific meaning within the form, structure and material, the Pyramid acts as a bearer of multiple images: it is effectively a multi-sided, ever shifting billboard for Kazakhstan. Shifting between images of international capital; religious tolerance; peace; stability; openness; safety; security and technological advance.

The media (the steel, concrete, granite, glass, light, void) are the message. The use of these materials, and their overt tectonic expression on the facades, demonstrates a technical capability within Kazakhstan and produce the transparent materiality and transparent image of the building. The commissioning of Foster + Partners is as important as the realization of the project: an international corporation whose appointment demonstrates a progressive late-modernity on behalf of the President. But the core of this project is an emptying of content through the void of the atrium. The Pyramid is structured around this atrium, programmatically connecting base to top and enabling multiple meanings to be projected onto the structure. As Anacker suggests of the planning of the capital:

> ' [...] every foreign visitor should be able to see "his own native city" in the built form of Astana."[324]

322 Martin, *The Organizational Complex*, p.101, 117, 159

323 Baudrillard on the production of the image as centre and source of power, through the idea of all becoming 'real' made open to view: Integral Reality, as he terms it. Baudrillard, *The Intelligence of Evil.*

324 Anacker, 'Geographies of Power', p.519

Kazakh identity exists, but it is made transparent: conveying 'economic openness'[325] requires a weak identity, one that can be appropriated and made 'global', and by seeing through the architecture and planning of Astana, the international investor is made aware of the generic qualities of the city and the desire for the country to be invested in. The specific architecture of the Pyramid achieves this. Through the void at its core and the reductive representation of Kazakh identity through literally translucent elements a type of internationally recognizable architecture is delivered.

This is a surficial architecture, and one that forces a form of openness and focuses on the surface presentation of both identities and materiality with the density of depth emptied.[326] It is architecture that is production of the image of itself. The architecture becomes, as Baudrillard suggests, transparent:

> '[...] the murder of the image. [...] lies in this enforced visibility as source of power and control, beyond even the 'panoptical': it is no longer a question of making things visible to an external eye, but of making them transparent to themselves. The power of control is, as it were internalized, and human beings are no longer victims of images, but rather transform themselves into images.'[327]

The clear lucidity of the surface becomes central to the production of images of Kazakhstan that mark a dramatic break with Soviet epistemologies and ideologies. Within the city, the use of architecture is intended to allow an 'opening' of a previously closed society. Transparency becomes here that which Lefebvre discusses: the decryption of the hidden and secretive – the transparent becoming aligned with the transformation of the state of Kazakhstan. Through its architecture, the Pyramid permits this opening: a generic 'enlightenment' project takes place. As Lefebvre would suggest, a decrypting through transparency takes place, and the progression from dark to light spaces is intended to highlight this opening of a previously closed and secretive society.[328] An appeal to a supposed 'universal truth' of religions and humanity (the relationship between light and knowledge) is appealed to. Principally, the Pyramid is structured around this universal singularity: light falls into the

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325 Ibid.
326 Baudrillard, *Simulacra and Simulation*, p.6, on the four stages of the image.
327 Baudrillard, *The Intelligence of Evil*, p.94
328 Lefebvre, *The Production of Space*, p.27

undercroft of the building, from the Congress Chamber (place of ultimate, final enlightenment in the programme).

The void of the central atrium permits this – and structures the majority of the space in the scheme. Its emptiness is its conceptual heart and produces a transparency of content, and establishes the medium (the Modernity of steel, glass etc) as the content of the architecture. In the context of the Pyramid, light is used as form of organization. Programmatically, it is used to arrange a hierarchy of spaces; conceptually, it establishes a superficiality of content that is appropriable in the context of the Congress of World and Traditional Religions. Light connects the ordering of the spaces of the building to the programme of the Congress – the relationship between the hierarchy of the Pyramid form and the activities of the Congress are calibrated by light, and as McLuhan suggests, it is a medium with no message. Dark at the base, light at the top, and through this hierarchy, transparency is placed at the apex, the pinnacle of the Pyramid; replete with symbolic images of doves, this transparent position is the aim of the Pyramid. The Pyramid becomes a transparent object. Culturally specific content is voided: the production of culturally generic transmutable images becomes the goal of the building. The international aesthetic, imbued with neutered symbols of a 'safe', 'stable' and homogenous Kazakh culture, appeals to the demands of 'trans-national capital': the companies, corporations and governments that Nazarbayev's regime courts. *[120]*

As well as acting internationally, the Pyramid has national significance in the promotion of a stable state:

> '[...] the focus is [...] on *internal* [sic] legitimacy. The capital move represented a unique way of changing the demography of the north and re-territorializing the Kazakh nation without inspiring much immediate resistance from either inside or outside the country.'[329]

As part of the capital move, the construction of the Pyramid played an important role in demonstrating the cultural, social and religious tolerance of the Nazarbayev regime. Through demonstrating an openness to all forms of religious expression, within an avowedly Kazakh context, Nazarbayev is able to absorb potential external influences into his concept of the Kazakh nation. The Pyramid, through its programmatic tie to the Congress, demonstrates an image of this commitment to religious and cultural

329 Anacker, p.531

tolerance. Its iconic centrality to the establishment of the new Astana lodges this attitude firmly in the national consciousness: the image of Astana is tied to this 'high-profile' building, and hence tied to the programme of the Congress.

Irrespective of actual governmental policy, the transparent impression within Kazakhstan, and communicated to potentially dissident groups, is the acceptance of difference. By absorbing all differences into the national identity, possible radical resistance is thwarted: what is there to radically respond against when the object of your reaction *is* your culture? Through the non-specific form of the building, the subtle integration of a weak national identity and universalizing tendency of the pronouncements of the Congress, a 're-territorializing' of parts of Kazakhstan is assisted. Entropic tendencies in recently defined states can be partially regulated through the voided content of the Pyramid. Competing groups are allowed (through the very establishment of the programme of the building) to appropriate it for their religious and cultural identity. Its generic formal, material and spatial qualities, its transparent identity, allow this to take place.

Through the development of an image of transparency, a brand-identity for the country, irredentist drives can be mitigated, national unity preserved and regional stability improved. Transparency is used to produce a simulation of the conditions of democratic openness and religious tolerance, as well as being used as a means by which space is organized and ordered through an active decrypting (the exposure of the darkness of the base to the transcendental light of the glazed apex). Through establishing an architecture that contains a message of faith in technology, the condition of modernity and progress is attached to the national image of Kazakhstan for the purposes of organizing both the domestic sphere as well as presenting that image of order to an international audience who are engaged in the productive exploitation of the oil and mineral wealth of the country. The architecture plays a central role in both fostering the idea of a progressive central Asian nation and of a progressive president, open to the west and engaged in a supposedly democratic transformation of this previously Soviet republic.

Much as Barnstone suggests, the Eiffel tower presented an image of a modern French republic to the world, and as Fierro suggests the Reichstag is central to the production of a 'new' Germany, the Pyramid, as procured by Nazarbayev, is critical to Kazakhstan's image of itself and has been the first of many Foster projects in the

country from Astana to Almaty.[330] But, as Anacker suggests of the president's approach to 'managed' democracy, the worries of international election monitors and alterations to the country's constitution that enables the president to remain in power indefinitely, this marker of a newly modern Kazakhstan presents an image of conditions that exist largely in a simulated form: a Baudrillardian simulacra of the conditions of clarity and openness that are used to open the country to international, corporatist investment. Transparency here, therefore, is that thing of Lefebvrian illusion. It presents through the material of the building – through the organizational regulation by the programme for the Congress of World Religions, as Martin's discourse analyses, an image of Kazakhstan whereby the 'traps or secret places'[331] of Kazakhstan's many natures are rendered safe, made visible and hence decrypted through the McLunian medium of the Pyramid.

330 Khan Shatyr Entertainment Centre, Astana (2006-2010), Central Markets, Astana (2007) <http://www.fosterandpartners.com/Projects/ByLocation/Kazakhstan.aspx> [accessed: 19 April 2010] proposed Foster Towers, Almaty (2008) <http://www.skyscrapernews.com/news.php?ref=1404> [accessed: 19 April 2010]

331 Lefebvre, *The Production of Space,* p.27

4.2 Constructing Confidence: HACTL SuperTerminal 1

[100]

Architecture has always been significant to the development of the identity of Hong Kong, and to the production of an environment of highly organized trade and commerce. The significance of projects by Foster in the archipelago is considerable: his work has acted to situate Hong Kong both architecturally and politically within one of the most influential financial hubs in the world. Foster + Partners' HSBC[332] headquarters is clearly significant to this financial community *[101]*, the HACTL air-cargo SuperTerminal is equally significant – as an example of the integration of systems thinking, technology and transparent ideology in one highly programmed unit. It also provides an example of the idea of emancipatory technology and social provision that Fosters believe produces a human work environment. This section examines how the integration of mechanical, digital and architectural systems produce a transparent condition in the architecture of the HACTL facility, how this facility is of significance to the functioning of the region, and how Fosters' architecture of transparency has been important in producing an image of efficient organization in the region.

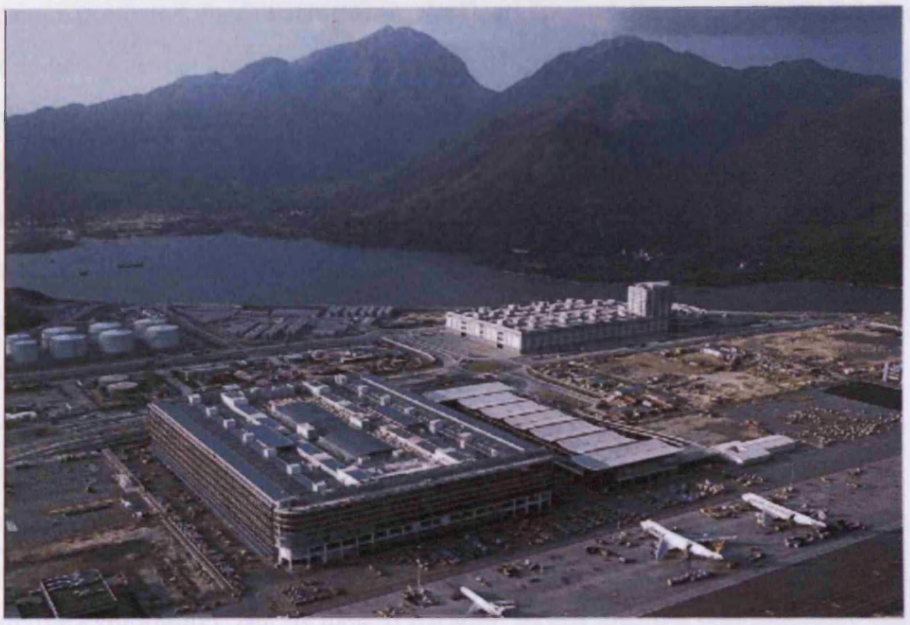
Understanding, following Lefebvre, that space is directly produced, through economic, social and cultural conditions, this case study places the physical material of the HACTL terminal in the recent historical context of Hong Kong. Rather than production of a Lefebvrian illusion (a dissimulation, as transparency is discussed in the previous case study), transparency here is discussed as generative of systems of technocratic organization intended to produce structures supportive of global trade and commerce. Whilst not a dissimulation, Lefebvre's contention, supported by Martin's analysis, of the productive power of material, and hence transparency, to induce systemic and social change, is explored through HACTL – processes of power, control, and organization are enacted, it will be argued here, through a rational, technocratic and literal form of transparency. It is necessary, therefore, using Lefebvre's understanding of transparent spatial practice, and Harvey's notion of a

332 Wong, Shirley 'Colonialism, Power, and the Hongkong and Shanghai Bank' in *The Unknown City: Contesting Architecture and Social Space* ed.by Iain Borden, Joe Kerr and Jane Rendell (Cambridge, MA: MIT Press, 2001), pp.160-199

historico-geographical materialism, to outline the situation of which HACTL forms an active part.

The historico-geographical context in which the HACTL facility is built, of pre-handover Hong Kong, is important to questioning the significance of this project both in terms of the position Hong Kong holds as a hub for international trade and in the establishment of an identity for the region of economic, political and technological stability during the change to a Communist administration. In order to understand the significance of Hong Kong as a hub for global trade, and its position in an interconnected world, Manuel Castells' discussion in *The Network Society*[333] will help to illustrate how transparency is critical to the successful operation, both literally and metaphorically, of this cargo handling facility. The practice's application of transparent ideals to the creation of a technically advanced processing plant are also discussed. The position of transparency as a force for organization at the local scale of the terminal facility and at the wider scale of the interconnected networks of global trade are considered.

333 Castells, Manuel *The Rise of the Network Society: Volume 1*, (Malden, MA: Blackwell, 1996)



一千港元新鈔背面圖
HK$1,000 – back

Fig.100
HACTL, Air Cargo Terminal, Chek Lap Kok, Hong Kong, Ariel view, from Foster and Partners publicity matieral

Fig.101
Hong Kong dollar. Note the HSBC Headquaters building printed on the face of the note

Background

Britain took possession of Hong Kong Island in January 1841. A naval expeditionary party landed on the island's northern shore and claimed the territory for the British Empire. Fundamentally, Hong Kong was taken as a strategic staging outpost to

consolidate British trade and relations with the Chinese mainland. [334] Its geographic position, a protected deep-water port in the Pearl River delta, promotes the territory as a strong geo-political holding. To the British, Hong Kong represented a base for establishing power-relations with China, driven by disputes over opium trading in the region. Taken during the opium wars of the 1840s, the territory of Hong Kong became established as an outpost of the British conception of free trade. The island was not taken to extend Empire purposely for colonization: it was intended to consolidate trade practices and secure military, diplomatic and commercial objectives.[335] Even at this early stage in Hong Kong's economic development, it existed as a site where flows of goods and people were processed and organized. Diplomatically, it was used to open China to the continued influx of opium from British traders. The territory itself was not productive, being a difficult, rocky outcrop frequently battered by typhoons; the geography of the island was not conducive to productive exploitation. But its natural harbour, global position and relatively sparse population were extremely valuable in Britain's wider ambitions of establishing colonial power.

Throughout its century-and-a--half of economic development, Hong Kong has mediated between Western colonial systems and Chinese power. It is often claimed that Hong Kong is China's window onto the world; that Hong Kong offers a point of interaction between China and the West that does not threaten the spread of capitalist contagion to the mainland. As such, Hong Kong has been the trade gateway to and from China. As John M. Carroll suggests in his history of the archipelago:

> 'Hong Kong has been China's most critical link to the rest of the world since the Silk Road and the Mongols. Until recent decades, about 90 percent of all Chinese emigrants went through Hong Kong. From the 1960s until the 1980s, Hong Kong exported goods throughout the world. [...] The Chinese who returned to China from North America or Southeast Asia almost always came through Hong Kong. Money from overseas Chinese was remitted through Hong Kong. After the Communist revolution of 1949, capitalist Hong Kong played an important and ironic role in building China's Socialist economy [...] as a centre for remittances from overseas Chinese [...] and as a base for importing goods that China could not produce. Hong Kong investors were also partly

334 Carroll, John. M *A Concise History of Hong Kong* (Plymouth: Rowman & Littlefield, 2007), p.12
335 Carroll *A Concise History of Hong Kong,* p.12

> responsible for China's dramatic economic transformation in the late 1970's [...].'[336]

Prior to, and after, handover back to China from Britain in 1997, Hong Kong was an island territory of processing. It remains a regional hub: taking in external products, investment, services, distributing resources to surrounding areas. Its history, defined in part by the idiosyncrasies of geography, is located between systems: colonial and dynastic; imperialist and feudal; capitalist and communist.[337] As such, it never stands still. The territory is in a constant state of processing – and from this processing arises its economic success. These historical and contextual developments have contributed to establishing how Hong Kong works in a global system today: a liberalised capitalist economy, within the political sphere of a controlled communist-market system, easing the dialogue between two conflicting yet complimentary ideologies in the recent history of China and acting as a regional node in a network of globalized trade and finance.

Before handover, there were numerous concerns about the conflict between ideologies from both Hong Kong residents and the British political system:[338] a liberal trading enclave in Southeast Asia reabsorbed by a decidedly less liberal political system. These fears were exacerbated by events in Beijing in 1989: the pro-democracy student uprising and subsequent brutal, state-led suppression of dissent, most evidently realised in Tiananmen Square on 4 June.[339] Following this event, shockwaves rippled through ethnic Chinese and expatriate communities in Hong Kong and with handover less than eight years away, a supposedly more 'liberal' China was being condemned by Western governments for repressive political practices. Fears of a managerial and financial exodus mounted. The British government were forced to make policy changes to immigration regulations and to establish confidence in the island's future in other ways.[340]

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336 Carroll *A Concise History of Hong Kong*, p.3
337 ibid.
338 ibid.
339 Carroll *A Concise History of Hong Kong*, p.191
340 Ibid., p.193

Airport Developments

In October 1989 plans to build a new airport on the island of Chek Lap Kok were announced by Hong Kong's governor, David Wilson.[341] These plans were intended to keep Hong Kong competitive in both airfreight and air-passenger numbers. The territory's airport at Kai Tak, Kowloon, was severely restricted by its location. The growth in air-traffic could not be supported by the current facilities and a new airport was necessary. But similar to HSBC's investment in a new headquarters, this move had political motivations:

> '[...] many observers saw the project as an attempt to restore public confidence in Hong Kong's future, especially since [David] Wilson announced the project the same month that he initiated the process for drafting the Bill of Rights [enshrining political, cultural, economic, social and civil rights common to British citizens].'[342]

The future economic prosperity of Hong Kong rests squarely on the shoulders of infrastructure provision. By initiating this investment (half of which would be met by Hong Kong, and half by the Peoples Republic of China), a bold statement was made by the territory, and Britain, to the viability of a Chinese-led Hong Kong. As well as providing an image of confidence, the resulting infrastructure would operate to improve the capacity of productive flows throughout both Hong Kong and the region. This statement of confidence, through investment in distribution infrastructure, highlights the centrality of flows of both capital and trade to Hong Kong's existence. A contextual importance, from which the new airports cargo processing facility, HACTL, stems.

Immediately prior to handover, Hong Kong International Airport moved operations to Chek Lap Kok island: with it, airfreight handling moved from HACTL Terminals 1 and 2 at Kai Tak, to the newly built SuperTerminal 1. Hong Kong Air Cargo Terminals Limited had commissioned Foster and Associates to develop, in collaboration with systems engineers, a processing and handling terminal for airfreight:

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341 Ibid., p.193
342 Carroll, p.194

> 'The world's busiest airport for international cargo is home to the world's largest air cargo terminal - SuperTerminal 1. Costing US$1 billion to build, SuperTerminal 1 has the potential capacity to handle 3.5 million tonnes of air cargo each year, with built-in flexibility to handle more.'[343]

Supported by the infrastructure of the airport, the SuperTerminal is a highly automated processing and temporary storage facility. The majority of air freighted goods sent from and to Hong Kong pass through the SuperTerminal. In terms of the infrastructure supporting trade within Hong Kong, the SuperTerminal's function is of critical significance. Its scale of operation, efficiency and security are as central to the functioning of capital flows within Hong Kong as the presence and identity of the HSBC Bank.

The physical structures of both of these organizations are critical to their successful function. Manifested in the HSBC building are a corporate identity, a brand, but also a set of organizational principles. Within the SuperTerminal, identity is secondary to a physical process of systematic organization but there is also, it will be argued below, a branded capacity to the facility. The close integration of electronic, mechanical and human networks within HACTL is echoed within the HSBC building by a close integration between capital, electronic and human systems. And both are central to the trade role that Hong Kong plays globally. Both projects require a close integration between systems and organization: a logical, rational programme and structure.

Economic Storms

The significance of the HACTL facility is illustrated by its role in the economic turmoil of East Asia in the late 1990s. Around the time of HACTL's completion, an economic storm was brewing. The collapse of the Thai baht in July 1997 marked the beginning of the East Asia Crisis: a spiralling problem of cash flowing out of countries in the region. Speculation in the money markets on Malaysian, Korean and Philippine currencies led to their rapid devaluation. Speculative currency dealing led to, and exacerbated, a condition where major financial systems were fundamentally

343 hactl.com *SuperTerminal 1* <http://www.hactl.com/en/SuperTerminal/default.htm> [accessed: 10 May 2008]

threatened.[344] The crisis followed a period of rapid and strong economic growth in the East Asian Region, led by direct Governmental involvement in economic policies. As Joseph Stiglitz[345] suggests this was growth as a measured, controlled system: not free-running liberalized capital. Whilst not one of the currencies devalued, the impact of this event on Hong Kong – occurring shortly before Chinese handover – was nonetheless considerable. A speculative attack mounted on the Hong Kong dollar in October 1997 triggered automatic regulatory mechanisms, forcing interest rates between banks up so substantially that speculative trading was prevented. [346] In August 1998, a second speculative attack was launched on the Hong Kong currency. It involved considerable short term selling of the HK dollar (HKD). Through Hong Kong Treasury purchases of the HKD, the relationship of the HKD to the United States dollar was maintained – but at the cost of investor confidence in the Hong Kong stock-market, which collapsed to a five-year low and had to be bailed out by the Hong Kong Monetary Authority to the cost of HK$118 billion (US$15.2 billion).[347] Both of these attacks combined, which were direct results of the East Asian Financial Crisis, contributed to a dramatic increase in interest-rates, and a jump in the cost of mortgages, along with a concurrent drop in property-values.

The interconnected nature of markets and liberalized trading has been partially blamed for the East Asian Crisis. The increase in digital technology and the rapid interconnection between markets creates a system of both inward and outward capital flows, according to a report to the US Congress on the crisis:

> 'With respect to the scale of financial crises, it is clear that recent liberalization of capital markets and advances in telecommunications have increased the scale of financial crises.'[348]

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344 Stiglitz, Joseph *Globalization and its discontents*, (London: Penguin, 2002) pp.89-132, 89

345 Joseph Stiglitz, member of The Council of Economic Advisors, under the Clinton administration, USA 1993-95 and Chief Economist and Senior Vice-President of the World Bank from 1997-2000. Nobel Prize winner for economics, 2001. Presently, University Professor at Columbia University in New York and Chair of Columbia University's Committee on Global Thought. From Columbia University website <http://www2.gsb.columbia.edu/faculty/jstiglitz/bio.cfm> [accessed: 19 April 2010]

346 University of California, Institute on Global Conflict and Cooperation, *Effects of the Asian crisis on Hong Kong*, <igcc.ucsd.edu/pdf/afc/afc_hongkong.pdf> [accessed: 15 May 2008]

347 Ibid.

348 Nanto, Dick N. *Congressional Research Service Report for Congress: The 1997-98 Asian Financial Crisis*, <http://www.fas.org/man/crs/crs-asia2.htm> [accessed: 15 May 2008]

The crisis was contingent upon International Monetary Fund (IMF) policies of forced market openness to outside investors. Previously, within the East Asian countries affected, their financial and market systems, as well as industrial production and energy sectors, were state-owned. This had led to what was termed the 'Tiger Economies' of East Asia: managed economies, prudent saving and a large involvement of the state sector in fiscal policy.[349] In the late 1990s, the IMF and the World Trade Organization placed pressure on the 'Asian Tigers' to liberalise their money markets: effectively open-up the financial sectors to international investment. This pressure to liberalise came from the west. Naomi Klein writes:

> 'In 1997, when the flood of hot money suddenly reversed current in Asia, it was a direct result of this kin of speculative investment, which was legalized only because of Western pressure. Wall Street, of course, didn't see it that way. Top investment analysts instantly recognized the crisis as the chance to level the remaining barriers protecting Asia's markets once and for all.'[350]

Klein, writing in *The Shock Doctrine*, suggests that the liberalizing policies were intentionally implemented in order to forcibly open these domestic markets, and place them firmly within a globalized trading system. Liberalizing is equated with opening up and a forced market transparency and it appears in this situation that economic transparency was both cause and supposed cure of the crisis. Klein suggests a movement towards a total financial liberalization: the restructuring of any form of state or social ownership, towards the rule of the free-market.[351] This free-market capitalism was new to the region. The unhindered flow of finance, relatively unregulated, is critical to the function of liberalised capital systems and as Hak Pyo suggests in *Private Capital Flows in the Age of Globalization:*

> 'Hong Kong [has] maintained much more open trade regimes and liberal financial systems, so that the impact of the contagion [of short selling] could be contained to some extent.'[352]

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349 Klein, Naomi *The Shock Doctrine* (London: Penguin, 2007) p.267
350 Ibid.
351 Ibid., p.268
352 Pyo, Hak. K, 'Excess competition, moral hazard and industrial trauma in Korea, 1997-8' in *Private Capital Flows in the Age of Globalization*, ed.by Dadush, Uri et al. (Cheltenham: Edward Elgar, 2000) p.13

Hong Kong was in a very different position to the 'Asian Tigers'. It had the third largest currency reserves in the world,[353] keeping the HKD 'pegged' to the US dollar. Its background is much more established as an international trading centre, and had already liberalised some of its financial systems as Pyo describes. It also had a 'dedication to the free-market', and the stabilizing effect of China's massive currency reserves. Nevertheless it impacted on the country's economy, due in part to the interconnected quality of financial markets, but also through structural and systemic weaknesses in the Hong Kong financial sector. As Joseph Yam, the chief executive of the Hong Kong monetary authority, suggests:

> 'Volatile capital flows and defects in the international financial architecture have been an important component of the crisis, but it is clear enough from the summary I have given that many of the problems are closer to home and institutional in nature: lending excesses, poor risk management, political interference, weak supervision, lack of transparency, and so on. Solutions to these problems are within our grasp, in the sense that they are not so dependent on international consensus: they are also essential if the international reforms necessary to ensure global stability are to be effective.'[354]

Transparency is here equated with openness, regulation and the ability to maintain an effective and efficient system. The interconnected quality of the markets demands a system that is internationally operable: a system that is open to investors across the globe. Within the East Asian region, Hong Kong sits as a central hub, a location of both physical (cargo) distribution, and financial processing. As a location whose current financial success is born out of globalized trade, Hong Kong's systems necessarily need to be open to investors. But this transparency, conversely, has also been partially blamed for the impact of currency speculation on the HKD. Yam comments:

> 'The problem [the speculative attack on the HKD] arose in the nature of Hong Kong's currency board system, which, by its

353 Nanto, Dick N, *Congressional Research Service Report for Congress: The 1997-98 Asian Financial Crisis,* <http://www.fas.org/man/crs/crs-asia2.htm> [accessed: 15 May 2008] p.2. Third largest, to Japan and mainland China.

