# C H A P T E R   T W O

THEORETICAL DISCOURSE

This chapter investigates the fundamental nature of labour as an important component of this dissertation, further drawing parallels to the production of architecture as an object of utility in an urban context, in order to later inform a design manifesto for current contextual conditions.

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From the point of view that a shift has occurred from the vernacular to rationalised production, architecture has been much affected by the substitution of industry norms and homogenisation. Buildings are designed in response to processes of construction, leading to objects which are dominated by high speed edges, the insertion of services and rapid construction techniques, in order to create within an urban setting a "high-rise megalith" which is by virtue isolated from the surrounding urban fabric, and becomes "a consumer object" (Frampton, 2002:36).

THEORETICAL PREMISE

Within the city, many structures and systems function as isolated entities of consumption, ingesting space, resources and energy. It is imperative that buildings consume, but they should also labour from what they have consumed, by means of contributing to the surrounding and greater urban context.