354 Yam, Joseph, JP, Chief Executive, Hong Kong Monetary Authority, Hong Kong and Asia: From Crisis to Opportunity <http://www.info.gov.hk/hkma/eng/speeches/speechs/joseph/speech_160699b.htm> [accessed: 15 May 2008]

> very transparency and predictability, was susceptible to speculative attack once the crisis had erupted.'[355]

Hong Kong was susceptible to the economic downturn in the region for the very reasons of its success. Edward Chen of the Tokyo Club Foundation for Global Studies suggests that:

> '[...] Hong Kong is a small, open and extremely outward looking economy has rendered it particularly vulnerable to adverse external economic and financial shocks, despite strong underlying economic fundamentals.'[356]

Its open markets, its position as a 'regional logistics hub',[357] and the concurrent interconnections that this 'hub' status demand, make the economy at once buoyant but also susceptible to systemic breakdowns. As a location that processes external factors, it is bound by the conditions that these external factors impose: Hong Kong's economy and status as a 'hub' are responsive. A stable core infrastructure permits this responsive quality. This is established financially by the foreign currency reserves Hong Kong retains. Materially, an infrastructure of technologically advanced processing systems and logistics provision enables Hong Kong to respond to trade changes and external influences. Within this context, an infrastructural provision such as HACTL forms a substantial part of the island territory's physical infrastructure.

Airfreight is central to Hong Kong's economy. Government estimates suggest the industry amounts to eighteen percent of imports and exports value. Valued at 1.7 billion HKD daily, the processing of air-carried cargo is critical to the special administrative region.[358] In mid-July 1998, shortly after services were transferred from the old HACTL at Kai Tak, on Kowloon, a large-scale systems failure occurred in the facility. A breakdown of the computerised COSAC system that handles the management and distribution of incoming cargo effectively halted the flow of air-

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355 Ibid.

356 Chen, Edward K.Y., Ng, Raymond, 'AT10 Researches Meeting: 29-30 January 1999, Tokyo Club Foundation for Global Studies' *Regaining International Competitiveness: Hong Kong after the Asian Financial Crisis*, <www.tcf.or.jp/data/19990129-30_EKY_Chen_-_Raymond_Ng.pdf> p.1 [accessed:15 May 2008]

357 Metcalfe, Tim, 'HK Warned it Faces Logistical Nightmare' *South China Morning Post*, 26 October 2007, supplements, p.10

358 Lim, Peter 'Hong Kong Business Sector Outraged by Extended Air Cargo Ban', *Agence Frane Presse*, 10 July 1998, p.3

cargo around the facility,[359] the airport and, to a large extent, Hong Kong. The SuperTerminal handles eighty percent of the territories airfreight business and as the Hong Kong Legislative Council commented:[360]

> 'HACTL's inability to bring the air-cargo handling service back to any level of normality until the end of August 1998 [...] leads to the logical conclusion that the problems with HACTL's systems were more serious than has been made known.'[361]

For the territory, the systems failure was economically troubling. The movement from the rapid processing potential of the SuperTerminal back to manual handling and the imposition of an import and export ban on the Chek Lap Kok facility had a major impact on the economy. At a time of volatility in the markets, the systems failure at HACTL had considerable knock-on effects. The necessary systemic transparency that was implemented through the computerised handling technology and integrated into the building had failed – the loss of the COSAC system had brought opacity to a system to relied on clarity and transparency of data and systems. As the *Japan Economic Newswire* suggests:

> 'The company's eight-week suspension of services at the new airport could result in a loss of around 4.6 billion Hong Kong dollars (595 million U.S. dollars), equivalent to 0.35% of Hong Kong's gross domestic product, a government spokesperson said.'[362]

The dramatic economic impacts of a single systems failure extend into the regional economy. The distributive nature of the systems at the SuperTerminal and its position as the world's largest grossing airfreight facility tie the fortunes of disconnected businesses into this singular hub. Factoring in the impact on small and medium sized business, the impact of this failure could be counted in the bankruptcy of thousands of small companies, and a total effect on the regional economy to the sum of US$7.7 billion.[363]

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359 Trunick, Perry A., 'Hong Kong leads Asian air cargo' *Transportation & Distribution*, August 1999, 40, 8. P.97

360 H.K. air cargo crisis battering economy: official' *Japan Economic Newswire*, 16 July 1998

361 Hong Kong Legislative Council, quoted in Stewart, Anne, 'Handlers Accept the Blame' *The South China Morning Post*, 28 January 1999

362 'H.K. air cargo crisis battering economy: official' *Japan Economic Newswire*

363 Suggested by estimates from academia and the private sector. Rowe, Richard, 'HACTL: one step

An Operational Machine

The original HACTL Terminal operated out of the International Airport at Kai Tak, Kowloon in 1976. Designed in 1973, Terminal 1's cargo flows grew rapidly, outpacing the modifications and extensions to the original fabric in 1984 and 1988. HACTL Terminal 1 operated largely as a manual cargo handling facility: freight was delivered to specific floors by customer's vehicles, and stacked by manually operated forklift trucks. Initial forecasts were for an annual cargo throughput of 350,000 tonnes. The modifications in the 1980's enabled the facility to process 750,000 tonnes annually; however, the technology of the facility remained basic. [364]

HACTL Terminal 2 established elements that form the basic systems diagram of SuperTerminal 1. High land values and constricted development potential at Kai Tak forced a vertical solution to the storage and processing problem. By extending upwards, installing sophisticated lifting mechanisms and computerising the freight processing and identification systems the facility is capable of processing a larger quantity of cargo in a smaller time frame. Spatially, a core-shell wrapping approach was also established in Terminal 2.[365] This model was developed, refined and substantially computerized at the Chek Lap Kok facility.

> '"We developed the vertical concept at Kai Tak," notes Charter. [Managing director, HACTL] The lack of land led them to realize the efficiency of a vertical system. "If the SuperTerminal had been built in the traditional way [for an air cargo facility] [sic], it would have a footprint about three times the size." [...].' [366]

The efficiency of the system stems in part from the legacy of the initial locational constraint. When Hong Kong International Airport moved to Chek Lap Kok in the latter half of the 1990's, it was possible to use more land. On the flattened mountain that makes the reclaimed land of the new airport, there is space for a second passenger terminal. However, HACTL maintained its stacked processing facility, recognizing the efficiency and effectiveness of a more horizontally constrained building. Through

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closer to full service' *Airports International*, September 1998, p.2

364 *Hong Kong Architecture: The Aesthetics of Density*, ed by. Vittorio Magnago Lampugnani (Munich: Prestel, 1993) p.128

365 Ibid.

366 Trunick, 'Hong Kong leads Asian air cargo' *Transportation & Distribution*, p.97

automation, this constraint becomes a productive possibility. The economics of building vertically, procuring the most technologically advanced mechanical and digital systems and investing in human resources became profitable.

The SuperTerminal is an operational machine. It combines digital and mechanical systems in order to process, store and retrieve cargo. Its operative brief calls for the rapid processing of airfreight cargo that passes into, out of and through Chek Lap Kok airport in Hong Kong:

> 'The Cargo Terminal is a building on a vast scale. Like the Chek Lap Kok airport terminal, its vital statistics are record-breaking: 200 metres wide by 290 metres long, it has two container storage racking systems, each 250 metres long and 45 metres high, and two bulk storage racking systems - the largest fully automated, combined racking system ever built. The container racking lines the perimeter of the building, visible from the runway through fully glazed walls, while the bulk storage racking systems are located in a concrete enclosure at the heart of the building, where cargo can be stored for up to two months.'[367]

This processing system is designed to handle individually shipped items, bulk cargo and mixed-ownership freight. Hazardous materials, time sensitive cargo, restricted freight and high-value items are all capable of being processed in the SuperTerminal. Within the structure of the organization, regional customs legislation and airfreight regulations have to be incorporated: material that passes into and out of Hong Kong is subject to inspection. The building must be capable of organizing these varied status inputs and outputs, and it does so through frequently reprogrammed computer systems and associated handling equipment. In the way that the bank processes capital, the SuperTerminal processes the material basis for a proportion of this capital production. At its functional heart, the SuperTerminal is based around this systemic machine: the Container Storage System (CSS), the Box Storage System (BSS) and the Bulk Cargo Distribution System (BCDS). These three systems are interconnected and managed by a central computerized management system; together they control the flows of cargo that move through the facility, with minimum human involvement:

> 'The Box Storage System is another example of advanced logistics technology. Located at the heart of the terminal

367 Fosterandpartners.com *HACTL SuperTerminal Description* <http://www.fosterandpartners.com/Projects/0734/Default.asp> [accessed: 10 May 10, 2008]

> building, the BSS automates the movement of bulk cargo in the terminal building without the need for human interaction.'[368]

The system is based around the minimization of human interaction with the cargo: the efficiency of the system is predicated on this mechanization – risk, security issues and fallibility are edited out to as large an extent as possible.

After touching down on the runway at Chek Lap Kok, aircraft taxi to interface with the SuperTerminal *[102,104]*. The facility is divided into two principle buildings: the Express Centre and the Cargo Terminal. The smaller unit of the two, the Express Centre *[103]* handles smaller scale courier items, whilst the Cargo Terminal is the main handling centre for bulk and palate cargo passing through HACTL facilities. Following dock allocation, palates and cargo are off-loaded and taken via cargo trolleys to the Container Storage System. [369]

> 'SuperTerminal 1's highly automated cargo handling systems offer unparalleled efficiency and reliability for the thousands of tonnes of cargo that pass through the facility each day. [...] Our multi-floor CSS has direct and covered interface with the airside, allowing units and pallets to be transferred from the tarmac straight into the system.'[370]

368 hactl.com, *SuperTerminal 1: The world's largest air cargo terminal at your service*, <http://203.189.166.163/hactl/en/about/ST1_brochure.pdf> [accessed: 10 May 2008]

369 Process and building description based on notes taken during field research in Hong Kong, March 2008.

370 hactl.com, *Automation*, <http://www.hactl.com/en/SuperTerminal/automated_fac.htm> [accessed: 10 May 2008]

Fig.102
Cargo interface, HACTL Cargo Terminal, Chek Lap Kok

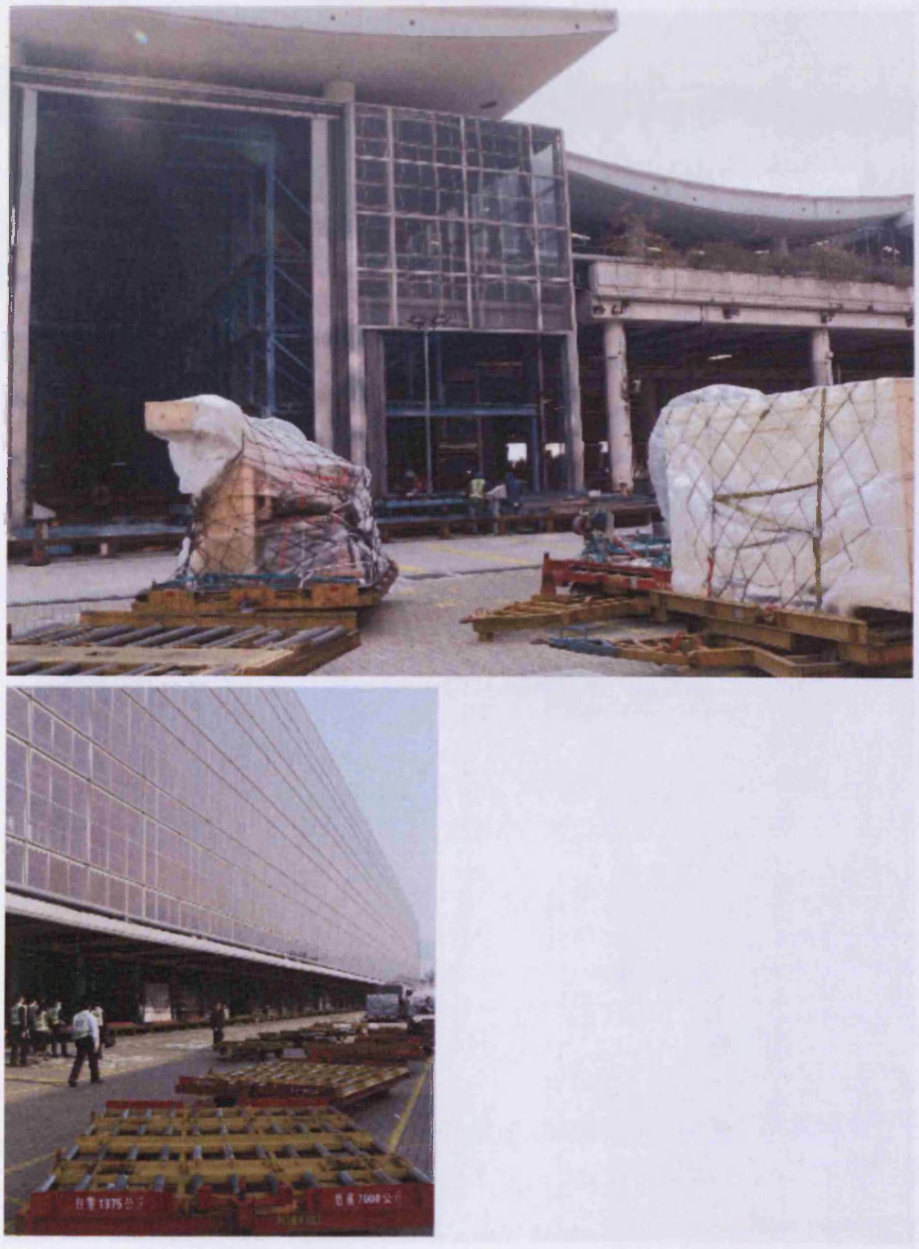

Fig.103
Palette handling into the semi-automated 'breakdown area'

Fig.104
Cargo interface, Airside: palettes are brought into the system from cargo jets

The CSS *[105,106,107]* sits at the perimeter of the Cargo Terminal, providing the interface between aircraft and processing systems. Within the processing system, this five storey cargo-racking system hold palates that are in-transit or being subject to breakdown and storage within the SuperTerminal facility. Cargo is moved on palates around the perimeter of the building *[106]*, with the CSS forming two of the four facades of the facility *[102,108]*. The external perimeter interface is maximized through the location of the mechanized storage system, which is capable of accommodating 3,500 storage positions.[371] The third façade interfaces with what HACTL term the 'Perishable Cargo Handling Centre'[372] and the 'truck docks' *[109]*: semi public areas that interface with external agencies and operators, importers, exporters and shipping companies. This perimeter storage system has a fully automated deposit and retrieval system. Automated handling devices, programmed and controlled via on-board microprocessors, store and sort whole palates. Passed via third-floor gantry bridges to the main terminal buildings, whole palates are processed and either manually broken down into individual lots, or shipped back out for further transportation. The CSS forms a perimeter buffer between the outside environment and the interior of the terminal. Through the total-automation of the storage and retrieval systems, security is maintained through minimizing human contact with imported/exported goods. Whilst the storage system itself is automated, manual handling of freight takes place on the ground floor of the CSS. This space is top-lit through glazed roof-lights, and a tinted-glass façade runs the length of each wing of the CSS, effectively semi-exposing the operations of the mechanized system to view. The perimeter of the SuperTerminal becomes, in effect, a lightweight, porous membrane through which cargo passes at various floor-levels, into the heart of the facility.

371 Ibid.

372 hactl.com, *SuperTerminal 1: The world's largest air cargo terminal at your service*, [accessed: 10 May 2008]

Fig.105
Container Storage System: here, planes interface with the storage and processing systems of HACTL

Fig.106
Cargo interface, manaul handling and processing area for un-broken down palettes

Fig.107
Cargo interface: the Express Cargo Centre is visibe in the back-right of the photograph

Fig.108
Facade of the Container Storage System

Fig.109
Public vehicle and lorry access to cargo collection/deposit interface

This heart is the longer-term storage of the Box Storage System (BSS) *[110,112].* This 'customs-bonded area'[373] contains provision for 10,000 storage 'positions'

373 hactl.com, *SuperTerminal 1: The world's largest air cargo terminal at your service*, [accessed: 10 May 2008]

through two 'parallel' systems of automated deposit and retrieval stacks. This automated system is computer controlled and has the capability of processing 'import, export and transhipment in one location.'[374] Redundant capacity is built into the system to provide a 'fail-safe back-up' in the event of a mechanical systems failure.[375] With human interaction in the mechanism limited to a six-weekly maintenance schedule,[376] this storage system is effectively a secure black box within the centre of the facility. With two-month maximum storage duration, this facility is intended to store smaller, boxed cargo prior to on-shipment or collection by local freight companies and private customers. By being security sealed, this is able to operate as a bonded warehouse. The BSS is directly linked, through another automated handling system, to a Hong Kong Customs examination hall. Fast, efficient processing of bonded freight is essential to the operation of the facility.

Cargo is fed to this part of the facility from the CSS, via the Bulk Cargo Distribution System (BCDS):

> 'Our BCDS is a computer controlled 'sushi-bar' style conveyor loop system allowing your cargo to be moved between floors and over 300 workstations within the Main Terminal Building in a fast, efficient manner.'[377]

By integrating the CSS, the BSS and the manual workstations *[113+114]*, where cargo is broken down into its constituent lots, the building operates as a wholly unified processing system. The BCDS finally interfaces with external carriers at the point of the 'import and export truck docks' *[115]*, where Hong Kong and Mainland Chinese companies connect in to the distribution hub that is the SuperTerminal. Vertical and horizontal movement of freight is integrated and a smooth flow of goods throughout the facility and to the point of distribution is maintained.

These systems operate as an integral part of the building. They are not additions made to the building fabric, or a proprietary system incorporated in a loose-fit building shell. The systems that operate within the facility were designed in collaboration between Foster Associates, HACTL engineers, Siemens Demag, Murata Machinery and Rockwell Automation, Japan. The building fabric and structure are formed by

374 Ibid.
375 hactl.com, *Automation*
376 From field notes and discussion with leading systems engineer at HACTL, March 2008
377 hactl.com, *Automation*

parts of the mechanised systems: as such, the facility becomes an integrated processing facility for cargo handling, designed to fulfil a specific task.

This task is supported through both the advanced automated systems, and the close integration of trained cargo handlers. Whilst the system is designed to keep the level of human interaction with cargo and freight to a minimum, it is still essential to the successful operation of the facility. The majority of human/cargo interaction occurs at the point of the 'computer-controlled general workstations'.[378] There are approximately three hundred of these workstations, where the un-automated process of what HACTL term the 'break-down' and 'build-up' of cargo takes place *[113+114]*. Occurring within the core of the building, on the third and fourth floors, these areas are artificially lit and mechanically ventilated in order to maintain a constant working environment temperature. The regulation of these workers, both in terms of their well-being and their behaviour, is maintained by the facility. As Fosters suggest, the social-aspect of the SuperTerminal is a fundamental part of its operation:

> 'While the building sets new standards in terms of capacity and performance, it also breaks new ground socially, providing an unprecedented level of amenities for staff members and their families. In that sense, it continues a drive on the part of the practice to incorporate amenities in the workplace that began with the Willis Faber & Dumas building in the 1970s. In addition to a restaurant capable of serving 600 people at one sitting, HACTL employees have access to a swimming pool, a sports centre with squash, badminton and tennis courts, and they can relax on the largest roof garden in the world. Taken together, these amenities give the building an extraordinary social focus.'[379] *[116]*

The facility operates twenty-fours hours a day, year-round. Processing does not stop, even for Chinese New Year. Systems and human regulation are therefore essential to the continuing functioning of the SuperTerminal. Both the machines and the operators need to be able to function at maximum performance, regardless of external influences.

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378 Ibid.

379 fosterandpartners.com *HACTL SuperTerminal* <http://www.fosterandpartners.com/Projects/0734/Default.aspx> [accessed: 11 May 2008]

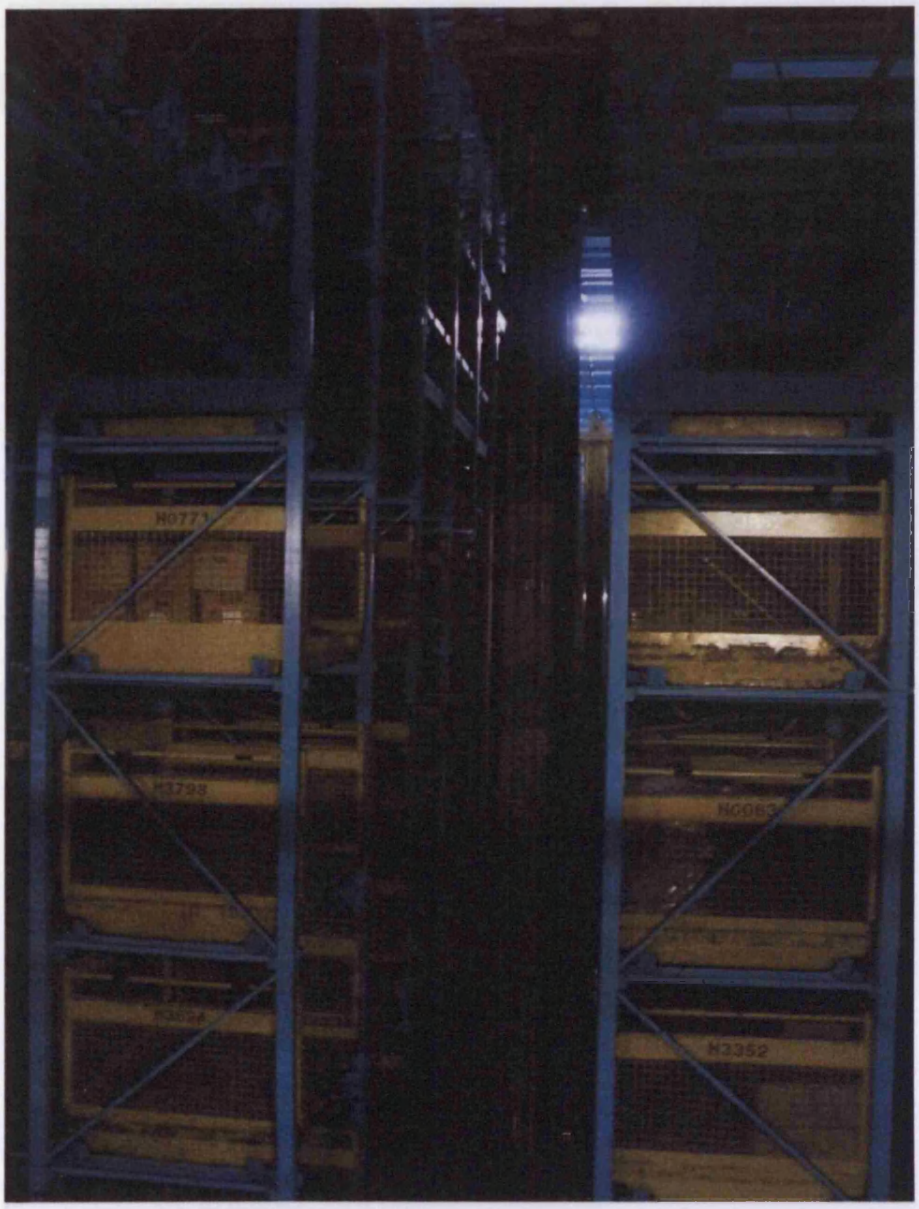

Fig.110
The automated Box Storage System

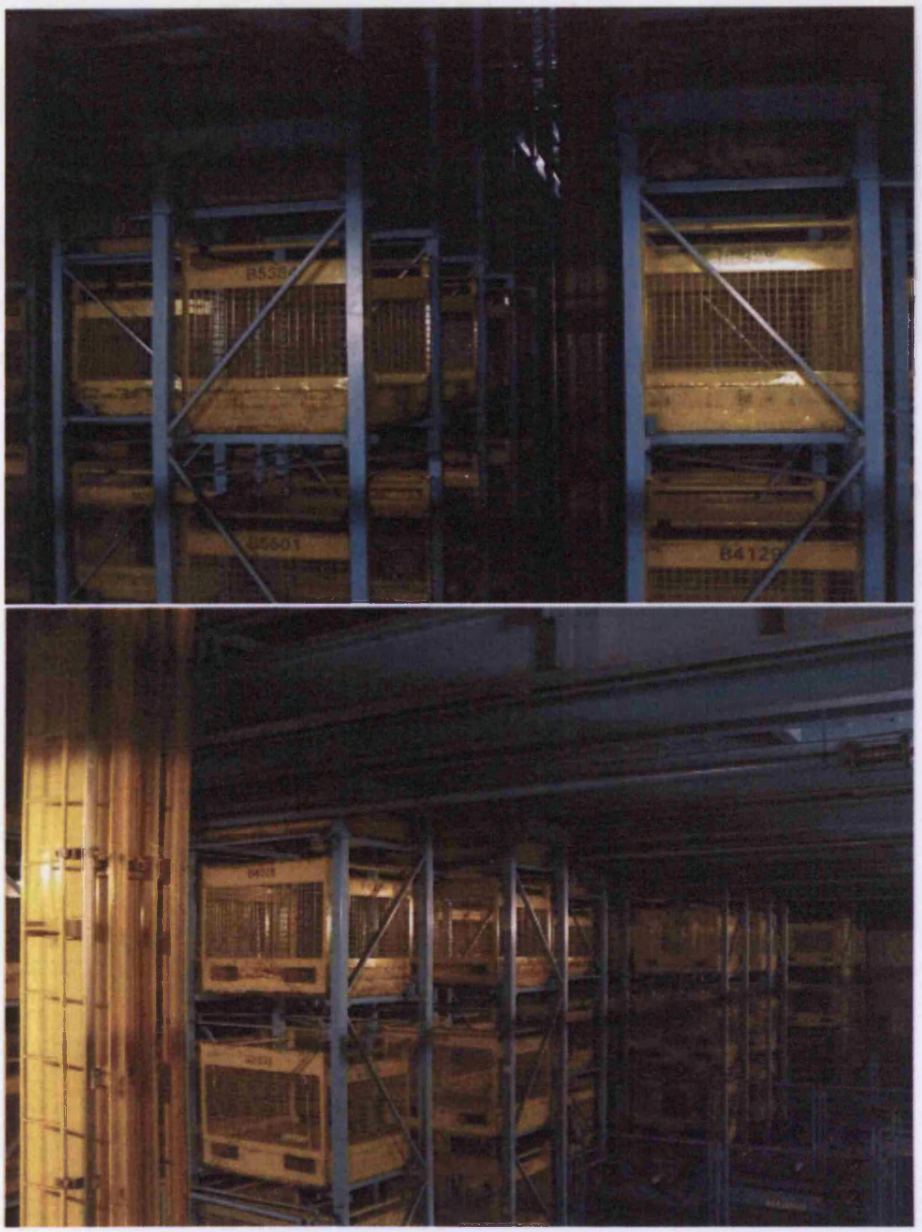

Fig.111+112
Box Storage System

Fig.113
'Breakdown and buildup, computer-controlled general workstations'

Fig.114
'Breakdown and buildup, computer-controlled general workstations'

Fig.115
Cargo lorries in front of the collection point

Fig.116
Staff leisure facilities, including swimming pool on the roof of the main terminal.

Through the addition of socially supportive facilities, the efficiency and effectiveness of operators can be maintained. These regulatory systems are as fundamental to the design and construction of the facility as the mechanized systems are. Their operation

can be likened to the homeostatic regulation that Martin writes about,[380] through both social facilities and the close incorporation of information systems to the running of the facility. Through the incorporation of both technology and leisure facilities, the individual worker is provided for and controlled in a system that integrates their social well-being and productive working capacity in one unit. The entropic potential (the potential for a disintegration into disorder) of a workforce can be regulated in this way – homeostatic regulation – encouraging efficiency within the organization. Through the close integration of technology and architecture, the worker and the client – through the medium of transparent technologies – the operation of the facility is controlled. From the HACTL website, transparency is directly correlated with the instantaneity of information transfer and the production of an efficient system:

> 'HACTL provides a range of information services designed to bring our customers and members a secure and efficient channel through which cargo information is instantly exchanged to provide transparency and operational efficiency.'[381]

The physical infrastructure of the terminal interfaces with a broader digital infrastructure producing a condition of technical transparency that is used as a marketing tool for the company, and as a form of brand identity. As well as the computer-controlled mechanical systems interface, the facility interacts with clients through a cargo-tracking web-based application, described on HACTL's website as an enhancement of efficient practices:

> 'Our mandate is to leverage our IT expertise to support your business growth and enhance operational efficiency for you and your freight forwarding agents.'[382]

The SuperTerminal in turn interfaces with airline systems in order to track specific pieces of shipped cargo. The physical processing infrastructure of the building is extended into a virtual domain, where physical, material goods are abstractly

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380 Martin *The Organizational Complex*, p.121 and see Wainwright, Edward *The Production of Corporate Space: Henri Lefebvre, Reinhold Martin & the working methods of DEGW North America*, M.Phil thesis, Cardiff University, 2006 'Human Homeostatic Regulation' p.127

381 hactl.com, *Information Services*, <http:// www.hactl.com/en/information/default.htm> [accessed: 10 May 2008]

382 HACTL, *One Solution for all your cargo needs: Moving forward with you*, Marketing Brochure (Hong-Kong: HACTL, 2008),

presented as tracking numbers within a digital system. The efficiency of the system is regulated and controlled by this external involvement in its functioning. Again, from the HACTL website, the systems are marketed as enhancing business performance through the application of systems and transparency:

> 'Timely information exchange and data transparency is critical to your business. That's why we developed one of the worlds most sophisticated online logistics management systems – the Community System for Air Cargo (COSAC). Developed in-house by our IT experts, COSAC connects major segments of the logistics chain, providing an electronic platform for immediate cargo data exchange and manifest submissions.'[383]

The building is in effect a highly secure, bonded warehouse surrounded by another secure storage unit. The container storage system, the automated steel racking system, sits on the perimeter of the structure. Through the base of this storage unit, and at floor-levels above, cargo filters through into the internal processing area. Structurally, the same principle of wrapping is at work. The more permeable, lighter-weight steel assembly of the CSS wraps the concrete-framed core of the internal storage and processing facility. The separation of the CSS from the core of the facility enables a roadway to pass between the two elements. This increases the operational façade area, producing six effective working interfaces totalling six kilometres.[384] As a modular steel construction, the CSS has the capability of expansion – growth and future potential is in-built into the facility, which is currently functioning at approximately eighty-percent capacity. It is also designed to be constructed independently of the heart of the facility.[385] The interior order and logic of the systems is echoed on the CSS facades by facility length fully glazed curtain walling *[117]*. Weather proof, this is not intended to be thermally sealed, but to regulate sun-penetration into the core of the facility, permitting daylight to enter some of the manual workstations. These workstations are less architecturally specific spaces: they do not have the totality of mechanized control that the CSS and BSS require. They represent a looser-fit warehouse type, with a mechanized and automated floor; capable of moving palates and containers around the facility and integrating with a vertical transit system.

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383 Ibid.
384 Pryce, Will *Big Shed* (London: Thames & Hudson, 2007), p.112
385 Ibid.

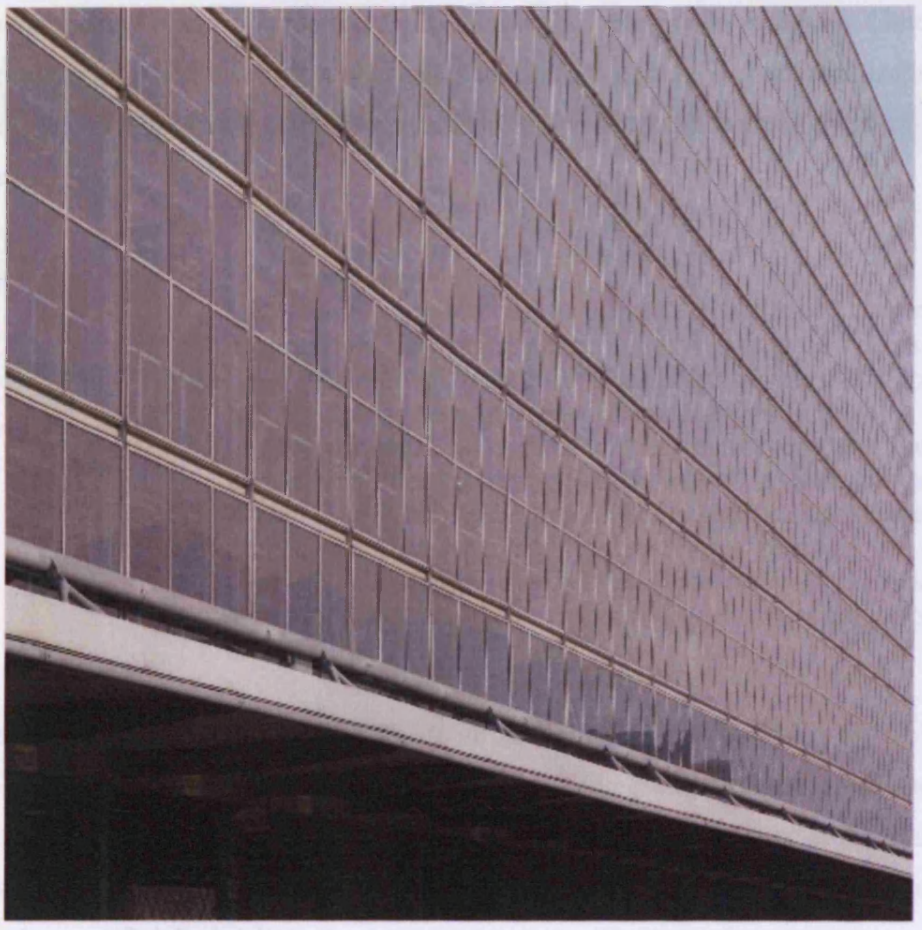

Fig.117
Close-up of the air-side facade of the Container Storage System

Systems Management

This congruence between digital and mechanical, 'virtual' and 'real' occurs most evidently in the systems management software developed for the facility. These processes and systems can be seen as a form of human homeostatic regulation, as discussed by Martin, that operate to regulation and control the operation of the

HACTL plant through an illusion of transparency.[386] Developed by a team from City University Hong Kong's Department of Computer Science, led by Dr. Andy Chun,[387] this resource allocation software is intended to ultimately 'help [...] an organization work productively in unison.'[388] From the HACTL website, the technology is described:

> 'AI Technology
> Our scheduling methodology is based on advanced constraint-programming and object technology. A prototype system was developed to demonstrate the feasibility of the methodology using a scaled-down version of the new SuperTerminal 1. This prototype assigns resources such as conveyor belts, hoists, cranes, and decks to service containers of import and export flights. The system performs scheduling based upon expected number of containers and the resources required by each flight. This scheduling system also performs real-time reactive scheduling to accommodate changes in allotment and resource availability.'[389]

The system operates to efficiently allocate infrastructural resources within the facility to demands placed upon it from external variables. It integrates a fixed system (the storage and processing technology) with a variable, less accurately predictable system (the arrival of air-freight, and its dispatch). By linking these two conflicting systems through an artificially intelligent, responsive system, allocation of material resources can be carried out rapidly and efficiently. The allocation software enables the physical environment of the building to be responsive to the demands placed upon it by unpredictable events.

This 'enterprise resource optimization software', as it is termed by HACTL, also incorporates the human variables of the system. By abstracting the function of an individual to the process of cargo breakdown and build-up, they can be allocated as a

386 Lefebvre, *The Production of Space*, p.27
387 Dr. Andy Chun, Associate Professor, Department of Computer Science, City University of Hong Kong, group leader, Software Engineering Subject Group, Software Engineering Research Group. Subject specialist in *'Artificial Intelligence (AI), Knowledge Management, Business Intelligence, Software Engineering, Web Technologies, Software Architectures, and Middleware Technologies. Consultant on AI Scheduling and AI rostering systems.' Dr.Andy Chun,* <http://www.cs.cityu.edu.hk/~hwchun/> [accessed: 15 May 2008]
388 CITYU: Department of Computer Science, *AI::Commercial Projects,* <http://www.cs.cityu.edu.hk/~hwchun/AIProjects/HACTLscheduling.shtml> [accessed 14 May 2008]
389 Ibid.

resource in much the same way as a cargo storage box. The integration of the human and technology are referred to in the marketing of HACTL on their website:

> 'We also applied the proposed scheduling methodology to produce a design for a workspace and personnel scheduling system. The systems allocate suitable work areas for the build-up or the break-up of each container and a team of workers to perform these tasks based on operational constraints and criteria.'[390]

The loose-fit 'workspaces' within the core of the facility are incorporated as a resource for allocation, as are the individual workers. By allocating humans as a resource, they can be efficiently and effectively positioned throughout the facility to respond to changes in processing demands. The allocation of a specific individual, or team of individuals, to a specific spatial location enables the infrastructural resources of the SuperTerminal to be closely aligned to the available 'human resources'. The individual worker becomes directly programmed within the resource allocation software, and operationally implemented within the material structure of the facility. They become the most responsive and self-maintaining resource in the facility and are abstractly represented within the system as units for distribution across the SuperTerminal.

This system of resource allocation relies upon establishing securely where resources are. Through the embedding of microprocessors, the exact location of specific material resources can be determined. The resource allocation system relies upon this feedback to determine the most efficient and effective allocation of services, but the regulation of the allocation of human resources is not consciously acknowledged in the material on the SuperTerminal website. However, security and surveillance are mentioned as being critical to understanding the close integration of the individual worker within the infrastructure of the facility:

> 'Close Circuit Television [sic]
>
> With over 850 close circuit televisions (CCTV) positioned in key locations, we centrally monitor activities both inside and outside of SuperTerminal 1 from our Security Control Centre. [...]

390 Ibid.

Security Access Control

> We have also implemented a Security Access Control System, with more than 100 control panels placed at entrance and exits to the Tenant Restricted Areas.'[391]

Combined with the human element of the resource allocation software, the CCTV and Security Access Control (a secure swipe-card carried by every operative, used to enter and leave access-restricted areas) enable the position and activity of workers to be monitored. Microprocessors are not actively embedded in the workforce but through the surveillance and access systems, the effect is similar, yet self-regulatory:[392] the panoptic quality of 850 CCTV cameras within the facility act to ensure the efficiency of the workforce. The closed circuit television system feeds information back into the system: it regulates entropic tendencies by establishing controls on behaviour, as an embedded microprocessor controls the behaviour of an automated cargo cage. Feedback into the system is critical to its successful functioning and the systemic transparency of the terminal's infrastructure is crucial to this feedback.

This feedback is in evidence in the systems and the management of HACTL. Openness to external inputs is built into the operational structure of the corporation, as suggested on www.hactl.com:

> 'We are sensitive to our customers' feedback and needs, and we are dedicated to continuously invest to advance our product. The new canopies and the revamp of the Landside Service Counters are just two of our latest initiatives to upgrade our facilities," said Kenneth Bell, Director of Service Delivery. "We are always looking for ways to do this and doing so to uphold Hong Kong's unique position as a leading air cargo hub."'[393]

The maintenance of the facility's primary position is an aim clearly stated by this paragraph. A responsive approach to the requirements of the customer base

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391 hactl.com, *Security*, <http://www.hactl.com/en/SuperTerminal/security.htm> [accessed: 15 May 2008]

392 Serious proposals from a Florida nursing care-home to implant RFID tags under the skin of Alzheimer's patients were reported on ABC News in 2007. <http://abcnews.go.com/Health/ActiveAging/story?id=3186229&page=1> [accessed: 15 May 2008]. There has been subsequent legislation passed in certain US States to prevent the forced implanting of these tags for reasons of work, health-care etc, reported in the *RFID Journal* <http://www.rfidjournal.com/article/articleview/2304/1/1/> [accessed: 24 May 2010]

393 Hactl.com, *Media Centre*, 'Hactl invests further in facility enhancement projects to go beyond excellence' <http://www.hactl.com/en/mediactr/press20080429.htm> [accessed 15 May 2008]

contributes to the maintenance of this position and though developing responsive approaches and systems, variables such as changes in the scale of cargo aircraft, freight distribution patterns and corporate requirements are used to effectively fine-tune the operational systems. This responsive quality is also related to wider economic changes. Systemic changes have been developed by HACTL as responses to factors induced by events such as the East Asian financial crisis, and subsequent attempts to establish 'transparent' practices and information networks. Changes in methods of industrial production are also incorporated into changes in HACTL's operations. Expansion of the Express Service centre and a related focus on moving smaller cargo shipments has been promoted by the increase of 'just in time' production and assembly: a more responsive and flexible consumer driven approach to manufacturing, especially microelectronics. From *Shippers Today*, on airfreight in the region, the importance of transparency (at least as a marker of efficiency and effectiveness) is highlighted:

> ' "The growth in the express sector is evidently even higher than the general airfreight market. [...] Following the economic downturn, general airfreight increased significantly in 1999, in terms of throughput at the HKIA in Chek Lap Kok. Due to the emerging e-commerce market, the volume of the individual transaction is becoming smaller, and just-in-time distribution is under high demand. Customers now require full transparency in their supply and demand chain management. This is particularly important, when virtual inventory management is included in the picture," said Bryan Chan, general manager of TNT Express Worldwide (HK).'[394]

The transparent characteristics of both a process (the physical movement of cargo) and a management system is established as a crucial demand of the cargo customer. 'Virtual inventory management' such as the COSAC information system are used to ensure congruence between digital indicators and physical reality: where an object is indicated as being located, and where in the world it is. A transparency of this 'flow' of goods and objects is important to establishing the implicit trust in a system: it is also critical to supporting interconnected methods of manufacturing and assembly in spatially distant locations. Information systems such as COSAC and HACIS HEx e-

394 Shippers Today 'Air cargo gathers momentum' in HKTDC <http://sme.hktdc.com/content.aspx?data=hk_content_en&contentid=174756&src=HK_BuNeTr&w_sid=194&w_pid=644&w_nid=10027&w_cid=174756&w_idt=1900-01-01&w_oid=111&w_jid=> [accessed: 20 May 2008]

Logistics System enable a real-time 'view' of where products and components are: time-critical goods can be monitored and supply chains that rely on this model of distribution can operate. Unpredictable events can be monitored, watched and through transparency, control can be exercised – a distributed Foucauldian panopticism that makes information (as well as material goods) transparent to the technological eye of the facility. As HACTL comments on their website:

> 'Service providers of [...] shipments can also trace historical and real-time activities of trucks through HACTL's website, providing added transparency of information throughout the supply chain handled by HACTL.'[395]

Informational and material networks come together and are mutually supportive through their 'open' integration. Within this context, transparency is activated as an entropic regulator: a necessary part of systems control. This is control based in the facility but extends out through the HACIS distribution networks and web-based customer interfaces. The building, the physical SuperTerminal itself is a centring hub, a site of command and control and transparency within this system. It is used to promote efficiency, effectiveness and extend profit margins, as well as operating as a brand-identity for the company and the centrality of Hong Kong to Southeast Asian trade.

Terminal Architecture

The material reality of the SuperTerminal works to support an interconnected global system. Hong Kong sits within this system as one of a number of connective and distributive nodal points, as Castells discusses. The specific context of Hong Kong, and HACTL in particular, relates to this global system, or this system of globalization. Castells suggests:

> '[...] the globalization of markets has only been made possible in the late twentieth century by dramatic changes in transportation and communication technologies, for information, people, goods, and services.'[396]

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395 Freightnet.com 'Hactl enhances operational efficiency for the airfreight community' <http://www.freightnet.com/article/965.htm> [accessed: 20 May 2008]

396 Castells *The Rise of the Network Society: Volume 1*, p.96

The SuperTerminal as a piece of architecture is not formally, or symbolically, representative of these changes: it does not reflect or iconographically illustrate the flows that form a global economy. The SuperTerminal is one part in an active generation, production and support network that constitutes the very physicality of these flows. The facility as architecture organizes through its various forms of transparency: it organizes the material movements that form a part of global industrial production. The SuperTerminal calibrates the relationship between informational networks and material networks: it sits as a productive amalgam of information systems and physical logistics. It processes goods, information and humans within a 'total, if pliant, system', to quote Martin.[397] This 'total' system is adaptive to change and totally reliant on the context that it in part forms. The total failure of the SuperTerminal shortly after opening demonstrates this contextual significance. A relatively small systemic failure in a single, geographically specific location became dramatically magnified by the facility's interconnections. The failure rippled through the regional economy. It impacted on thousands of small and medium sized corporations, wiped nearly half a percent off Hong Kong's gross domestic product and forced a dramatic reorganization of airfreight distribution to Macau, Shenzhen, and Guangzhou. This at a time when the larger regional business community could not absorb the losses well. The very conditions that provide the facility with its functional capacity were also the conditions that amplified the effects of this localised failure.

As a singular facility, the SuperTerminal can be discussed as a metonym for a larger scale system. As argued by Castells, space is an organizer of time. As an integrated mechanical, digital, structural and human system the SuperTerminal can be seen as a time and material based organizational machine. Its efficacious capacity is measured in the compression of time – how the delay between shipment and delivery can be minimized, and volumetric throughput maximized. As Castells suggests:

> 'The informational/global economy is organized around command and control centres able to coordinate, innovate, and manage the intertwined activities of networks and firms.'[398]

397 Martin *The Organizational Complex*, p.4
398 Castells, *The Rise of the Network Society: Volume 1*, p.378

The location of these command and control centres is partly produced by contextual factors, and productive of other factors: they generate a related geo-economic context as well as being formed by these contexts. Hong Kong, as a centre of international trade, industrial production and financial markets is one such 'nodal centre'.[399] The significant capability of these 'nodal centres' is measured in their level of rapid connection: how fast and securely information and material can be processed and controlled. These nodal centres are generative of economically dependent, and materially supportive, contexts. Progressively, these are developing into substantial urban agglomerations, what Castells refers to as a condition of 'third millennium urbanization', or 'megacities'.[400] Hong Kong, Shenzhen, Guangzhou, Zhuhai and Macau together are an emergent megacity upwards of 40 million people, and as Castells suggests:[401]

> 'Its [the Hong Kong/Guangzhou megacity] units [in 1995] were functionally connected on a daily basis, and communicated through a multimodal transportation system that included railways, freeways, country roads, hovercrafts, boats and planes. New superhighways were under construction, and the railway was being fully electrified and double-tracked. An optic fibre telecommunications system was in process of connecting the whole area internally and with the world, mainly via earth stations and cellular telephony. Five new airports were under construction [including Chek Lap Kok]. New container ports were also being built [...] adding up to the world's largest port capacity in a given location.'[402]

The SuperTerminal sits squarely within this urban agglomeration as a critical part of its infrastructure. In the 'flat' world model described by Thomas Friedman in *The World is Flat: A Brief History of the Twentieth-century*,[403] the speed of processing that occurs within the facility supports the time-critical economy. Hong Kong as a productive centre acted to initiate the development of this megacity region. Its existing infrastructure and state-supported economic systems formed Hong Kong as the export/import hub of the region. Flows of capital and goods pass through the

399 Ibid., p.379
400 Ibid.
401 Castells, p.404
402Ibid., p.407
403 Friedman, Thomas *The World is Flat: A Brief History of the Twentieth-century* (New York: Farrar, Straus and Giroux, 2005)

systems of Hong Kong trading: and these flows have formed and are formed by the physical space of the territory.

Through its mechanized instrumentality, HACTL at once produces and is produced by capital and material flows. Its physical form is produced by the functional needs of global trade: processing, customs clearance, transhipments. The space of the SuperTerminal also produces these flows, as is evident in the early systems failure that cost Hong Kong's economy dearly. Castells comments:

> 'Flows define the spatial form and processes. Within each city, within each area, processes of segregation and segmentation take place, in a pattern of endless variation. But such segmented diversity is dependent upon a functional unity marked by gigantic, technology-intensive infrastructures [...]'[404]

The spatial form and processes also form the flows. The SuperTerminal's position at Chek Lap Kok, within Hong Kong, in the highly populous urban agglomeration around the South China Sea, in a global centre of industrial production, places it firmly within a highly interconnected network and one that requires highly organized systems to operate.

Façade Articulations

This network is actual and articulated within HACTL. Approaching the SuperTerminal from the airport road that circulates traffic around Chek Lap Kok, you are confronted by the seemingly endless rational articulation of the curtain walling protecting the external layer of the container storage system. The outward appearance of the highly organized, automated racking system is presented through this façade. A structural logic is informed by an organizational dictatorship of the systematised processes within the facility. This façade image *[118]* is not an expression: it is an exegesis.[405] It works productively to elucidate the operation of the facility. Much as

404 Castells *The Rise of the Network Society: Volume 1*, p.409

405 See Oxford English Dictionary for definition of exegesis *'1. Explanation, exposition (of a sentence, word, etc.); esp. the interpretation of Scripture or a Scriptural passage. 1823 in CRABB Technol. Dict., Exegesis, an explication of words or an elucidation of sentences. a1848 R. W. HAMILTON Rew. & Punishm. Notes (1853) 423 The exegesis of Scripture is conducted by instituting inquiry into what certain parties understood. 1857 GLADSTONE Glean. VI. xix. 59 That most wretched consummation, which reduces all exegesis to a profane and deluding art. 1876 M. ARNOLD Lit. & Dogma 161 A very small experience of Jewish exegesis will convince us.'* OED

Reinhold Martin indicates the functional emptiness of the façade of Saarinen's Bell Laboratories *[119]* so the 'patterns of endless variation'[406] flow within, through, into and out of the SuperTerminal are functionally unified through this rigidly rational, gridded surface. As the facility is metonymical of Hong Kong as hub, so the façade is metonymical of the facility. Its rigidly ordered, rational grid extends to a perspective distance the exterior of the facility into Hong Kong's landscape. The horizontal lines of the stacked facility are drawn out and form a visual relationship of regulated order with the airport, the roadways, distant housing blocks finally to challenge the dominance of the mountains in the background. The façade takes this hermetic self-referential ordering to an extent far beyond that of the unreflective mirror of the Bell Labs. The tectonic ordering of the horizontal and vertical mullions and the low-reflectivity glass produce a narcissistic façade: the dramatic landscape around the island is suppressed in favour of a techno-centric display of Modernist mechanical instrumentality *[117, 118,120]*. Process, systematization, mechanization and a rational control of flows are visually ordered in this façade: quite different from the complexity of the external/internal, reflective/translucent, context/content oscillations that take place within the socially minded Willis Faber Dumas offices. Here, the progressive blending and layering of interior and exterior realms through the mirror glass façade (that disappears at night) ties the offices into the small-scale context of Ipswich Town centre. This glass curtain-walled façade is suggestive, not explicit, of its structure: its propensity to rigid rationality softened by both its gently curving boundary and its semi-hidden structural system. The relative difference between the Willis building's façade and SuperTerminal's curtain walling could not be greater. Subtlety is eschewed in favour of an almost pornographic material, structural, constructional and systemic exposure. Façade depth and complexity, attained through the subtle blending of light, glass and structure at Willis, is lost. A literal indication of the structural depth of the envelope into the CSS is forced through the relentless dimensional coordination of façade structure and the racking system. The dehumanized automation of the CSS provides perfect content for a systemic perfection of a total, rationally defined deep skin. The abstracted, quantitative process of automated processing replaces the messy reality of human subjectivity. And in a

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Online
<http://dictionary.oed.com/cgi/entry/50079859?single=1&query_type=word&queryword=exegesis&first=1&max_to_show=10> [accessed: 21 May 2008]

406 Martin *The Organizational Complex,* p.195

linear extension of the hermetic self-regulation of Bell Labs façade, any substantial possibility of contextual reflection (as at Willis) is negated. The glazing within the curtain walling is subsumed by its structure. Any reflections are effectively pixelated by the rectangular grid of the surface, digitized on a mechanical façade. It reflects its own supporting structure, visually nullifying external discontinuities that would threaten the objective rationality of the system of flows. It imposes order through the grid as an anti-entropic device, as device that is subject to catastrophic failure as seen in the first weeks of its operation.

Fig.118
Detail of facade, Container Storage System

Fig.119
Eero Saarinen, Bell Labs Holmdel Complex, USA

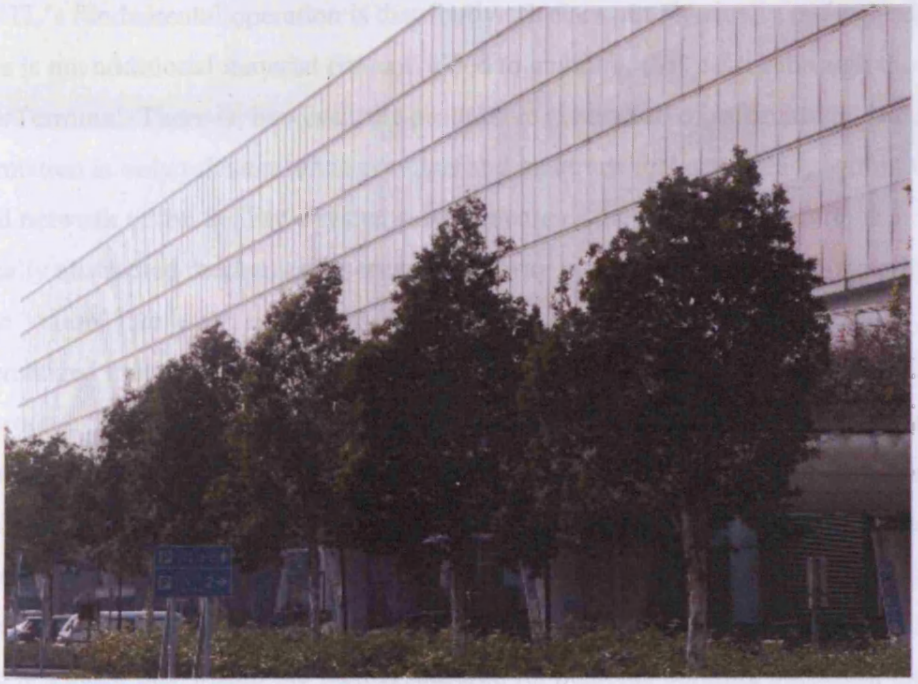

Fig.120
Facade of the offices of HACTL facing customer access areas

Distributive Information Systems

HACTL's fundamental operation is distributive; it does not physically make products. There is not additional material content added to anything that passes through the SuperTerminal. There is, however, the productive generation of information. But that information is only relevant to the products and materials that are already within the broad network of the facility's systems. At the core of the facility, therefore, is a radically abstracted mechanized system. Peel away what Foster + Partners describes as the 'onion' like layers of the terminal building and what is revealed is the systematized mechanical heart *[121]* – beating in operation twenty-four hours a day, year round. This heart is, again, metonymical of the broader system that defines and is defined by its function. Diagrammatically, the building wraps its external processing operations around the Boxed Storage System. This dark, fully automated system is at the centre of the time-compressive characteristic of the facility's cargo processing. Closely arrayed storage gantries are serviced by robotic cargo-retrieval hoists. The space is a black box within the facility: secured for customs bonding purposes, the access and retrieval of cargo is entirely regulated by the centralized control system. In this dark, cavernous space only machines operate: human intervention being limited to six-weekly scheduled maintenance. In combination with the information systems interface, this space is effectively a handling unit for the facilitation and production of flows. Through the elimination of human interaction in this heart of the facility, a closed mechanical system can operate. This is regulated by interaction with HACTL's digital control interface, the artificially intelligent resource allocation software. Efficient and rapid deposit and retrieval of cargo is enabled by the relationship between the structure of the building and the operational electronic systems.

The systems, mechanized infrastructure, organizational operation and effective programmatic diagram of the building are set before Foster + Partners conceive the design. For the most part, the basic organizational brief of vertical cargo distribution and storage was developed at the original HACTL Terminals at Kai Tak airport. But the integration of these systems and programmes within a specific built form, and the synthesis of human regulation through the 'social' activities in the facility work to produce a highly tuned piece of 'architecture': a built artefact that is highly contextually dependent, but also works productively to define a specific identity for Hong Kong; enables and regulates flows through the region; mediates relations

between differing systems and enables responsive change to altering market conditions and economic demands. It achieves this through a transparent approach to systems at all scales. Transparency here, as suggested by both Martin and McLuhan, is a form of media used to organize and present images of organization to corporate partners and prospective clients.

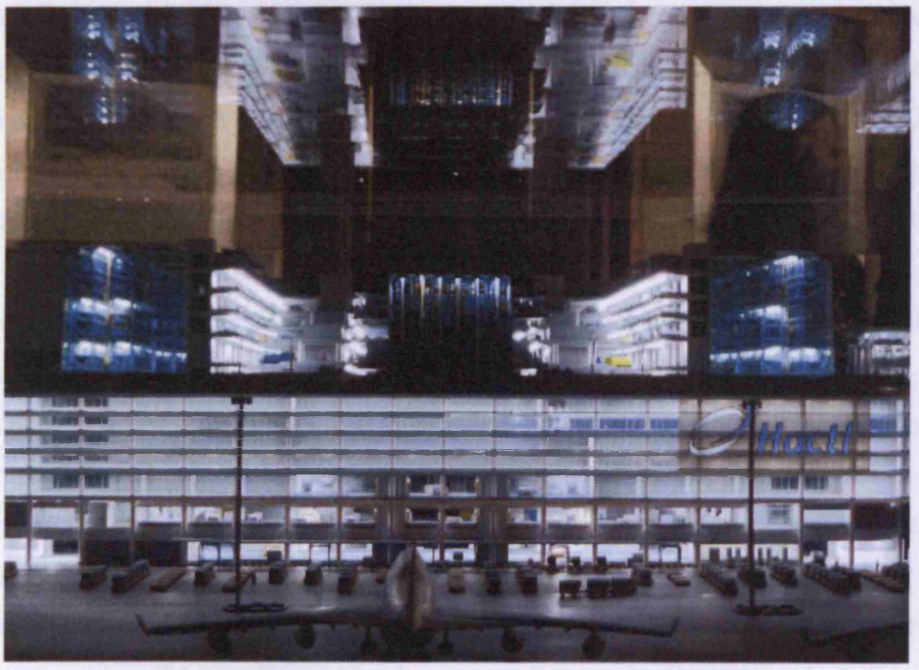

Fig.121
Cut-away model in office foyer, HACTL Superterminal 1

Image Generation

At the most macro of scales, HACTL works as part of the larger move of the airport to its present location. As a direct response to potentially dramatic contextual changes, the investment in a major infrastructure project prior to handover is both a productive generator of an image of confidence, and a practical method of assuring the territory's position as a regional hub. At this scale, the building works in a similar way to the Pyramid. Like the Pyramid, it is not the singular object of HACTL in isolation that is generative of this image of confidence in a specific future: it is the super-scaled activity capable of flattening a mountain, reclaiming a considerable area of land, and constructing (at the time) both the world's largest airport and airfreight terminal. As a visual indicator of confidence, this is considerable and the engineering and architectural complexity of this development operate in a similar manner to the transparency that Fierro talks of with regard to the *Grand Projets* of Mitterrand's France. The continuation of investment in the project after handover, by the Peoples Republic of China, suggests a continued confidence in the region as a whole. HACTL, as part of the airport infrastructure, communicates this confidence through its presence: similar to the crypt paintings at St. Savin, discussed by Lefebvre following Panofsky, it is not *seeing* the existence of the airport and SuperTerminal per se that is critical to its capacity. It is *knowing* that it will exist, in the minds of the residents of Hong Kong prior to handover, that is capable of inducing an effect: the production of confidence. But unlike the crypt paintings, its physical scale is directly proportional to the condition that requires response: a potential major shift in political control. Through the hyperbole of scale used to describe the SuperTerminal, the scope of this confidence is iterated many times. There has not been a scaling down of ambition. Development aims have not been compromised prior to handover. Hong Kong is transparently demonstrating this confident stance, iconically, through the transparency of material and scale. Necessary to this iconic demonstration is the appointment of Foster + Partners. Having worked for the other harbinger of Hong Kong's future prosperity - the indicator of confidence in the markets, HSBC - Foster + Partners have an established reputation for delivering an image of institutional confidence. The practice has been associated with a progressive and 'future' orientated stance in the territory. Whilst not an unmitigated success, the HSBC building nonetheless indicates the aspirational and successful face of Hong Kong. The HSBC building, commissioned in 1979 and completed in 1986, was also a response to

the imminent change of political systems. As the expressive face of Hong Kong's financial stability, security and future strength, the success of this scheme for the bank and the territory lay partially in its image of modernity, technology and belief in Hong Kong as a stable economic home. Foster + Partners were an obvious choice, in this context, as architects for the airport and HACTL scheme. Following developments in airport organization at Stansted, the processing capacity of the Renault Distribution Centre, and progressive social attitudes at Willis, the capacity of Foster + Partners to deliver an effectively functioning facility is almost assured.

Transparent Functioning

Whilst the transparent capacity of the project is at once located in its scale as a communicative symbol, as both Fierro and Barnstone (with reference to the Reichstag conversion) suggest, through technology and infrastructure, the transparent is also a critical element of the technical functioning of the facility. At this point, the scale on which the transparent works steps down a level. Defined and discussed as a systemic openness, transparency within the organizational framework of HACTL is a necessary condition to its successful functioning. The open, rational quality of the networks that form the facility is necessary to their integration. HACTL is not a closed system: inputs are defined by conditions that are not necessarily predictable or contained. By developing a set of systems that are logically related, and open to customer inspection, a process of external regulation can take place that responds to these external inputs. As the building needs to function within a broader set of operating structures, there is no scope for contradiction or illogical patterns in the congruence between physical, electronic and human systems. In order to cope with potentially chaotic externalities, internal factors must mesh perfectly within very precise, limited tolerances. By using a unified systems approach to processing within the facility, the networks of mechanical infrastructure, electronic control and cargo-workers can intersect in a responsive mode: regulated by the intelligent resource allocation system. Once these intersecting systems step outside the facility, the Internet based cargo monitoring and control software of HEx, and the HACIS system of integrated, secure road transit and processing, take on these transparent roles. You can 'watch' your cargo shipment and processing in real time through a virtual window onto the entire processing line. Bar-coded shipments are traceable from point of departure to point of arrival, and the extension of the facility into a 'real-time' tracking environment on the

web builds the transparent capacity of HACTL as a supportive instrument for global trade flows. In order to partake in these flows, one must enter into a regime of the transparent. Exposure of shipped goods to customs is part of HACTL's operation and in order to work within these interconnected, institutionally codified infrastructures, the 'hidden' must be surrendered, decrypted as Lefebvre would suggest. Within the building itself, transparent systems of surveillance are active, both to regulate machines (microprocessor resource identification) and humans (closed circuit television) in a control loop that Martin sees as a central to the control and regulation of humans – homeostatic control as a resistance to entropy.

Transparent technology and practice therefore supports an instrumentalized processing of airfreight. This occurs not only within the operational structures of HACTL, but also within the architectural structures. There is a transparent tectonic at work here. As much as the structural and material evidence of the container storage systems are not only *expressions* but also necessary *conditions* of its operation, the same is true throughout the built fabric of the facility. The 'perfect' quality of material, structural and constructional details drives the rational, logical, systems orientated approach to the architecture of the facility. Dalibor Vesely suggests in *Architecture in the Age of Divided Representation*:

> '[...] transparency of concepts expresses the will to eliminate from design everything that cannot be calculated or controlled. This brings us to one of the more mysterious characteristics of contemporary architecture - its fascination with those aspects of design that can be treated like disengaged problems of construction and its tendency to suppress, almost instinctively, everything that is beyond our control [...]'[407]

The elimination, or certainly the controlling, of the uncontrolled is central to the effective functioning of the SuperTerminal and the deeply logical method of working employed by Fosters. Transparency, here, also operates as that force for decrypting – for eliminating the hidden and mysterious from the realm of the controlled. It is a Lefebvrian transparency at work, antagonistic to the uncertain and the uncontrolled. As Baudrillard suggests, forced visibility, enacted in HACTL through electronic and mechanical technology, controls: 'it is no longer a question of making things visible

407 Vesely, Dalibor *Architecture in the Age of Divided Representation: The Question of Productivity in the Shadow of Production*, (Cambridge, MA: MIT Press, 2004) p.314

to an external eye, but of making them transparent to themselves.'[408] The operatives become, again as Baudrillard would suggest, from beyond a Foucauldian position, points of power, represented and active as images of the operation of themselves and the facility. As the curtain walling suggests, transparent structures are fundamental to the project of HACTL. They are not merely representational: they are directly productive of both a spatial condition and a mechanical operation. Within the scope of the production of the building, the modularization and ruthless coordination of elements work to suppress conditions of difference: all is indicated as being held in the rigorous, defining grids activated from façade to functional heart. Again, from Vesely, it can be seen that technology produces an image of wholeness that is, in fact, quite distinctly fractured:

> 'The tendency towards idealization and disembodiment, so prevalent among contemporary architects and designers, may be compared with the most recent developments in artificial intelligence and the attempts of contemporary technology to simulate the conditions of embodiment. Technological thinking has to examine itself in order to understand the conditions of its own inner possibilities – mainly the limits of emancipations and disembodiment, the ambiguous nature of the technologically constructed illusion of wholeness.'[409]

There is a contingent quality of idealization in the interconnected networks and systems within the SuperTerminal. These are mediated by the relational quality of their transparency: and if this fundamental operative transparency is damaged, such as when a rogue external factor (the dust that led to the system's failure shortly after operational commissioning) enters the system, collapse can occur. Due to the interrelated conditions that the facility itself mediates, this collapse has implications beyond the facility. The SuperTerminal is at once supported by this 'constructed illusion of wholeness', constructed through its transparent technologies, and exposed to potential collapse for the self-same reasons. As will come to be illustrated later, following Baudrillard's argument, the production of this illusion of wholeness can be read as a simulation of conditions for the purposes of the support of hegemony, and the creation of an abstract space of Lefebvrian transparency.

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408 Baudrillard *The Intelligence of Evil*, p.94
409 Vesely, *Architecture in the Age of Divided Representation*, p.314

Transparency as a productive tool steps beyond the iconographic, as suggested in Astana. Part of the function of the airport development is the production of identity and confidence through infrastructure and investment. But HACTL is also more than this. It is a confluence of transparent processes, regulated and controlled by transparent systems, operating within logical, rational material structures. Transparency is used as an abstracting device: a means of reducing complexities, mitigating the entropic capacity of the unknown, and it is used to produce supportive conditions for a system of globalized flows.

In summary, HACTL operates on a multitude of transparent levels: its design, construction and operation are all lodged in a Western episteme of intelligible, rational and logical instrumentalism, and act, as Lefebvre's analysis would suggest, as a part of a transparent project of abstract, technocratic design and decryption of the secretive and hidden that is detrimental to the operation of the technology of the facility. Through transparency HACTL organizes complex and interconnecting systems of trade, technology and the human, as both Martin and McLuhan's theoretical positions would indicate, through the regulation of the entropic tendency in 'human resources' and the use of the medium of architectural organization to produce productive spatial conditions. It projects an identity of both HACTL and Hong Kong as a significant hub of a global system of trade, following Barnstone and Fierro, which can also be read as a transparent projection of a brand, as Klingmann's position attests. Through the development of these transparent systems, and the branding behind the facility, a rhetoric of the transparent is produced that is used both by HACTL and as generative of the identity of Fosters. Through transparency, accountability, openness, the efficiency of the organization is rhetorically assured.

4.3 Transparent Organization: Berlin: The Free University

As the historical-geographical contexts of both the Pyramid and HACTL have indicated, a building's purpose is manifold – and the deeper position and purpose of a structure is revealed through this close analytical reading of its background and layers of organization (spatial, material, technical, human). It is possible to read transparency as a central factor of the designs, in both rhetorical and organizational terms. The two projects studied above are both new-build structures, but the architectural insertion is important within the repertoire of Fosters' work. As the Great Court at the British Museum and the Sackler Galleries at the Royal Academy indicate, the practice's approach to the insertion is to generate a heart, a centring and organizing device into an existing fabric. Transparent technologies are employed to produce this effect in the Great Court, as well as organizational tactics of spatial planning. The project analysed below – the Philological Library of the Freie Universität, Berlin – sits in a context that is interesting both architecturally and historico-geographical, and as such reveals how the practice uses transparency to reorder, restructure and rebrand an institution through the insertion of transparent technologies, techniques and spatial planning. Reading the complex history of the university, the project also indicates how transparency in architecture has taken on, in a corporate sense at least, a more reductively abstract role in organization. This case study will illustrate how transparency has been used by the practice to order, organize and rationalise, reading the building through Lefebvre's understanding of the active production of space, and the centrality of transparency to attempts to induce order and spatial hierarchies and a logic of visualisation as read by Lefebvre through Panofsky. It will indicate how the material of the FU library (the medium of architecture) induces spatial changes that hence induce changes in the organization of an institution, following McLuhan and Martin. It will also indicate how, through the construction of a brand-identity for the university a form of image is presented through the transparent nature of the structure and organization. However, it will be argued that this project presents a simulation of the conditions to which it purports: a Baudrillardian simulacrum of openness, clarity and accessibility – the presentation of an image of the democratic institution.

The Philological Library of the Free University (FU), Berlin, completed in 2005, demonstrates the insertion of one system into another. It is also an example of the use of architecture to organize, rationalize, centralize and brand an institution. The agendas of transparency are developed and applied overtly in this project. *[122,123]* The Foster + Partners library – a futuristic space-framed building on the Dahlem campus of the university, sits within the context of what has come to be affectionately known as the *Rostlaube*, the Rust Bucket, by students and Berliners alike due to the colour of the cladding. It was designed by architects Candilis, Josic, Woods, Schiedhelm (CJWS) and completed in 1973. Underpinning it was a radical position. An agenda of change – formally, politically, socially – famously existed in 1968. The potential to restructure society appeared, if only briefly, before the emasculating free-market emerged from economic upheaval.[410] Architecturally, there came a definite, deliberate break with the orthodoxy of Modernism: social rebuilding attempted through architecture.[411] The ideological position of the FU was inextricably linked to a newly conceived organizational structure, and the *Rostlaube* was a project imagined as more than a faculty building. As CJWS suggest of their project:

> 'This is an attempt to discover structuring principles which might be applicable to the organization of physical environment [sic]. The university is considered as a place and a tool. Many of its functions are known, others are not.'[412]

For CJWS, the intentions behind the university are the intentions behind its building and the intentions behind the building are those of the ideological position of the university in the late 1960s. A symbiotic relationship between form and content defines its layout. Into this context Foster + Partners have inserted a cerebral manifestation, dubbed 'the Berlin brain' by the architectural press and Berliners alike *[124]*.

In order to understand the condition of Fosters' project it is necessary to first outline the historical context within which the FU emerged. Following this, a discussion of the ideological position of CJWS in post-war Modernism places Fosters'

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410 Ali, Tariq *1968 and after: inside the revolution* (London: Blond & Briggs, 1978)
411 Clausen, Meredith L. *The Pan Am building and the shattering of the Modernist Dream* (Cambridge: MIT Press, 2005), pp.370-387
412 Architectural Association et. Al., *Free University Berlin: Candilis, Josic, Woods, Schiedhelm, Architectural Association Exemplary Projects 3* (London: Architectural Association, 2006), p.25

technologically driven library in its specific social, political and architectural environment.

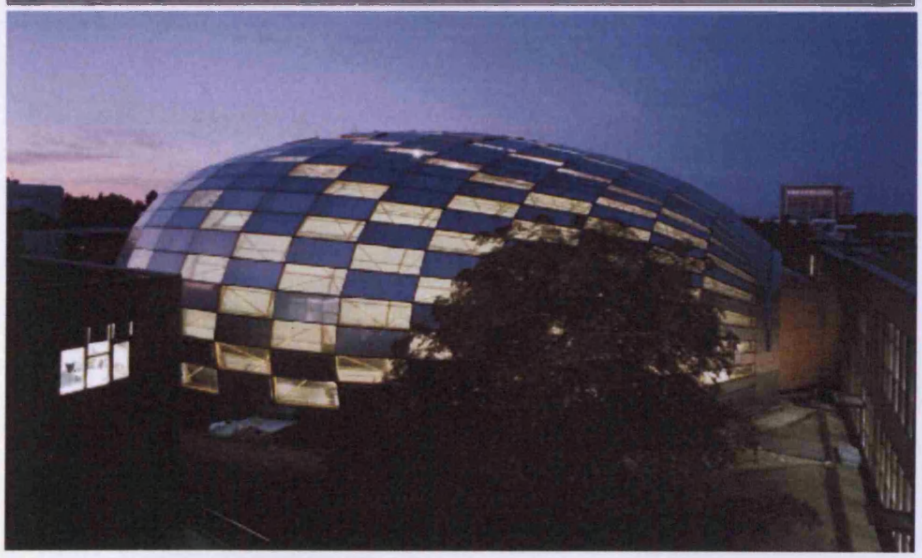

Fig.122
Facade of the Rostlaube with the Philological library of the Berlin Free University behind

Fig.123
Philological library within the Rostlaube. Image from Fosterandpartners.com

Fig.124
Philological library within the Rostlaube. Image from Fosterandpartners.com

Context

The institution of the Free University emerged out of a radically turbulent period in German history. The post-War settlement and emerging Cold-War tensions were instrumental in the institution of the FU. These events acted in the production of the socially critical architecture of the *Rostlaube.* By outlining its historico-geographical context, it is possible to read how transparency is now operating within the institution.

The liberal conditions of the Weimar Republic in the 1920s and early 1930s, where in Berlin the internationally renowned Friedrich Wilhelms Universität flourished, ended with the rise of Nazism. With the decline of liberal Berlin, so the decline of higher education in the capital occurred. Friedrich Wilhelms Universität was systematically emptied of any groups opposed to the Nazi ideal. The biographer of the FU, James F. Tent comments:

> '[...] Friedrich Wilhelms University succumbed to Nazi pressure like all other institutions. Nazi purges of Jews, socialists, and free-thinking individuals eliminated entire segments of its fine faculty and cowed the rest into silence.'[413]

The Kaiser Wilhelm Gesellschaft research institutes in the Berlin suburb of Dahlem, and the Technical University in Charlottenburg/Tiergarten faced a similar fate. The ideology of National Socialism penetrated the fabric of academic life. The progressive, liberal attitudes of the Berlin universities were displaced by conformist pedagogy. As Lefebvre's spatial analysis would suggest, the liberal conditions of Weimar Germany were overlaid with a dark, hidden and secretive space of totalitarianism.

An air and land offensive, a full-scale invasion of Berlin by Soviet forces, occurred in May 1945. The last stand of the Nazis in the capital ended with the breaking of the city, physically and psychologically. As Tent discusses, the fall of the capital to a wholly Soviet force explains, to an extent, the development of the post-war city. The division of Berlin into British, French, American and Russian controlled sectors, and the destruction of physical and social infrastructure, left the university system in total disarray. Following 1945, and the assumption of control by the Allies, distinct

413 Tent, James F *The Free University of Berlin,* (Indianapolis: Indiana University Press, 1988), p.7

differences between the western and eastern sectors' approaches to higher education emerged. Tent suggests that 'if the Americans had given little thought to education in general in the summer of 1945, they had given none whatsoever to higher education in Berlin.'[414] Yet the Soviets, at this stage, had indicated a willingness to organize and influence the rebuilding of the educational systems in the city. Tent observes that Colonel John J. Maginnis (senior American officer in the allied occupation) noticed the ideological potential of education, a fact that the Soviets were undoubtedly aware of.[415] Berlin University, as the Friedrich Wilhelms Universität came to be known, lay in the central Berlin district of Mitte, under the administrative control of the Soviets. Initially, the university was to be administered under the control of a four-part structure, as proposed by the Americans. But continued Soviet interventions in the running of the university, including submission of curricula to Moscow,[416] indicated the Russian attempts to move control of higher education into Soviet hands. The quadripartite control of the university was not accepted by the Soviets, who suggested that whilst the University was in the Soviet sector, it would come under the control of the Military Administration at Karlshorst, effectively placing it under 'exclusive' Soviet control in the summer of 1945.[417]

This assumption of ideological control over the reopened university can be seen as formative in the emergence of the conditions that led to the foundation of the Free University. Berlin University, under Soviet administration, became Linden University. Compulsory lectures in 'social issues and politics', admissions policies and arrests of dissident students in March 1947 raised considerable concern of the overt politicisation of the University. Tent observes:

> 'On May 1, 1946, the first May day that could be celebrated as an independent labour day in Germany since 1932, the authorities flew the flags of the four Allies over the university as well as a large red flag. Over the entrance to the university hung a large red placard with two clasped hands, the emblem of the newly created Socialist Unity Party. Later, loudspeakers proclaimed the consolidation of the socialist movement.'[418]

414 Tent., p.17
415 Ibid., p.17
416 Tent, p.27
417 Ibid., p.30
418 Tent, p.41

This politicization, in a manner reminiscent of the propaganda campaigns under the Nazis, drew emotional reactions from the student body. The position of the university was being used to grow socialist sentiment, encouraging what Tent refers to as 'unbridgeable ideological differences' between Marxists and the middle-class who saw a depoliticized mode of rebuilding the city.[419] German socialists, members of the Socialist Unity Party (SED), were being favoured for admission to Linden University – a condition that the Americans were aware of, and uncomfortable with. Direct involvement in the admissions process came in autumn 1946 in the form of a colonel from the Soviet Karlshorst military administration. [420] The Soviet administration's grip on the newly reopened university tightened. A student population of young, politically motivated and left-leaning individuals emerged. Gradually, through selection, the student body shifted towards a strong representation of SED members and those with a socialist leaning. Congruent with these developments in admissions was a rise in student engagement in the running of the university. The *Studentische Arbeitgemeinschaft*, a volunteer organization, intended as an equal representation of all political parties, became influential in student matters within the university. This organization was to prove critical to the later foundation of the FU, and future developments in the politics of that institution.

By 1948, this student movement had grown. Its politically diverse nature had been retained; the SED membership in the *Studentische Arbeitgemeinschaft* reached no more than fifteen percent. By 1948, tensions between the Western allies and the Soviets were mounting. Karlshorst's involvement in the affairs of the university moved the institution towards Soviet control. Active ideological programming of parts of the academic structure drew resistance from an older, more experienced student body, one who Tent suggests had 'been personally acquainted with the effects of totalitarian terror and most were not inclined to embrace an extreme ideology again.'[421] The arrest of students by the Soviets for 'espionage' pushed the politically active and motivated elements of the *Studentische Arbeitgemeinschaft* to question the Soviet aims and ambitions behind their administration. Within the student body there began to emerge a desire to establish an institution free of overt 'ideology': the seed from which the FU was to grow, nurtured by the Americans.

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419 Ibid.
420 Ibid., p.46
421 Tent, p.90

The movement towards an institution 'free' of ideology – an open institution, a transparent one - whilst supported by the American administration, nonetheless came from a student base. The *Studentische Arbeitgemeinschaft* gradually began to lose influence at the old Berlin University, and many of the student council left. Supported by influential Americans at first, the founding members of the FU included students from Berlin University, a group that Tent suggests demonstrates the fundamentally 'German' basis to the FU.[422] Support was sought from Americans such as Fritz Karsen, Fritz Epstein and Richard Sterling for a new Berlin university and the independent development of what Tent refers to as the 'Berlin Model'[423] of university organization. This model was set in the FU's constitution, a document that stated the institution's independence from ideological manipulation. The constitution states that:

> 'The university has the responsibility to serve scholarly research and teaching through freedom and independence to the community of scholars and teachers. It is to prepare students for those professions for which scholarly and scientific education is necessary and proper.'[424]

The constitution also radically altered the control of the university's funding. A board of trustees set the level of funding for the institution, chaired by the city's incumbent Mayor. The intent was to establish a closer link between the institution and the city, distancing it from the controlling forces of a centralized education ministry. The appointment of staff members, and the selection of students also differed from other institutions. The student body was directly involved in the admissions procedure and student representatives on the senate were consulted on the appointment of full professors. [425] This vocal student involvement was critical in the functioning of the institution. For Tent, this was not at first a radical move away from the authority of the university's administration: this involvement was a fundamental aspect of the establishment of a functioning institution. The radical challenge was to the order of the Berlin University under the Soviets. The move to the 'Free University' effectively being a statement of intent to rid an educational institution of a specific ideological position. The stated challenge was not to authority per se, but to overt institutional

422 Ibid., p.175
423 Tent, p.175
424 Ibid., p.160
425 Tent, P.161

politicisation: a situation that German students had found themselves in but a decade earlier.

Infrastructure

The Free University was inaugurated on 4 December 1948. January 1949 saw the former Berlin University change its title to Humboldt University, and the process of consolidating the FU as an institution began. Building work commenced on more substantial projects, replacing wooden post-war huts with structures funded by the university's supporters. By 1952, following increases in support from the US and the Berlin senate, the FU's budget rose to nearly ten million deutschmarks. However, according to Tent, this included only two hundred thousand deutschmarks for construction.[426] Support for the expansion of the university's estates (and therefore its student capacity) came from the Ford Foundation where an approach for funding had been met with a receptive response. In Tent's biography, an officer of the US administration is quoted as stating:

> '"In conclusion, Mr. Hoffman [the Ford Foundation's president] stated that the Free University's application would ordinarily have been declined by the Foundation, since the latter does not finance building projects of American universities. However, the enthusiastic recommendations of Mr. McCloy, Mr. Stone, and his staff in Frankfurt and Berlin convinced him and Mr. Ford of the vital importance of the Free University in educating and reorienting German youth.'[427]

The American money carried associations and expectations of a democratic system. The construction of new parts of the university enabled the expansion of both the faculty and the student body, which by 1961 had grown to 12,000 students, and would soon almost quadruple in size. Continuing investment in infrastructure, from both the senate and the various associated foundations, including Ford's continuing involvement, led to the establishment of further areas of study. The stated ambition of the university from the outset – to resist ideological programming of its courses, structure, faculty and student body – gradually began to take on an international dimension. Along with an increase in scale came a dilution of its original

426 Ibid., p.227
427 Tent, p.230

organizational form. With the considerable funding from the Ford Foundation came also an involvement in forming the areas of research and teaching. According to Tent, the Foundation recommended a dramatic increase in the scale of the American Studies department, with the intent to increase West Berlin's connections to the Western world. Inevitably, the institution was aligned with Western power structures, and as Tent observes, John F. Kennedy was appointed an honorary member of the FU.

Change soon occurred at the FU. Tent suggests:

> 'Berlin was a city of great cosmopolitan quality, the two officials [Shepard Stone and Frederick Burckhardt, of the Ford Foundation] stressed. What was needed now, over and above military and economic assurance, was for Berlin to attract "the type of people who are the carriers and leaders of culture and enterprise and who arouse hope in the future.'[428]

With this agenda, the university aimed to become a place of international repute, attracting students and faculty from across the Federal Republic, Europe and the United States. By 1962, the university had reached 14,000 and was growing. It had become a part of the mechanism for repair in West Berlin and Western Germany itself. However, the notion that the university would operate as a model for democratic, 'non-authoritarian' modes of teaching, in the relationship between student and professor, was gradually being lost.[429] Instead of the FU influencing the traditional university model in Western Germany the reverse occurred. The FU, during the early years of the 1960s, had started to seem closer to conventional university organization.

Arguments

A growing disenchantment started spreading in 1963 following the rise in Cold War tensions and the increasing efforts of the USSR to control their sector of the city. The tacit support of the Federal Republic for the US campaign in Vietnam became a focus of anti-American feeling among student groups in Berlin and Tent observes that a degree of antagonism towards the US had also developed among other West German groups following the Soviet construction of the Berlin Wall in 1961.[430] The lack of

428 Ibid., p.282
429 Tent, p.285
430 Ibid., p.287

resistance to this concretisation of the cold-war divide in Berlin from the Americans grated. To an extent, it marked the potentially permanent division of the country: an unappealing event for Germans, and Berliners alike. West Berliners saw themselves isolated: a Western outpost in a Soviet system. And as this isolation increased through the formation of the wall, a congruent growth in youth awareness of the West occurred. This was a questioning generation: politics, culture, social forms and university systems coalesced into a narrative of resistance. Tent suggests Berlin emerged as a nexus of these resistant and youth based cultures: its history, liberal culture and international significance placed the city at the fore of the German student movement.[431]

1965 saw dramatic disturbances on campus. The student body, now composed of more radically politicized individuals, saw fundamental disagreements over issues of free speech emerge between members of the student council and the professorial faculty. The radical Berlin journalist Eric Kuby, who held controversial views over the role and position of the FU, was invited by the student council to engage in a debate over the Federal Republic's progress. Kuby had questioned the ideological stance of the FU in the press. His suggestion that the university founded and presented itself as an ideologically reactionary institution opposed to the university in the East. Tent quotes Kuby as suggesting:

> '"Only the basically polemical situation in Berlin is able to hide the fact that in the title 'Free University' there is an antithetical connection to the other one. It is fixated upon the unfree university on the other side of the Brandenburg gate. In my opinion this is a connection which... is scarcely reconcilable with the scholarly and educational goals of a university."'[432]

This statement elicited a dramatic response from the rector at the FU. Kuby was banned from campus – an act that would have knock-on effects for the institution. Kuby was challenging the ideal of the founding of the university, effectively positioning it as an ideological tool of an emergent cold war. The mythology of the FU's foundation lay in its anti-ideological stance. What Kuby suggested very publicly was the inherent capacity for the institution to have an ideology – all be it one of

431 Tent, p.289
432 Tent, p.291

democracy, but an ideology none the less and one closely tied to an American agenda, at odds with its view of itself as a transparent intellectual endeavour – open to the light of democratic reason and rationality.

Kuby's ban from campus dramatically backfired for the Rector and professorial faculty. The university's administration was accused of censorship by the student body. The issue of free speech, restricted in Berlin's recent history, sparked protests on campus. The 8 May ban on Kuby's appearance and subsequent demonstrations by the student body escalated. National press took an interest, and by 15 May, as well as active protests by over 3,000 students, a full student parliament had met and universally denounced the actions of the administration as censorial and unjust.[433] As well as protesting the specific nature of this censorship, the student body identified an ossification of the governing of the FU. Instead of operating as an institution that provided a challenge to the traditional model of German university organization, the FU had started to follow these models. The position of the student body in its operation had become, to an extent, muzzled, and a more conservative administration of the university had emerged. The relationship between the FU's academic and student administrations – a fundamentally close relationship in the founding of the university – started to sour. Tent quotes the left-wing students as suggesting that:

> '"Thanks to the Berlin Model [the FU's specific form of organization] we have our place at the university, but our place is decidedly that of the outsider. We are constantly being outvoted in the various academic committees, and we have no influence in practice."'[434]

The student governing body had begun to feel disempowered within the existing structures of the FU. Continuing protests and escalations of the debate over free speech heightened the febrile atmosphere at the university. At professorial level, the relative power of the student parliament was progressively seen as a threat. Their capability to disrupt the running of the institution, and the knock on effects to research, scholarship and the 'international standing' of the FU were seen as damaging. By 1965, as Tent observes, the university was in a state of crisis. The productive equilibrium that had been established between students and faculty, in both the academic and administrative functions of the FU, had been destabilised.

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433 Ibid., p.292
434 Tent, p.296

Breakaway groups within the FU emerged, not least of which was the *Kritische Universität*, the Critical University. Formed from both faculty and students, with a Marxist agenda, they campaigned on German social issues. They also had an active architectural contingent, criticising sweeping urban development that threatened deprived areas of the city.[435] Tent's biography suggests that the FU, in terms of its student body, had become overtly politicised, and heavily left leaning. An atmosphere of young, left-wing radicalism had taken over the FU by 1968. Anti-American sentiment was running high at around the time of the opening of a new American supported institute, the Ford Foundation sponsored John F. Kennedy Institute for North American Studies.[436]

Architectural Developments

The expansion of the FU and the procurement of the new building in Dahlem, the *Rostlaube*, took place in a period of left-wing radicalism, social questioning and amidst an atmosphere of possibility. A 'new' society of 'anti-hierarchical organization became tied to methods of social re-building. It was within this context that the Candilis, Josic, Woods, Schiedhelm structure began to take shape. CJWS indicate the position that they approached the commission with:

> 'Our intention, then, is to provide within one organization the maximum possibilities for contact and interchange...whilst ensuring privacy for each specific function. In order to facilitate intercommunication between the various disciplines we felt it necessary to go further than the analysis of different faculties in different buildings; we tried to imagine a synthesis where all the faculties would be associated [...] and where psychological barriers which separate one from the other would not be reinforced by physical barriers [...] or by the physical identity of the parts at the expense of the whole.'[437]

This statement, issued as part of the winning competition project and published in *Architectural Design* in 1964, was conceived and developed during the upheavals in the FU's history. 'Poly-centric' planning was envisaged: a response against singular

435 Karapin, Roger *Protest Politics in Germany. Movements on the Left and Right since the 1960s* (University Park, PA: Pennsylvania University Press, 2007)
436 Tent, p.336
437 CJWS, 'Architects statement', *Architectural Design,* 8, (1964), pp.380-83

hierarchies and faculty divisions. As Gabriel Feld suggests in the Architectural Association's anthology on the FU, CJWS's structure suggested a form, organization and space for 'an alternative social order.'[438] This vision of a social order had, in part, been driven by the social upheavals experienced in the mid-sixties. Feld asserts that the CJSW building attempted to 'abolish relationships of domination' and tried to encourage a form of interdisciplinary engagement across the university structure. A desire to dismantle boundaries, as Feld suggests, came about through the spatial structure and organization of the physical infrastructure of the university. Its ordering was conceived with utopian ambitions – an open society of students, academics and the public. Through the organization of a series of interlinked streets, corridors and rooms in a characteristically CJW horizontal 'web' – an organizational device that implemented a regular, rational grid – a non-hierarchical institution was envisaged. Outdoor spaces interspersed this 'web' of interior routes and rooms, key areas in social interaction and engagement. For Shadrach Woods, as Feld recounts, this urban form is related to the structuring of the city: a model for a unified approach to intellectual life:

> '"The city itself, which is the natural habitat of Western man, is the school, college, university. We see the city as the total school, not the school as a 'micro-community'. Places of teaching and learning, when they can be identified as such, are an integral part of the structure of the city."'[439]

The relationship between city, inhabitants and learning was seen, by Woods, as naturally blurred. The planning of the FU resisted an artificial distinction between spaces of interaction and spaces of learning. By distributing specific functions across the 'web' and interconnecting them through interior streets, a blending of ideas and challenges to static models of disciplinarity were encouraged. The potential for this to spread – for the closed nature of a singular building to be challenged – was an integral part of CJWS's scheme. The boundaries of the project were markers, suggestions for future additions. The institution would become the city, the city the place of learning.

Alexander Tzonis and Liane Lefaivre, also writing in the AA anthology, suggest that the structural form of the FU was intended to operate as a 'proscriptive rather than

438 Feld, Gabriel 'Shad's 'Ideé Fixe', in AA et.al *Free University Berlin*, p.115
439 Woods, Josic, in Feld, 'Shad's Ideé Fixe', p.113

prescriptive' space.[440] Using the grid form of the 'web' as an organizing principle, potential and opportunity – through chance occurrences and interaction – were critical design factors. As a form of urbanism, the 'web' was a development of CJW's 'stem' idea: a design approach that Feld suggests looked at architecture as a 'conceptual system of organization.'[441] Developed from the practice's housing scheme in Caen-Herouville in France, the stem was intended as a linear organizational tool: the communal, 'collective' foundation of the housing programme. Off this stem, housing units were attached, operating as served spaces to the provisions of the shared stem. The notion of horizontal layers of movement as methods of promoting increased interaction, and the surface as an active element in the social programme of a building were developed here. These were ideas that infused the competition proposal for the FU, in which the influential French architect Jean Prouvé was instrumental in designing the cladding system – a technology that was integral to the spatial planning of the *Rostlaube.* Mohsen Mostavi suggests, writing in the AA anthology:

> '[...] Prouvé was more interested in the building envelope's performance than he was in its visual appearance. His and the architect's belief in the growth and changeability of the building resists a sense of compositional wholeness.'[442]

The *Rostlaube*, as built, had stemmed from a drive towards democratic structural systems. Systems not expressed through the built architecture, but activated by the physicality of movement supported by the infrastructure of the building.

CJWS's *Rostlaube* was not an iconic structure. Its visual 'architecture' was secondary to its systemic function. It did not produce a visual indicator of the university's status, but acted as a condenser of social activity. The cladding system by Prouvé, modular and, in 1968, technologically advanced, was implemented as a flexible system for future expansion *[122].* Walls were, as stated above, not terminations of the structure and this prefabricated system allowed for this possibility. The visual identity of the *Rostlaube*, as far as the architects were concerned, held no importance. If the building, in the future, had become subsumed by an expanding metropolis (and hence integrated into its urban structure), its rationale would have been achieved, and any

440 Tzonis, Alexander and Lefaivre, Liane, 'Beyond Monuments, Beyond Zip-a-tone, Into Space/Time' in AA et.al *Free University Berlin,* p.133
441 Feld, p.111
442 Mostavi, Mohsen in AA et.al *Free University Berlin,* p.103

visual indication of its existence removed. Fundamentally, this building was a response to social needs, as determined by the architects; its 'mobile, flexible, minimal structure'[443] acting as an organizational tool for the faculties of the FU that it housed.

Progressive Approaches

CJWS's position is markedly different to that of Fosters' contemporary architecture. Their social project can be seen as decidedly radical and left wing. Candilis-Josic-Woods' (as the practice was first known) approach to the social context of architecture, in the early 1960s, was progressive and critical of existing social forms. From *A Decade of Architecture and Urban Design*, edited by George Candilis, the author of the book's preface, Jürgen Joedicke, states:

> 'Candilis-Josic-Woods regard society today as an unhierarchical association of autonomous individuals, with change providing the only constant element. In their view, the structure of towns is based on human activities and not on geometry.'[444]

For Joedicke, CJW's later period of operation is marked by a move away from an earlier engagement with planning and architecture on aesthetic grounds, towards an understanding of architecture as systems, as organization. The team of George Candilis, Shadrach Woods and Alexis Josic formed in 1955. Candilis had met Woods at Le Corbusier's office in 1948, where they had been project architects for the Unité d'Habitation in Marseilles. In 1951, Woods and Candilis moved to Africa, running ATBAT (Ateliers des Batisseurs), Afrique. They returned to Paris in 1954 and 1955 respectively, where Candilis met Josic, working in the French HQ of ATBAT. The practice's formative commissions were largely low-income housing projects, their first being a competition win for generic plans for social housing.[445] Their approach to architecture was decidedly anti-monumental and anti-formalist. Joedicke suggests:

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443 Tzonis and Lefaivre in AA et.al *Free University Berlin,* p.139

444 Joedicke, Jürgen 'Candilis-Josic-Woods. Notes on the Origins and Planning Methods of the Partnership.', *A decade of architecture and urban design,* (London: Alec Tiranti, 1968), p.8

445 Ibid., p.8

> 'As architecture is conceived [by C-J-W] as a framework and generator of human activities, it is understandable that the pre-eminence [sic] of form should be disputed. The starting point for creating a new environment lies [...] in contriving a way by which the problem can be treated under specific conditions of place and time.'[446]

It was a contextual approach, specific to a set of characteristics derived from a specific condition that the practice adopted. These conditions were analysed and, as Joedicke suggests, mapped onto a ground plan: the basis for organizing a flexible diagram of use and programme. Their approach to planning was seen by Joedicke as developing partially flexible spaces, served by more programmatically defined elements: 'space clusters', whose function is temporally defined. For the practice, time was decisive to their design response. For Joedicke, they had no fixed idea of a form of organization, but operated in a contextually responsive manner:

> 'The [C-J-W] idea of a town does not derive from any predetermined method of organization, but from anticipating potential activities.'[447]

CJW's approach to urbanism was to generate a network of potential: a web or mat that allowed chance occurrences, events and activities to take place within a non-predetermined spatial environment. That which may occur, predicted from careful study and analysis of existing conditions, was allowed the possibility of being. Their projects attempted to be knowingly non-deterministic and flexible to the development of an urban infrastructure. As CJW suggested, writing about their approach to architecture:

> 'Our attitude towards building is that the organization of the plan generally takes precedence over all other considerations. Functional relationships, in so far as they can be determined, dominate the organization. Typically, the procedure is to separate the functions of the building into two families: those that can be defined with reasonable accuracy and those that remain relatively indeterminate functions.'[448]

Through this approach, a type of organizational functionalism was achieved. The flexibility of parts, such as the programmatically non-specific courtyards, is supported

446 Ibid., p.9
447 Joedicke, p.10
448 Ibid., p.21

by the programmatic and spatial specificity of ordering elements: corridors, stairs, access routes etc. These are the 'two families' that the architects speak of. They are evident in the ordering of the plan and section form of the FU, critical to the function of what the architects termed '*Freiräume*', or the 'open space system' of planning.

Streets and Systems

In this setting, Foster + Partners' library overlays one organizational system with another. The *Rostlaube* can be seen as a whole system that is a product of ideas on 'organization' that CJW developed and that attempted to deal with the combination of social and architectural structures. By drawing on structural analogies to describe the ordering principles – the ideas of webs and stems, systems of ordering that are inherent in nature – Woods suggests that:

> '[Whether] they are Stems or Webs, their purpose is to organize a field... The chief characteristic of such devices is their intent of total organization, this meaning that they are not exclusively concerned with certain aspects of the problem [of architectural production].'[449]

CJWS' FU could be described as a 'total yet pliant system', to quote Martin with regard to organizationally driven post-war US corporate architecture. It attempts to incorporate social ordering and architectural organization in a system intended to produce conditions that support a left-wing social situation.[450] The *Rostlaube* can be seen as a positivist technological utopia: a carpet grid, deformed and built around movement, interaction and chance encounters - the elements, suggest the architects, which should form a university environment. By 'organizing', by layering a field of potentials, moments are formed, suggests Woods. Moments that, within a dynamic system (a system of architectural organization), generate greater possibilities: extensions of ideas, thought, production, change. Seeing organization as the structural layering and composition of possibilities, the city is taken as a model for the FU,[451] which CJW see as network of streets, organized to enable potentials, possibilities and moments to emerge. With this in mind, CJW see organization as a thing of dynamic

449 AA et.al. *Free University Berlin*, p.19
450 Martin *The Organizational Complex*, p.4
451 AA et.al. *Free University Berlin*, p.20

potential, where the capacity for modification and alteration are central to an evolving urban form:

> 'We can already deduce from what goes before that, if we are to accept the concept of 'organization of the environment', then we must consider organization in these terms:
> - The only visible organization is one that is potentially dynamic.
> - The dynamic of organization is concerned with the evolution
> - of human habitat
> - The organizations with which we must deal are global in scope and discipline. They are conditioned by everything that happens in the world.
> - In urbanism there are not three but at least four dimensions, of which the time dimension is perhaps the most important.[452]

Organization, for Woods, is a complex of intersecting conditions controlled by time. The distances in the FU are not measured, in the designed and constructed realms at least, in centimetres. The experience of walking, the subjective time it takes to travel a certain distance, determines the objective building. As CJWS suggest, corridors in the FU have a duration, not a specific length per se *[125,126,127]*. Thus the building contains the possibility for continued temporal extension. In its modular capacity, and its prefabricated façade system, the intention existed to see the building grow out from the immediate structure to infiltrate a broader urban area. [453] CJWS's design intention was to see the *Rostlaube* grow as a city in its continuum of moments. In the FU building the external walls, the ends of the internal streets, are not dead-ends. They are intended to be temporary halts in a growing and expanding streetscape. The façades, the modular cladding system, the flat-roof structures are suggestive of extensions, expansions. They are resistant, so the architects intended, of stasis. Here time, and hence movement, is 'a mechanism for social interaction.'[454] Such designs, described as mat buildings, now considered to be a product of 1960s radicalism and social architecture.[455] They were seen as containing the potential to produce new forms of social organization through an approach to urbanism and architectural design that avoided the rhetoric of earlier attempts at radical social planning by adhering to a more rational and analytical form of design.

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452 AA et.al. *Free University Berlin*, p.21
453 Ibid.
454 Ibid., p.125
455 *Le Corbusier's Venice Hospital and the Mat Building Revival* ed. by Hashim Sarkis (Munich: Prestel Verlag, 2002)

For this reason the plan of the *Rostlaube* is based on a network of streets. It is an urban model of architectural development, constructing a gridded amalgam of streets and rooms, but it is not a gridiron development. There is a crucial deformation of the street by the volumes of the rooms and lecture halls. Whilst the planning grid, based on a minimum unit of 30-centimetres, is paramount, it does not impose a defined set of gridded spaces. The construction of the 'ideal city' was key and was more important as a design approach than the organizational grid. For Reyner Banham writing shortly after the completion of the project this ideal urbanism overtook the social ambitions of CJWS's design:

> 'The avoidance of rhetoric has defeated itself. The design is made to misrepresent its intentions, by not saying anything at all. The FUB [Free University Berlin] mumbles away its own virtues. And it does not, in fact, avoid rhetoric. [...] The design for the FUB did not begin as a university, it began as a piece of the city. It is a reworking of a slightly earlier Josic/Candilis/Woods competition project for the rebuilding of a part of downtown Frankfurt-am-Main!'[456]

Surely this is the point with the *Rostlaube*: that it was not specifically an isolated institutional building but something that should have developed out of an urban approach to architecture and the city context. The rhetoric of organization is a greater part of the development of the new addition to the FU, and as in the process of the development of the contemporary city, a-contextual aberrations become normalised.

The Philological Library

The Foster + Partners' addition appears as technologically advanced semi-biomorphic growth sold as a force for reorganizing the university campus. As the original FU developed from another form of design, so Fosters' intervention stemmed from earlier plans for an 'Autonomous House Project', designed in collaboration with Buckminster Fuller.[457] Organized as two cerebral hemispheres, the library seems an aberration in the Foster orthodoxy of linear, sequential organization. However, this formal break from previous Fosters' projects is only that: formal. The building operates on a strictly rational set of principles. With balconies undulating in plan-form

456 Banham, Reyner 'Ground Scraping', *New Society*, 12 August 1976, p.352-3
457 Brensing, Christian, 'The free university still embodies the social and architectural dynamic of the 1960s.', *Architects Journal*, 15 September 2005, p.34

and the Fuller-like space-frame cover, the practice orthodoxy of architecture as systems organization is masked by a formal, sculptural quality.

The chequer pattern dome of the library rises above the *Rostlaube [122]*. A silver and transparent skin reveals the space frame, painted yellow, through glass panels *[128]*. This frame – expressed both inside and out – is sandwiched between two layers of skin, forming a conduit for passive, stack-effect ventilation. Internally, this technical function is made manifest through panel sized grey-louvered ventilators. Part of the 'intelligent' responsive climate controls, these are opened and closed to draw air from the base of the dome to the top: providing the majority of air-handling and cooling, assisted by limited air-conditioning and heating when required *[129]*. This is intended, however, to assist passive systems during peak-loading periods. Temperature controlled vents on the outside skin of the building, particularly at the top, but also scattered across the skin provide a visual cue to the climatically responsive nature of the structure. An obsessively planned system of rational ordering provides the potential to deviate where desired: the domed cover permitting a spatial and organizational freedom through the creation of a climatically controlled environment. The hermetic totality of this environment enables the positioning of workstations in locations that are independent of external influences of weather and light-conditions. The external environment is nullified by the homogenising quality of the dome's skin. An atmosphere of passive ambience is delivered by this domed covering: a seemingly neutral background against which to work *[130, 131]*.

Light Bubbles

Fosters' start to use transparency as literal architectural rhetoric to describe the building. Christian Brensing, writing in the *Architects Journal,* suggests:

> 'Each floor plate is defined on the periphery by continuous curvilinear reading desks, which create dramatic terraced spaces. Instead of being simply repetitive, the swinging reading surfaces probe the space, almost reaching the internal roof skin, which is made of white fibreglass panels and translucent ETFE elements. Appropriately, Foster senior partner Stefan Behling calls it a 'light bubble.'[458] *[123]*

Brensing is an architectural journalist, and also director of Christian Brensing Enterprises, a public relations and business development consultancy for architects.[459] He situates this 'light bubble' in dramatic contrast to the original structure, fabric and organization of the FU. According to the university authorities, it introduces increasing efficiency, bringing together the dispersed collections of the philological faculty into one centre, effectively reordering through a logic of visualisation, as Lefebvre discusses through Panofsky, by bringing the organizational of the facility and the organization of the technology of the library into one technically advanced unit. Brensing's description indicates the different quality of the architectural elements of the new scheme: words such as 'swinging', 'dramatic' and 'probe' could not be used as descriptors for the CJWS scheme. As part of both the development of the brand identity of Fosters in the architectural press, and the prestige position of the university. These are terms that describe the position of singular events, not interlinked actions forming a whole. The use of the term efficiency in the university's description of the project is important: a connection between the rational and logical form of the new building, its integrated systems of storage and methods of light admission, and the efficiency of organization. The terms used to describe the project above are descriptions of the 'new', very much within the vocabulary of Fosters. As Brensing suggests, the library aims to implement a 'new spatial concept to make everyday academic life more efficient.'[460] Although deeply concerned with organization, efficiency was not a driving force behind the CJWS scheme. Indeed, an argument could be made for the converse: the planning behind developing the 'ideal

458 Brensing, p.34
459 See Christian Brensing's profile on his business wesbite. 'Christian Brensing Enterprises' <http://www.christian-brensing-enterprises.com/profile.html> [accessed: 15 April 2010]
460 Brensing, p.37

city' model for the university was intended to allow for inefficiency, chance and the factors that produce a vibrant university life. By allowing moments and places of slowness, CJWS intended encounters that could be judged inefficient by the standards of productivity: their project had grown out of a realisation of the potential to organize the world under a different model of social engagement. Efficiency and clarity of purpose, the Lefebvrian transparency of idea, were not on the agenda of the *Rostlaube's* original architects.

Foster Insertion

Foster + Partners' website describes the new library in terms of technical capacity, linking translucency and transparency with ideas of educational efficiency. It indicates a position in contrast to the *Rostlaube.* The idea of a unity and a continuum of space is suggested, and the technology used to produce this open capacity is emphasized. As the website states:

> 'The new library for the Faculty of Philology occupies a site created by uniting six of the Universitys [sic] courtyards. Its four floors are contained within a naturally ventilated, bubble-like enclosure, which is clad in aluminium and glazed panels and supported on steel frames with a radial geometry. An inner membrane of translucent glass fibre filters the daylight and creates an atmosphere of concentration, while scattered transparent openings allow momentary views of the sky and glimpses of sunlight.'[461]

In contrast, the 'web' of CJWS's *Rostlaube* sets up a loose system of implied methods of interaction within the architecture. Its design principles allowed for a 'poly-centric' method of organization. Faculties were spread across the FU building, with the express intention of creating a boundary-less and de-centred institution. Organizational principles of the 'web' and 'stem', and the connections of rooms and courtyards in this horizontal matrix were intended to produce a destabilised condition of interdisciplinarity and chance. A resistant piece of architecture and urban design: a challenge to the status quo of post-War society in built form. As Tzonis and Lefaivre quote Woods as saying '[...] We do not practice democracy nor do we live in an open society [...] we hold up these as ideals to be revered, while going about the sordid

461 Foster + Partners, *Free University, Berlin,* <www.fosterandpartners.com/projects/0980/default.aspx> [accessed: 10 May 2008]

business of getting and spending.'[462] The inevitably unrealised utopia of CJWS's FU, in the climate of 1960s radicalism, attempted to manifest these ideals of an open and intellectually critical society.

The Foster + Partners FU scheme shares technical ambitions with the *Rostlaube*. Technically advanced forms of cladding, material developments and systems of modularization are common themes to both projects and an approach to rational methods of spatial planning is also shared. However, the effects and ideological programmes are radically divergent. Where the CJWS structure uses a rational form of planning and organization to develop a polycentric model of an institution, the Foster insertion operates as a centralising device. Its primary functional purpose is to bring together the disparate collections of the FU's Philological Department under the singular, luminescent dome. Where the technology of the CJWS scheme was intended as an expandable threshold to an interiorized cityscape, Foster's technical façade operates as a more hermetically sealed device. The scope for ad-hoc addition, alteration and change are denied through highly specific technology and spatial planning. The new library, in this respect, operates as a rigidly and literally transparent piece of organizational architecture. The open planning of the library is strictly controlled through technological mediation – a considerably more abstract space (in the Lefebvrian sense of a controlled and technologically produced environment) that regulates a previously dispersed library collection and introduces singular rationality into a system that was designed to allow for multiple different centres. Paul Makovsky, writing for *Metropolis Mag* and interviewing senior Foster partner Stefan Behling, indicates the design approach that the practice took to the planning of the library:

> '[...] Behling – Foster's resident expert in ecology, sustainability, and energy conservation — says the team debated a long time over how to contrast new and old, and decided to look at the library from the inside out. "Originally we had book racks going four stories up into the air, where you'd be sitting on this mountain of books," Behling says. "We realized the perfect solution was some kind of monk cell — something more abstract, timeless, and contemplative. That's when we came up with the idea of a wide parachute or balloon that would wrap over the whole thing."'[463]

462 Tzonis and Lefaivre in AA et.al *Free University Berlin,* p.139
463 Makovsky, Paul 'Thought Bubble', *Metropolismag,* February 2006

These descriptions of the Foster + Partners FU – abstract, timeless and contemplative – stand dramatically apart from the principles of the CJWS structure. The conceptual underpinnings of the library demonstrate the approach Foster + Partners have taken to the existing fabric of the FU. The expansive potential of the CJWS building is challenged in the Fosters project. Time, as a central factor in the reshaping of the relationship between architecture and society for CJWS is negated in the library. Its scale is calibrated vertically by human dimensions but, unlike the existing FU structure, time and movement are not used to calibrate its relation to the wider context of the university. Unlike the *Rostlaube,* the Foster library is not designed with the potential to be adapted, changed and manipulated to fit a new context. It is a singular system that is resistant to the adaptations that change of use over time brings, being closely tailored to a specific role and function within the institution.

The library has a radically different role to play for the university in the current context of Berlin, and Germany. Its model of organization relies on a visual openness, a literal form of transparency, in order to create a centre and a heart for the rationalization of the *Rostlaube.* The media of light, as Martin following McLuhan would suggest, is used to organize the interior space of the library, producing an environment of 'efficient' studiousness and a technologically mediated space of learning. As Markovsky's interview with Behling suggests, the desire to produce an absolute openness to the illuminating potential of light (a decrypting of the more complex *Rostlaube*) was explicit in the design:

> 'Behling's perfect building is, of course, the planet Earth. He describes its atmosphere as "a funny layer of dynamic gases and clouds constantly moving around this globe, somehow making it possible for us to live. That layer to me would be the perfect skin. The Free University is trying to go in that direction, and it's doing it more than any other building I know. Next time we'll do it with just air and gases moving, and no space frame."'

Fosters' ambition behind the library was more interested in the potential of a translucent and transparent skin to dematerialise – the Modernist ambition of the effacing of the wall as discussed above in relation to Neumeyer and Vidler *[123].* The

<http://www.metropolismag.com/cda/story.php?artid=1745> [accessed: 12 November 2008]

desire for an architecture of almost nothing through transparency contrasts with that of the CJWS scheme, and appears to be more about control, in the sense of a regulation of the interior environment for the purposes of the production of efficient environments for learning. In the *Rostlaube,* however, transparency is equated with democracy and, in an interesting twist of the metaphor, this brings the discussion round to a German myth of transparency, openness and democracy that has been activated by the architecture of the Federal Republic.

Spatial Democracy

The CJWS project equates, through the planning of the *Rostlaube*, a relationship between space, movement, meeting and democracy. The building, in line with the agenda of the Free University, attempted to promote a democratic form of institutional organization through the physical organization of space. This attempt to produce ideologically supportive conditions through space is central to the development of a post-War, German condition within architecture. As Barnstone suggests, building in the Federal Republic from 1945 was tied up with drives to reinvent the notion of 'Germany'. The democratic institutions of the newly formed Federal Republic aimed towards the development of an 'open society', an idea propagated by members of the so-called Frankfurt School, namely Jürgen Habermas and Ralf Dahrendorf.[464] This development of liberal, Enlightenment focused thinking from Kant, Fichte and Hegel and Rousseau (*The Social Contract*[465]), made the

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464 Barnstone *The Transparent State*, p.31

465 See The Oxford Dictionary of Philosophy, social contract.

'A basis for legitimate legal and political power in the idea of a contract. Contracts are things that create obligations, hence if we can view society as organized 'as if' a contract had been formed between the citizen and the sovereign power, this will ground the nature of the obligations of each to the other. This form of theory is prominent in Hobbes. In Locke and Rousseau the idea becomes one of a contract between citizens, as a result of which power is vested in government, rather than that of a contract between citizen and sovereign. This aspect is also reproduced in later contractarian writers such as Rawls. Social contract theory needs to explain whether the contract is thought of as having actually taken place, or as implied by social conformity, or as merely hypothetical, with the idea being that a legitimate body politic is one that a suitably placed agent could rationally have contracted into. Hume's essay 'Of the Original Contract' is a devastating critique of some uses of the notion, primarily on the grounds that both the obligation we owe to contracts, and that which we owe to civil society, are constructions which themselves stand in need of some other fundamental basis. See also contractarianism, general will, original position, state of nature.'

The Oxford Dictionary of Philosophy. Simon Blackburn. (Oxford: Oxford University Press, 2008). Oxford Reference Online. Oxford University Press. 20 April 2010 <http://www.oxfordreference.com/views/ENTRY.html?subview=Main&entry=t98.e2892> [accessed: 20 April 2010]

connection between states of transparency an ideal of democracy. As Barnstone suggests, it was a search for an alternate meaning through architecture, as an opposite to totalitarianism and Nazi rule, that led to the development of what she terms a 'transparency ideology' in West Germany following the war. The '*nullpunkt*', the 'zero hour', suggested a new start for Germany, a start that was closely allied to a transparent ethos across architecture, politics, culture and national identity. This ideological imperative to make open, to allow the gaze of the public to fall upon those administering its state meant a literal opening of architecture. From the initial parliament in Bonn through to the Reichstag in Berlin, this involved invoking the power of glass to provide vision into what was previously closed. In the latter period of the twentieth century, the ideology of a transparent state presented through a transparent architecture has persisted. The founding of the FU, as an institution committed to student participation and 'open' debate, was part of this theme. As the journalist Kuby had stated in the 1960s, the institution had, to an extent, formed itself around its opposite, the 'non-free' universities of the East. It was the very openness, the model of progressive education, social reform and democracy (not socialism, as the later student movement would suggest) that was at the centre of the founding of the FU. The founding agenda was only radical in terms of its response to events at the Berlin University; its model was much more closely allied to that of North America. It was by no means, initially, a left-wing institution. It was decidedly centrist and fundamentally committed to a democratic mode of operation. In its very founding brief, it subscribed to an ideology of transparency.

This transparent ideology, firmly based in a post-war German condition, can be read in the CJWS project. Here, the quality of organization of the project produces a condition of open participation. And here, it can be argued, CJWS inhabit a more complex interpretation of the zero hour of German politics. Their scheme uses a transparent agenda to define a system of potentials. Transparency is measured as a factor of time: meeting, chance, accidental cross-collaboration between previously disparate disciplines (as is the ambition). Transparency is not employed overtly as symbolic device, as occurred later in Germany and in other democratic architectures. The *Reichstag* uses literal devices to communicate a visual message about openness, democracy and civil society through the glass cupola, transparent façade and 'open'

debating chamber. The *Rostlaube* at the FU develops a complex approach to transparency through movement, articulated in the organization of plan and section form.

The intention of the scheme, to designate spaces according to an understanding of human movement over time, developed the plan as an ordered grid broken in critical areas to generate spaces for meeting, with circulation driving the spatial structuring. This project is not about visual identity or architectural experience. CJWS intended the scheme to have a deference to site specifics, following the lateral change in levels with a marked step in section, remaining lower than surrounding ridge heights. Its identity is indicated largely through the condition of the technology of the building: its cladding system. In Dahlem, the FU is not evidently iconic *[122]*. The approach to the entrance is markedly anti-hierarchical. There is no ceremony or evident drama of entry to the structure, being reached across a slightly inclining landscaped plaza, re-planned as part of the Foster scheme. The main entry doors are positioned in a recess on the module of the grid and open directly into the main access corridor, leading to ramped access to first floor and ground floor rooms. The totality of the structure is never experienced: parts are revealed and presented as one moves through the building and no singular overview is possible. Glass does not dominate. The building could be said to be anti-transparent in a visual sense, as the ability to see into, through and between the elements of the building is not central. Whilst the corridor is connected visually to external courtyards, this connection is not immediate and explicit: it is presented over the period of walking-time down the corridor, not exposed in one singular perspective view *[125,126+127]*. These courtyards, which in the summer are important meeting spaces for students and faculty, act as external rooms off the corridors. Similar, yet distinct to, the corridors, they act as non-determined, non-hierarchical 'free' spaces within the grid: places of expression (sculptures, art works), socializing and rest. In their open, democratic potential (owned by no specific parties), they are free to be appropriated for non-productive use: spaces to meet and talk: disorganization within an organized web. They are a critical counterbalance to the 'productive' capacity of other spaces within the structure. In CJWS's rhetoric of urban-plan as expansive continuing grid structure, they are essential. They act as regulators to the connective fabric of the corridors: regulating their potentially unrelenting interiority. Within the scope of producing a

version of the democratic city, these courts act as the piazzas of the city at micro-scale. They can be read as the exterior urban-realm, the space off the street, reinterpreted through late-modernist planning.

Fig.125
Reconditioned corridor leading from the entrance of the Rostlaube towards the Philological library. First floor.

Fig.126
Corridor, first floor, Rostlaube. The Philological library can be glimpsed behind the glazing on the left

Fig.127
The Philogical library seen behind the windows of the Rostlaube

Fig.128
Interior of the Philological library. The curving skin of the 'bubble' can be seen revealing yellow painted steel structure in the interstitial space between interior and exterior skins

Fig.129
Vents on the exterior of the 'bubble' enclosing the Philological library, seen at the top of the image

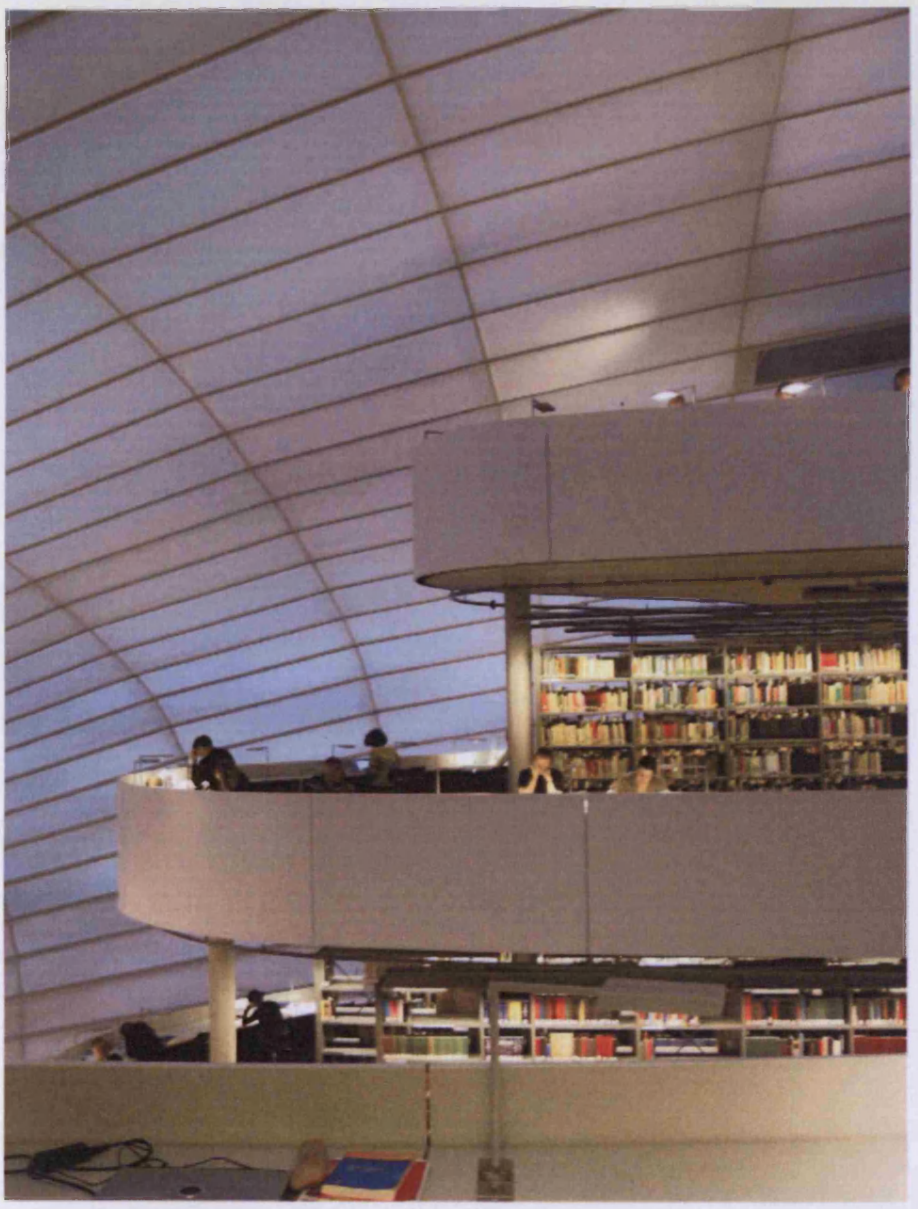

Fig.130
Interior of the Philological library. The curving skin of the 'bubble' can be seen revealing yellow painted steel structure in the interstitial space between interior and exterior skins

The street itself is the corridor. The connective fabric between rooms within the *Rostlaube* acts as an interior space of communication. And the building, in combination with electronic systems, operates as a 'flexible system in four dimensions'. As CJWS's statement, following completion of the first phase, suggests:

> 'The university as a place for the exchange of ideas and information calls for different kinds of spaces, which may be defined as: large-scale activity zones, study zones, and rest zones. These zones are mainly responsible for the way in which the building is organized.'[466]

The zoning is intended to allow for an intelligible and logical passage through the building. Spaces, through their scale, are approximately programmed, allowing for both intelligibility (a legibility, a Lefebvrian transparency, of spaces) and flexibility in use. The *Rostlaube's* organization is intended to promote dialogue, and as the architects state, this is achieved through the manipulation of section and plan:

> 'The fact that the building has only two stories, and unites different kinds of functions on two levels only, makes for easier communication.'[467]

Hierarchical, vertical distribution of functions is resisted here. Through a simplification of section, potential dialogue through meeting is encouraged. Ordering is developed through signage of singular colours, which is related to the colouring of walls and floors: an association with each area of general activity being made with the abstract colour choice. The spatial and temporal use of the building for the architects was the critical test of its success. For them, it was not designed as a singular object, but as a device to be used:

> 'The key fact about this building is that it has been designed not as a 'monument', but as an 'instrument' – for carrying out and developing multiplatform programmes that may also change over time. It is an instrument that the users themselves must learn to use.'[468]

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466 Architects statement, *Domus*, May 1974, pp. 1-8
467 Ibid.
468 Ibid.

As the architects suggest, this is not a passive structure. Its activation calls for a participation from its 'users' beyond that normally associated with an institutional building. In promoting this agenda, it attempts to achieve this state of programming through opening its structure to interpretation, chance and possibility.

Part of the generation of this didactic flexible 'tool' is the technology of the CJWS scheme. The skin, the cladding of the *Rostlaube,* designed in collaboration with Prouvé, is integral to the projected flexibility of the project. Its surface, as argued above, was never intended to be monumental *[132]*. However, developments in the demands of the university for centralized administration have changed the quality of this 'instrument' in the early twenty-first century: the notion of an adaptable structure, impermanent in its boundaries and anti-monumental in its presence, is altered through the approach taken by Fosters to both the construction of the new library, and the restoration of the existing structures.

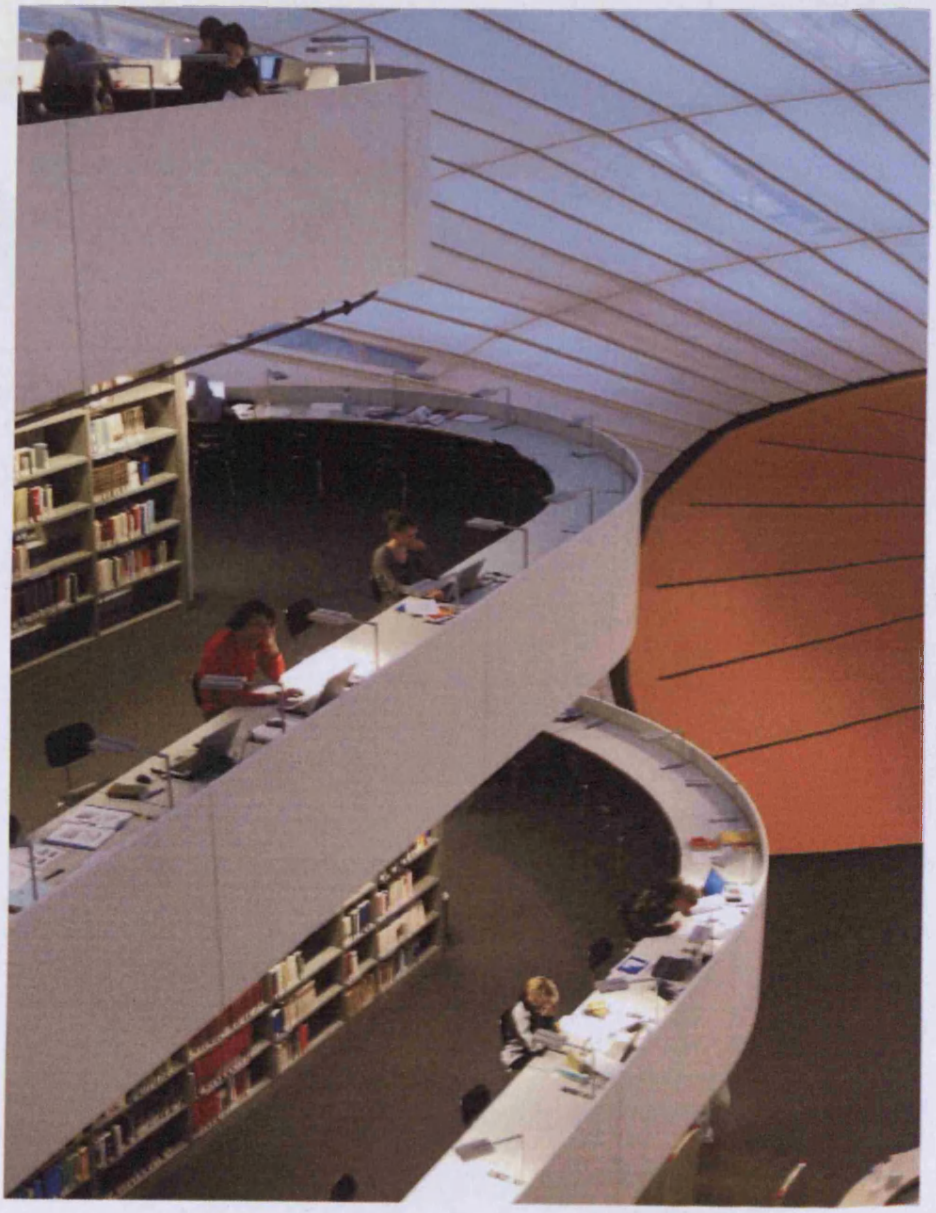

Fig.131
Workstations in the library, looking over the central borrowing desk

Fig.132
Principle access and emergency escape points of the Rostlaube

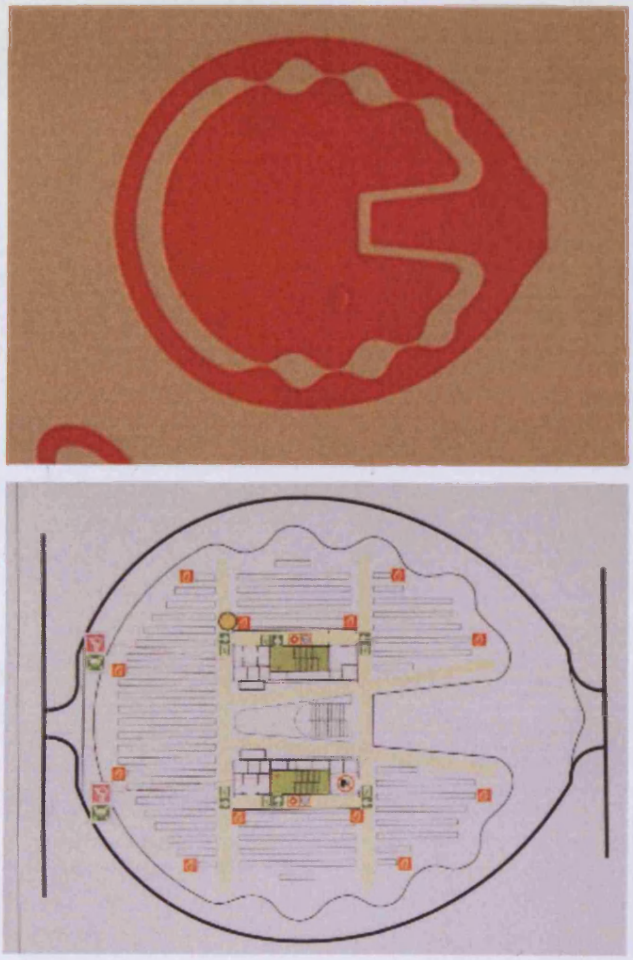

Fig.133+134
The 'Berlin Brain'. Icons and maps of the Philological library as resembling a cranial form

Centring

The Philology department's resources were previously distributed over eleven branch libraries across the Dahlem campus,[469] a position that, by the end of the 1990s was seen as disadvantageous for the FU. These eleven libraries[470] have been consolidated into the one central FU Philology library. A response to what Klaus Wowereit, Mayor of Berlin,[471] speaking at the opening of the FU library determined as the lack of a 'centre' for humanities at the University.

> '[...] here in Dahlem, work continues. The *Rostlaube* restoration project will be led by Lord Norman Foster – and already there is something happening. Another new development is planned. Here on this campus will be a unique concentration process instead of subjects that are still scattered over Dahlem. The FU [library] will provide a new impetus.'[472]

For Wowereit at least, the Foster + Partners library acts as a centring device for the institution. Disparate elements are brought together here, with the new library acting as a catalyst for this development. Mentioned throughout Wowereit's speech is this imperative to centring, to concentration. It is a critical theme surrounding the discussion of the role of the new building. It appears to stand in stark contrast to CJWS's intentions for their FU campus structure. Dr. Dieter Lenzen, president of the Free University of Berlin, also speaking at the opening, comments on the library being 'in the absolute centre of the campus', and draws upon the simile often used to describe the library as a centring device; 'What else can be in the centre of a university campus than, as Norman Foster calls it, "The Brain"?'[473]

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469 Philology Library: Facts about the opening of the Philological Library <www.fu-berlin.de/bibliothek/philbib/architektur/fakten/index.html> [accessed: 5 December 2008]

470 Branch libraries consolidated
Comparative literature
Altamerikanistik and Latin American
Byzantine studies and Neograzistik
German philology
Classical philology
Mittellateinische philology
Dutch philology
Romance philology
Slavic
Comparative linguistics

471 Klaus Wowereit, (October 1, 1953-), Social Democratic Party Mayor of Berlin since 2001 state elections

472 Philology Library: *Opening of the Philological Library: Message from the Mayor of Berlin* <www.fu-berlin.de/bibliothek/philbib/rede_wowereit.html> [accessed: 5 December 2008] (Google translations)

473 Philology Library: *Opening of the Philological Library: Message from the President of the FU*

The 'brain' as a descriptor of the FU library suggests its central organizing capacity. Defined by the Oxford Dictionary of English as '[...] functioning as the coordinating centre of sensation and intellectual and nervous activity', its use describes more than the physical shape of the building.[474] In plan, the library appears to have a 'cranial form',[475] its undulating workplaces stacking vertically. Diagrammatically, the structure is presented as brain-like on information boards and in literature across the library. The connection between ordering, intellect and centrality are well made: the 'brain' has become an icon *[133+134]*, a defining element in both reordering the physical state of the institution and redefining its brand image. As the FU president suggests:

> 'Situated at the absolute centre of the Dahlem science campus of the Free University, it will be the building with which the Free University is distinctively connotated.'[476]

On the homepage of the FU[477] the twin projecting prows of the decks of the library remain the constant in a banner of emblematic buildings from the campus. Refreshing the webpage keeps the Foster library in the upper-left, and circulates between the Henry Ford building, the *Silberlaube,* the *Institute für Informatik* and others *[135]*.

The building has become a marker for the university: a symbol of progress and faith in the Dahlem campus' future. The institution has used the image of the structure's interior to project an identity of technologically supported humanities research – situated as it is within an institute equally, if not better known, for its scientific research. In these images, the grid structure of the translucent dome sets up a regulated backdrop of luminescent neutrality; the foreground places the institute's crest on a Foster + Partners standard grey carpeting; and, through the deepened perspective of the photograph, focuses the centre of the image on the central issue

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<www.fu-berlin.de/bibliothek/philbib/grusswort_lenzen.html> [accessed: 5 December 2008] (Google translations)

474 'Brain, *noun*' *The Oxford Dictionary of English* (revised edition). Ed. Catherine Soanes and Angus Stevenson (Oxford: Oxford University Press, 2005) *Oxford Reference Online.* <www.oxfordreference.com/views/entry.html?subview=main&entry=t140.e9204> [accessed: 8 October 2008]

475 Foster + Partners, *Free University, Berlin,* <www.fosterandpartners.com/projects/0980/default.aspx> [accessed: 5 December 2008]

476 Philology Library: *Opening of the Philological Library: Message from the President of the FU* <www.fu-berlin.de/> [accessed: 8 December 2008]

477 Free University Berlin <www.fu-berlin.de/en> [accessed: 8 December 2008]

desk, framed by the symmetrically positioned decks *[136]*. The impression makes reference to the iconic symbolism of the Modern period's fascination with speed, technology and travel: the effect is of induced motion, drawing in to a core of information, knowledge, learning. In this image, a centre is clearly suggested, with an equally clearly delineated passage to the heart-brain, heightened by the airlock-like entry off the *Rostlaube* corridor. *[137]* As McLuhan suggests, the technology of the architecture is used to induce social change, '*[t]he effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without any resistance*'[478], and here that effect is to produce both an organizational centre for the *Rostlaube* and a branded centre for the institution.

478 McLuhan, *Understanding Media,* p.33

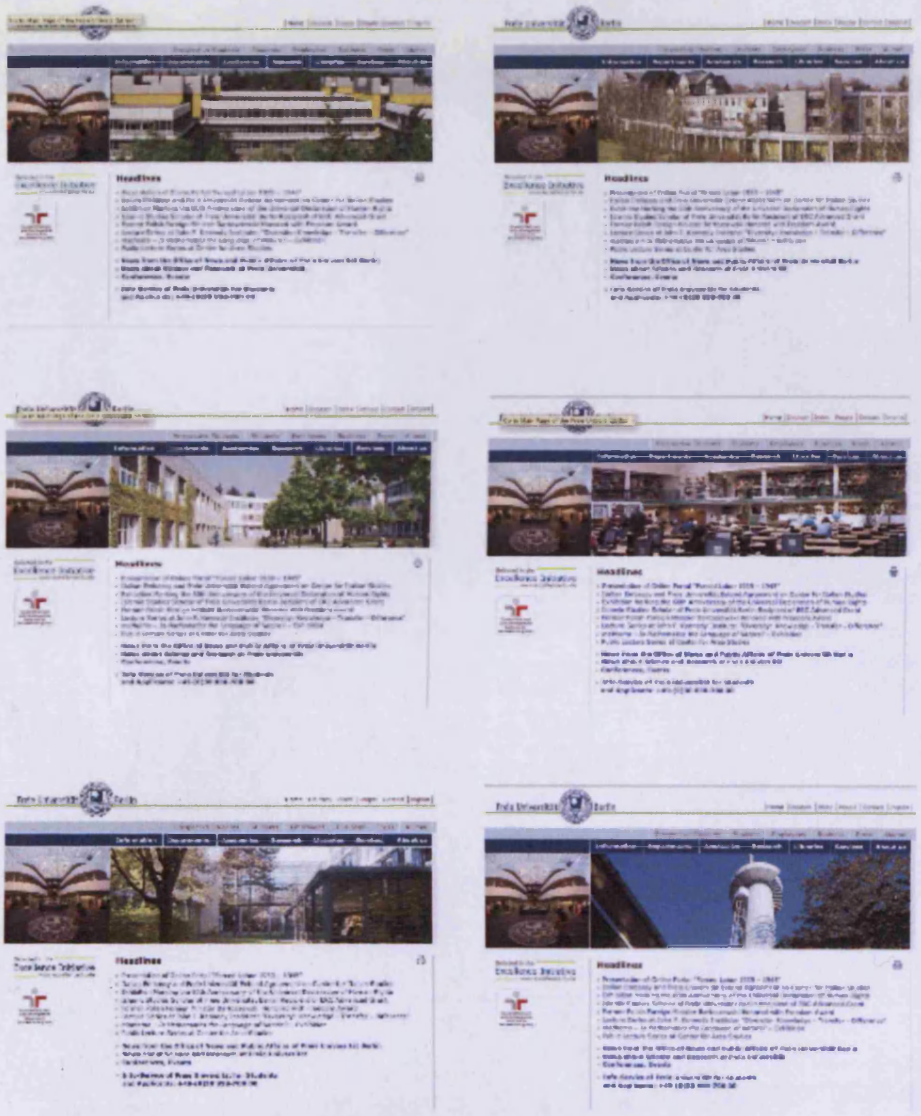

Fig.135
Screen-captures of the Free University's homepage. The image of the Philological library remains on the top-left of all refreshes. The other images are of faculty buildings around campus

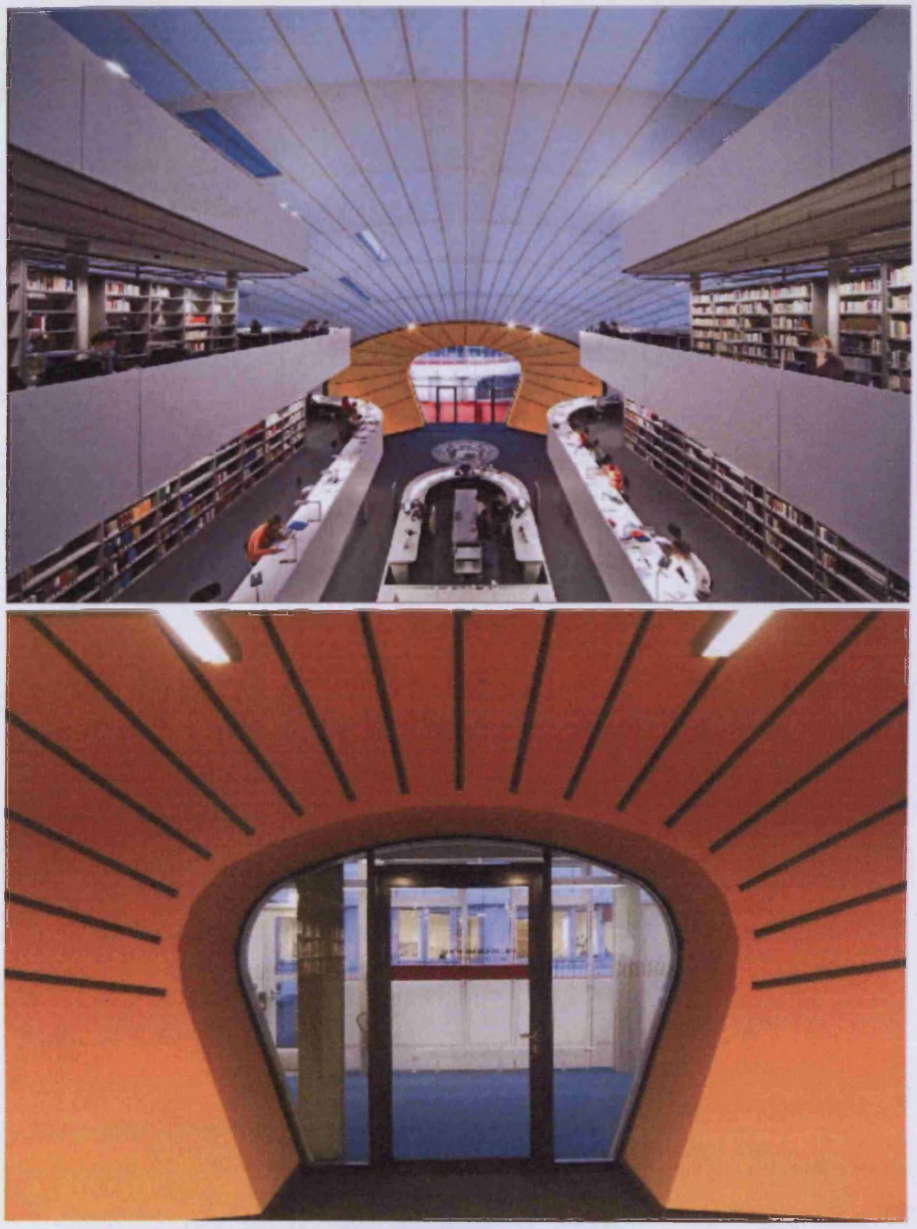

Fig.136+137
The main access point and borrowing desk; second proposed entrace, now locked closed.

Renovations

The practice's approach to the restoration of the *Rostlaube* indicates their approach to the stabilisation of the existing structure and also indicates how they have actively generated an iconic brand-image from the rusting-red facades of the original faculty. The CJWS FU scheme was never intended to be iconic.[479] These 'resistant' facades, suggestive of impermanence, adaptability and the passage of time have been monumentalized. They have been added to the cannon of modern architecture: the thorough reconstruction of the facades in their original form, in a new material (bronze) has fixed their condition *[138]*. The impermanence of the enclosure has been made permanent through this preservation: their iconic status, through the Foster + Partners treatment, has been generated, a status at odds with the radicalized politico-architectural ideology of CJWS. And through this fixing at a specific date (after the *Rostlaube* had become 'rusty', and before its skin had started to deteriorate), the structure is fixed in a specific time, preventing its intended temporal recalibration. The *Rostlaube* – a structure of dynamic potential and change, is placed into a form of architectural stasis: the disintegration of the façade - the rust - aestheticized in bronze and locked at around 1973. A solution to a performance problem, devised by Prouvé as a flexible system, embraced the potential to change according to need (the changes and events within the institution), which has now been interpreted as a defacto image of the structure. By this move of refurbishment (not reinterpretation, adaptation or response), the fluidity and changeability of the *Rostlaube's* surfaces have been brought into the rebranding of the institution as projections of its status and significance. Through Fosters' actions, the CJWS project has become amalgamated into the contemporary story of the new FU library: regulating, controlling and ordering the image of a previously loose, non-image based structure. As Mostafavi suggests:

> 'If they [the cladding panels] produce an image, it is the image of production where variations are brought about by a fixed number of elements. Ultimately the skin and the plan of the building become one. Together they construct an infrastructural architecture – a performative skin which directly participates in and responds to the building's functionality – its events.'[480]

479 Mostafavi in AA et.al, *Free University Berlin,* p.103
480 Ibid.

'Event' – time – conditions the architecture, as opposed to the architecture conditioning the event as an icon or monument would attempt to do. Production is a process of growth and change within a loosely defined system and for Mostafavi that is what the building projects. But the notion of the skin and plan becoming one suggest more than a representational relationship (in literal or phenomenal transparency terms), but an organizational relationship: the skin is both defined by and defines the interior organization in the CJWS project. Through it, functional adaptability and programmatic changes are intended to be supported by the infrastructure. Effectively, it doesn't matter what the skin looks like. What matters is how it performs: spatially, environmentally and organizationally. The skin seems sacrificial - but now, both metaphorically and literally, it is made monumental by Fosters and becomes part of the centralizing program of the FU.

Fig.138
Prouve designed, Foster + Partners' restored cladding panels on the exterior of the Rostlaube

The Brain

From *Architectural Record*, Clifford A. Pearson writes:

> 'Students at Berlin Free University have nicknamed it [the Foster library] "the Brain", an apt reference both to its function and its plan. The intellectual nexus of a dense network of linked buildings, the new library [...] indeed looks like a cranium [...]. More important, it's a smart building that employs a range of green design strategies and state-of-the-art digital technologies for connecting people with information.'[481]

On the Free University's website, an exploded axonometric diagram of the library's stacks is interactively navigable *[139]*. Collections can be found highlighted on the individual shelving units where they are stored. As one moves up through the section, each of the five levels are exposed, and as one hovers over the various groups of stacks, their contents are reveled in a pop-up box. The cranial plan-form is used in this software version of the library to 'connect [...] people with information'. Information here is evidently spatialized: knowledge is graphically presented as being located in a physical context, mapped and searchable across the institution and in the public domain of the Internet. The building's organization is made manifest in this digital interface, its legibility enhanced. In this representation of the building, its instrumentality is made manifest. As an 'intellectual nexus', the transparent capacity of the building to centre and control an architectural and organizational system of efficient information access. The 700,000 articles that are stored in the library have come from the centralization and amalgamation of the eleven philological branch libraries. As well as producing an image of a centre for the institution, the library actively organizes a centre. In a method not dissimilar to HACTL, the library's digital and physical infrastructures are married in both a spatialization of information and a spatialization of institutional ideology. The library mediates the relationship between people and information, processing both through a comprehensive reordering of relations within the existing fabric of the FU. By bringing the previously disparate collections together into a regulated environmental, technical and spatial whole, an image of a newly revitalized and productive institution is created – a technocratic, abstract space, in Lefebvre's terms. Inefficiencies in the old structure are ameliorated,

481 Pearson, Clifford. A 'Free University Library' *Architectural Record* November 2006 <http://archrecord.construction.com/projects/portfolio/archives/0611freeuniversity.asp> [accessed: 03 June 2010]

and moves to increase productivity amongst students, faculty and support staff can be made, as Martin suggests in the close relationship between spatial structure and institutional organization. The technological infrastructure behind the physical infrastructure of the library increases the ease of accessing material and ties the user into an abstract representation of the physical space in a transparent manner.[482] Regularized, centralized organization is imposed upon what was previously a space of non-hierarchical ordering and chance interaction. Literal and metaphorical transparencies are employed as media to organize, rationalize and control the spatial and organizational characteristics of both the library and the philological faculty buildings.

482 Lefebvre, *The Production of Space*, p.39-40

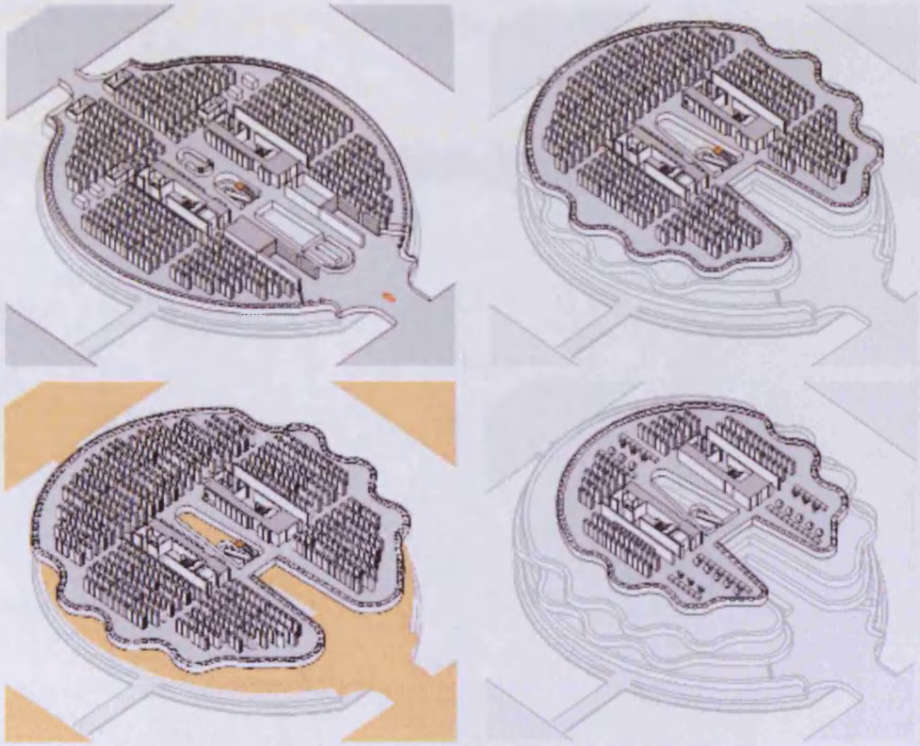

Fig.139
Screen captures of the online, three-dimensional guide to the location of items in the Philological library, the 'Infosystem'

Fig.140
Ariel view of the Rostlaube and the Philological library within the Dahlem campus. The Foster + Partners' library can be seen at the top centre-left of the image

A Transparent Agenda

Whilst both the CJWS structure and the Foster project pursue organizational modes of design, they operate with distinctly different agendas. As such, the Foster + Partners library can be read as a competing system within a system: one that actively regulates process (access, modes of interaction) performance (technological and human) and environment through a centering method of spatial organization. It operates, as Martin suggests, as a form of human homeostatic regulation. The medium of the architecture is used to induce changes in the organization of the *Rostlaube*, and through an ordered and rational plan, the previously loose and diffuse ordering of the building is given a centre and a singular heart – or rather, brain. A visual logic, as Lefebvre discusses, is used to indicate this heart and centre, presenting the identity of the library in both a micro and a macro context. Process, performance and environment are most efficiently ordered through this centering approach, and a new 'icon', emblem or monument for the University is constructed – a branded identity.

Organization is the principal functional purpose of the FU library. The scheme contains an explicit intent to order, rationalize and centre *[140]*. There is also an explicitly stated desire from the practice to make an architecture of nothing – the attempt to reduce the spatial shell to the absolute minimum required for the purposes of ordering and for producing a container for activities. Transparency can be seen here as an attempt to produce an image of advanced, ordered technological sophistication, the Lefebvrian form of technocratic organization and ordering. This image is brought to the university by Fosters and produces a new identity which is closely allied to the rational values associated with Foster and is both productive of and produced by a logical approach to values of systems engineering and rational planning, the transparent episteme that Lefebvre discusses. These values are capable of being broadcast to a wide audience, as an active generator of modes of physical and intellectual organization at the Dahlem campus in Berlin. The material structure works to centralize the space of the old *Rostlaube*, creating a centralized, easily surveyed panoptic point of control for the newly combined libraries – and through the production of an image of order and control, as Baudrillard comments, power is activated in the individual through a transparent form of spatial practice. The somewhat chaotic and loose organization that was inherent to the structure of the *Rostlaube* and that produced and presented conditions of change in 1960s German

higher education culture, is as Lefebvre would suggest in his analysis of the production of space, overlaid with the spatial conditions of literal transparency – transparency as that opposed to the irrational, chaotic and willful. Transparency as decrypt or of that which is not singularly controlled through a fixed, hierarchical organizational structure. Although first intended to have cross-access, now there is only one point of entry and exit. It connects physically a virtual realm – the online, three-dimensional catalogue – with a physical environment. Through this productive generation of a logic of organization, through a logic of visualization, a logo (the Berlin Brain) emerges that generates a new sense of identity for the university recognized by both Berlin, through its Mayor, Wowereit, and internationally, through the associated press-coverage, and the newly coined nickname which now takes contemporary precedence over the old nickname of *Rostlaube.* The architecture, therefore, produces an identity (a brand) through the production of an image of a set of transparent ideals. Clarity, lucidity, access and openness are all facets of this project that stand, to some degree, in contrast to the perceived identity of the structure within which it sits. The *Rostlaube* has become associated with difficulty in navigation, with confusion and with a diffuse disparity of places.[483] The new Library, in response to this, has become symbolically and practically a tool for reordering the image and structure of part of the FU. Media as architecture is used here to order. Media, as pictorial image, is also used to communicate the message of that order. The building and its symbol work in a union of rhetorical and practical transparency to produce a real and virtual space of integrated brand identity and organization. The transparency of the project is active in both its physical aspect, allowing a new form of ordering to be present within the old condition of the *Rostlaube*, and in virtual form, as a producer of identity for a rebranded institution: one that is steadily re-aligning itself with an Anglo-Saxon model of a semi-corporatized university system, and as such works as Baudrillard suggests, to produce a simulation of these conditions of openness, and democratic structures, where corporatism and institutional branding are considered central to the running of a modern higher education establishment. [484]

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483 From discussions with current and previous students at the FU. February 2008, September 2008 and February 2009.

484 See Liefner, Ingo, Schätzl, Ludwig and Schröder, Thomas 'Reforms in German Higher Education: Implementing and Adapting Anglo-American Organizational and Management Structures at German Universities' Higher Education Policy, 17 23–38 (1 March 2004) <http://www.palgrave-journals.com/hep/journal/v17/n1/full/8300039a.html> [accessed: 20 April 2010]

5. Conclusions

This thesis began with an overview of the definition of transparency. From here, it developed an analytical approach to Fosters' use of the transparent. These ideas, taken in combination, were used to investigate three case study projects: the Palace of Peace and Concord, the HACTL SuperTerminal, and the FU Philological Library. Five concluding statements are offered here following the analysis carried out in the examples. They are organised from the most specific and material applications of transparency, to its broadest political implications. As Baudrillard and Lefebvre have shown, there is by no means a singular answer to a singular question of transparency. The five statements, interlinked, operate together by way of conclusion.

The definition of transparency, set out in chapter two, describes transparency, following Lefebvre, as being actively produced: productive of and produced by social relations. In this definition, transparency is seen as being a trope of Western culture, intimately linked to the democratic and induced through material and technological media, described by Barnstone and Fierro and theorised through Martin and McLuhan. Transparency is closely allied to lucidity, clarity and openness within organizational structures and acts, as Lefebvre suggests, to decrypt the hidden. As Martin writes, architecture organizes through its media, and transparency is central to the organization of clear, open and lucid social and cultural structures. However, this is problematized through reading Baudrillard: transparency can be seen as productive of simulations of democratic conditions, the construction of simulacra.

Foster + Partners' design approach, as discussed in chapter three, sees transparency as a condition of material and spatial planning that is productive of order, rationality and organization through technology. Within their published material, transparency is used as a rhetorical device to indicate a technologically focused practice that generates order through architecture. Transparency is used to construct a brand-identity for the practice, creating an image that is readily consumable by institutions, corporations and states looking to enhance or develop their own corporate image.

The three case studies that follow these definitions illustrate the active role transparency plays in the production of Fosters' architecture, and its contextual position in a range of settings. In Kazakhstan, transparency is employed to organize both the spatial planning of the Pyramid and the identity of the country, inducing an appearance of an opening of a previously closed state. In Hong Kong, systems of complex and intersecting flows are managed by logical and rational material and technological structures in the HACTL SuperTerminal. Architecture is, again, employed to produce an image of a business and a country at a time of uncertainty that is open, clear and accessible – presenting transparent conditions within a transparent system. The final case study, the FU in Berlin, uses transparency to re-order and rationalize a previously dispersed institution. The practice, here, employs transparency to create a heart for an historically important building, and to create a new identity for the university.

The statements below, evidenced by the buildings' covert and overt operational structures, will point to the final contention of this thesis: that transparency's superficial clarity serves to obfuscate.

Statement One: Transparency Organizes

As seen at work in the principles of Fosters' insertion into the FU, the ordering of the systems and structures of the HACTL SuperTerminal, and the arrangement of spaces within and without the Pyramid, transparency is used to organize. In Foster and Partners' vocabulary, ordering and centring can be linked to notions of clarity, a synonym for transparency. These principles are at work in a multitude of Foster projects: from the Great Court of the British Museum, which uses the central court as a new device for organizing the visitor 'experience', marked by the dramatic symbolism of a vast transparent ceiling; to the unifying centrality of the atrium in the Palace of Peace and Concord, topped by a transparent cupola. Here, techniques of material and spatial transparency are being used to order, rationalize and organize. The medium of the architecture (its material, brick, stone, concrete, glass, plastic etc.) produces spatial arrangements, tailored in Foster's projects to encourage a legibility of space. Transparency is activated towards a singularity of organization, and works through the layout, integration of technology, and materials. At the FU the insertion

of a new piece of architecture operates to centre the organization and move the *Rostlaube* away from a previously disparate net of links, and towards a hub. The 'brain' brings together previously scattered sites into a single building that also operates as a centring device for a re-branded institution. Its transparency in structure (overtly expressed material joints, methods of construction and super-thin skin), which enabled the building to inhabit the central courtyard of the *Rostlaube,* is matched by its transparency in purpose: to re-order a set of institutional buildings and with it the organization of space. At HACTL, the combination of material and technological structures order and regulate the system of shipping. Here, transparency must necessarily be invoked by both the architecture and the corporation to produce a robust system of organization. Through the integration of technological systems and architecture, an efficient whole can be generated that is capable of large-scale systemic complexity. Transparency – as making open, clear and logical – controls. Openness to vision (both in the digital realm and in physical sight) is wholly necessary to ensure the successful functioning of this instrument, and to organize the systems that are a fundamental part of the architecture. The logical, ordered and transparent glass façade of the HACTL building is a productive part of this system, providing a metonym of the system as a whole. In the Pyramid, transparency is a principle of the vertical ordering of the project. A literal opening to the light, in the form of the glazed cupola on the apex brings light down into the atrium, where luminosity is used to order the experience of ascending the Pyramid, as well creating a process of centring via the main atrium space. The singular clarity of the form of the Pyramid on the exterior is mirrored by the logical and rationalized organization on the interior that, in diagrammatic form, the vertical ascent to the 'light' uses transparency as its singular ordering principle.

So, the first statement, that 'transparency organizes', is evidenced through these projects. This has been demonstrated in the Pyramid, where the transparent nature of the project also organizes the country of Kazakhstan. It does this through the production of a piece of architecture with national symbolic importance, as well as its significance as a tool to project an identity of benign national unity. It organizes a previously disparate country with the symbolic tool of iconic architecture. A similar approach to identity, as organization, is seen in the FU, where as well as producing a literally ordered plan, a new identity for the university is projected that aims to shift

the institution onto an international stage through a singular building project. Transparency here organizes a dispersed entity, through the production of a building as image, and brand, which is capable of international dissemination. These projects echo the analysis of Martin and McLuhan. Martin talks of 'media organizing': the media of architecture (spatial and material) is used to organize certain facets of a building's planning. But this level of organization also steps outside of the purely pragmatic and into the realm of the symbolic.

Statement Two: Transparency Projects and Brands

As well as being a tool that produces organization, transparency is also used to project identities. As Barnstone illustrates with reference to the Eiffel Tower, and the *Grand Projets*, the capacity for material to broadcast an identity is a phenomenon of state-led building projects. Scale, technology and engineering are employed to produce social effects that (in organizational terms) regulate the functioning of a country's identity. In Paris, the intellectual, technical and social weight of the French state was communicated through the construction of the Eiffel Tower. The cast-iron structure operated as a transparent projection of this state capability. In Kazakhstan, the Pyramid acts as the projection of a new identity of an 'open' state: open to investment from Western oil companies and to mineral exploitation. The Pyramid is not too dissimilar to the Eiffel Tower, although it operates to communicate to a different audience through its transparent structure and capacity. Economic and political stability are necessary to attract inward investment. Therefore the projected identity that comes from the Pyramid and its associated programme of religious activities generates an image of peaceful tolerance and religious co-existence. It also projects an image of a technically developed country. Particularly through the procurement of a piece of architecture by Fosters, it presents an image of a country that is unified and developed as a whole nation – distinctly separate from the identity of Kazakhstan under Soviet rule. Much like the *Bundestag* in Berlin a 'zero-hour' effect of restarting, 'clearing' the slate and starting afresh, is encapsulated in the Pyramid following decades of Soviet rule. Its internationally generic modernism, combined with a supposedly 'neutral' geometric form is intended to produce a structure that is wholly transparent to contentious issues of local identity, yet allows for the generic

application of symbols of international capital. A similar capability can be read in the FU. The projection of a 'new' identity for the institution is developed through the centralized device of the 'brain', which can be seen on the publicity material and website of the *Freie Universität.* An identity which was previously tied to the revolutionary activities of students in the late 1960s and became concretised in the socialist organization of the *Rostlaube* – through the development of a project of transparent systems, structures and organization by a company with internationally recognised status and values – has enabled the FU to re-brand itself as a university with international standing, high-quality facilities and a symbolically open approach to newly commercialised ways of providing for higher education. The rebranding of the FU is necessary to its project to expand international students recruitment. As for the HACTL SuperTerminal, it is necessary for the building to project an aura of stability and infrastructural dependency in order to both convince potential customers of its suitability as a transport hub, and to project an image of confidence in the economic future of Hong Kong post-handover. The transparent architecture of HACTL, in its façade, its spatial organization and its systems integration presents a brand image, for both the company and the economic base of the port of Hong Kong, of security, stability, openness and technological sophistication. Again the material existence of the building sends a message through its transparent capacity.

Transparency is used by the Foster practice not only to brand the identities of the projects themselves. It is used as a form of operational method. Through a carefully constructed idea of an instrumentalized form of architecture – architecture as a technical product – Fosters have used the synonyms of openness, clarity, light, legibility and accessibility to generate a brand identity for the practice. This identity is readily consumed by corporate businesses, institutions and democratic (and some less than democratic) states. The practice's appeal to logic and rationality as design drivers is critical in establishing themselves as a dependable, safe and yet architecturally progressive organization: the same values that become imparted to the clients of Fosters when they purchase a design from the practice. As Klingmann suggests with regard to the development of the modern brand, the process of brand creation is about developing an 'aura of meaning'[485] around a particular article or object, that is referring back to the brand that created it. Hence, with Fosters, this 'aura of meaning'

485 Klingmann *Brandscapes*, 'aura of meaning', p.55

produces an architectural brand that is regarded as what Klingmann calls a universal symbol and is also referred to as symbolic capital: an identity that is shared across cultures and regional distinctions within a globalized architectural environment. So, the 'universal symbol', this aura of meaning that the brand of Fosters creates, is that of a particular form of commercial Modernism, wrapped up in the widely understood values of the Western episteme: democracy, accessibility, meritocracy and technological capability.

Transparency is the window through which the universal symbol, common to Fosters projects, is seen. Transparency is the 'aura of meaning', and it generates an image of respectability and democracy that is easily purchased, but not so easily made real. Through the production of a transparent brand, an identity based in ideals of logical positivism (the scientific and rational) is presented through these buildings that exist within networked and globalized systems. Through organizational systems and infrastructures, their rhetorical stance is broadcast to a receptive audience primed to equate transparency with a positivist scientific culture: a cultural understanding located in western systems of thought that Lefebvre demonstrates reaches back to the Greeks and Romans.

Statement Three: Transparency is an Image

Transparency is an illusion. As has been illustrated by Lefebvre, transparency as both rhetorical device and physical condition imbues space with a metaphorical and literal luminosity. This luminosity is the product of a set of interacting images of the transparent. From clear glass screens to a logic of openness and clarity, the notion of transparency is productive of an image of space, as Lefebvre suggests, 'as innocent, as free of traps or secret places.'[486] This illusion of transparency, active in space, becomes part of the illusion of the systems that are supported by architecture.

Transparency in Fosters' projects is used to 'illuminate' (another term from Lefebvre) in order to eradicate potentials of chaos, disorder, irrationality – those principles that are against the episteme of the logos. The combination of the material properties of transparency, and the intellectual capacity of the transparent, within the schemes discussed here, generate an image of the conditions to which they point. Therefore, in

486 Lefebvre *The Production of Space*, p.28

the Pyramid, an image of an open (transparent) society of Kazakhstan is produced through the iconic status of the project to the country, as well as through the combined effects of the identity of the brand of Foster on perceptions of the project outside of the country. In order for the identity of the new Kazakhstan to be projected to an international audience, an image of the transparent nature of the building and what it stands for needs to be produced. And this image of transparency is literal: the picture of the building becomes associated with its programme and this then becomes associated with Kazakhstan. In the HACTL SuperTerminal, the same effect of the image takes place: the transparency of the project (in organizational, structural, material and metaphorical senses) is distilled into an image of a productive, efficient and effective system of regulation for the support of a system of trade and the production of a significant global hub for shipments. And, in the 'brain', the FU library, the building is again literally made into an image of transparent ideals and used as an icon for the projection of a set of new (or renewed) values for the FU.

These images of conditions allied to the theme of transparency are, however, just that: images. They construct a set of ideals of Western epistemes that are rhetorical products. What is important about discussing these as images is what Baudrillard's analysis of the simulacra gives us: namely, the capacity to look through the transparent façade of Foster's work, and discover the obfuscatory nature of the rhetoric of transparency.

Statement Four: Transparency is Rhetoric

There has been a rise, over recent years, in the use of the word 'transparency' to equate with accountability in systems. With particular reference to the 2008 financial crisis, as discussed above, transparency has been invoked as a way to prevent future events of this scale occurring. Over the past twenty years, since the fall of communism, transparency has been drawn upon as a particular form of visual rhetoric. For Fosters, this visual rhetoric is communicated through writings on their projects in their series of monographs and other publications. All the related words – clarity, openness, accessibility, legibility, rationality – have been used in association with visually and organizationally transparent projects. By associating their architectural product with the universally positive associations made to transparency,

Fosters have adopted this rhetoric of transparent values, and through projects such as the *Reichstag*, defined the architectural approach to the rhetoric of democracy for at least ten years. Transparency is now equated with democracy, and the rhetoric of politicians has been supported and developed by the rhetoric of architects when it comes to designing their places of assembly. The necessity of a visualized form of democratic assembly has become the norm, and Lefebvre's contention of Panofsky's 'visual logic,'[487] being the full opening, the revealing, of the hidden and secret, becomes manifest in the architectural embodiment of Western and westernized democracies. Through the work of Foster, the central, mainstream position of the logos is placed within the domain of democratic architecture, which as Lefebvre suggests presents an illusion, through this transparency, of space appearing 'as luminous, as intelligible, as giving action free reign. What happens in space lends a miraculous quality to thought, which becomes incarnate by means of as design.'[488] The luminous, logical and intelligible principles of design attributed to the Foster projects studied here provide this quality that Lefebvre talks about: the intellectual notions of democracy, accountability, accessibility and openness. This acts to make the systems that exist within – and have been partly responsible for the production of – these buildings incarnate: they become as real as a simulation can be.

Statement Five: Through Simulation, Transparency Obfuscates

Transparency, in the case studies investigated above, operates as a mechanism that makes open, clear and accessible. The principles applied by Fosters act to generate literal centres; to produce active lines of sight through glazing; to rationally order space through the use of light; and to make accessible through the opening of previously closed spatial shells and institutional structures. Fosters' architecture makes clear and lucid through the production of transparent images, the identity of a particular institution, organization or state. The mechanisms that Fosters use to do this are both architectural (as in spatial, material, technical) and rhetorical (written, spoken, drawn and diagrammatized representations of the idea of transparency). In the sense of the architectural production of built transparencies, there is the production of

487 Lefebvre *The Production of Space,* p.259
488 Ibid.

a visual rhetoric of openness, clarity and democracy through readily understood images of the transparent (glass walls, literally transparent structures, clarity of organization etc.) These are actual, extant and physical properties of this idea of the transparent. However, following Baudrillard's discussion of simulacra, the nature of these transparencies as mechanisms that work to obfuscate a lack of the democratic, can be unveiled. The readings of HACTL, the Pyramid and the FU, placed into their specific cultural and political contexts, have provided an understanding of why these projects came into existence, and what function (beyond the functionally architectural) they serve. It is through this process of contextual analysis, this interpretation through investigating the complex of reasons for a building's production, and what conditions that building subsequently produces, that I have been able to appreciate what the buildings studied are purporting to do. All three projects purport to produce conditions that, as I have demonstrated above, order, rationalize, make clear and accessible and present readily consumable images of the states, institutions and companies that they are constructed for. They do this, as indicated, through the use of transparency, in material, organizational and rhetorical ways. However, what they also do – and what is critical to the analysis in this document – is to *obfuscate.* Baudrillard suggests in *Simulacra and Simulation* that, as the ordering forces that regulate and promote the episteme of the democratic, and the forces of disorder and chaos proliferate (for instance the rampant, unchecked market economy), the symbols of that disorder also grow (the threat of terror, rogue nations); the contingent decline in what are considered the markers of liberal democracy (freedom of the press, individual liberty, voter involvement, accountable government and organizations) become restricted. But, Baudrillard suggests, this decline (of the democratic) is masked by a growth in the simulacra of that democratic power. As Baudrillard suggests:

> 'Power itself has for a long time produced nothing but the signs of its resemblance. And at the same time, another figure of power comes into play: That of a collective demand for *signs* of power – a holy union that is reconstructed around its disappearance.'[489]

The proliferation of signs of the democratic (the symbols of contemporary power) can be seen as the proliferation of the transparent. The growth of visual and systemic

489 Baudrillard *Simulacra and Simulation*, p.23

rhetorics of transparency – open government, transparency as preventative of corruption, transparency as regulator of financial systems – is matched by the growth of the architecture of transparency. And this growth of transparent rhetoric is correlated to the decline in the actual power of democracy. Baudrillard writes about the decline of God that, as images came to replicate the belief, so God died. God was replaced with the replica of God – with the simulation of the power of God, with a simulacrum. Baudrillard comments:

> 'It is when one is no longer sure of the existence of God, or when one has lost the naïve faith in a self-evident reality that it becomes absolutely necessary to believe in it.'[490]

And so with Democracy. As the proliferation of signs of the democratic (the media through which transparency is activated – buildings, technology, print and electronic) so a process of replacement of content is enacted. The democratic – which transparency works to protect – becomes replaced by an image of the democratic. Active and passive responses to the visual agency given by transparency become confused, and as Baudrillard suggests with regard to passivity and activity, cause and effect:

> 'Everywhere, in no matter what domain – political, biological, psychological, mediatized – in which the distinction between these two poles can no longer be maintained, one enters into simulation, and thus into absolute manipulation – not passivity, but into *the indifferentiation of the active and the passive.*'[491]

This indifferentiation of active engagement in a thing that claims transparent functioning from passive engagement typifies the projects discussed and Fosters' approach to the production of transparent architecture more generally. This is not to suggest that the practice itself develops this approach of indifferentiation, more that they provide the architectural services to render this cultural trend material. Transparent architecture presents the simulation of transparent, democratic cultures – and, following Baudrillard's argument, they do not forcibly induce passivity towards the content of the democratic. Rather, they create the condition of indifferentiation between the two: the indifferentiation between the active and engaged, and the passive, visual, consumption of symbols of democracy. Baudrillard states:

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490 Baudrillard *The Intelligence of Evil,* p.19
491 Baudrillard *Simulacra and Simulation,* p.31

'Convergence defines a society – ours – in which there is no longer any difference between the economic and the political. [492] Hence a politically engaged and active society is produced as an image alone, and the control of politics from the economic sector is cemented.[493]

Large-scale replicas of transparent democracies are produced that did, at the time of design (pre-War Germany to post-War Germany, construction of a marker of the *'nullpunkt'*, a shift to a liberal-democracy) produce some of the necessary conditions for democracy to exist *actively*. But the proliferation of the signs of the transparent started the shift, as Baudrillard would suggest, to the production of the simulation of active democracy, then to the indifferentiation between active and passive approaches to the democratic, seen in the rise of lobbying culture, the decline in voter turnout, the fragmentation of the political base of the left and the homogenization of the mainstream, neo-liberal, market-led parties. The mantra of 'change' that led Barack Obama to victory in the United States in 2008 can be read as a typification of this indifferentiation. 'Change' as a political virtue, as a democratic 'movement', became crystallized into the image, the icon, of an individual.[494] The change that occurs is that of subtle adaptation to a system: shoring-up of defective banking systems, industry and large-scale business through government subsidy. Fundamentally the change induced here was a change of rhetoric, supported by frequent and recurring appeals to the power of transparency to order, rationalize and make healthy systems that have become unstable and visibly weak. An indifferentiation of active change (revolution in its ultimate sense) with passive acquiescence to the subtle modification of an existing system was made, and hence the simulation of a dramatic moment of democratic triumph (supported by the west's liberal media) was made. Obama represented what transparency presents: accessibility, openness, honesty and clarity, and became a singular image for the reintroduction of the democratic into American and world politics. However, where the change promised is merely that of the

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492 Ibid., p.88

493 Banks too big to fail controlling the political structures of dealing with the economic crisis, see Bloomberg Businessweek, January 24 2008 <http://www.businessweek.com/magazine/content/08_05/b4069032985454.htm?chan=magazine+channel_special+report%3A+market+reckoning> [accessed: 24 May 2010]

494 See Barack Obama and Joe Biden *Blueprint for Change: Barack Obama and Joe Biden's Plan for America* <http://www.barackobama.com/pdf/ObamaBlueprintForChange.pdf> [accessed: 24 May 2010]

modification of policies within a liberal-economic framework, as Harvey describes,[495] then the coalescence of the active and the passive occurs. Indifferentiation, as Baudrillard describes it, is evident in this illusory construction of a notion of radical change. The method by which this change is enacted is through the appeal to transparency, as the guiding 'light' of democratic systems and structures.

The construction of this transparency is through both political rhetoric and the built structures that form our civic and institutional realm in Western, liberal democracies. As Baudrillard illustrates, it is through the medium, the technology, of transparency that the agency and the power of the simulacra of the democratic is enacted. Hans Blumenberg suggests in *Modernity and the Hegemony of Vision*, that a 'coerced' vision is at work, and the '[connection] between vision and freedom is being dissociated. Due to the dominance of the prefabricated and of technologically precast situations and aspects, the modern extension of sensory spheres has not become a source of freedom.'[496]

The implied liberation, freedom and accessibility of technology is a simulation of the condition of a simulated openness – a simulacra of active engagement. An image. A transparent screen upon which is projected the phantom of the democratic ideal: a glass wall where the only thing to be seen behind the façade is another layer of glass - another transparent screen.

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495 Throughout Harvey *The Condition of Post-Modernity,* but see the sentence on p.36, on high-modernism in design and culture, that *'its real nether side lay, I would suggest, in its subterranean celebration of corporate bureaucratic power and rationality, under the guise of a return to surface worship of the efficient machine as sufficient myth to embody all human aspirations.'*

496 Blumenberg, Hans 'Light As a Metaphor for Truth: At the Preliminary Stage of Philosophical Concept Formation.' in *Modernity and the Hegemony of Vision,* p.9

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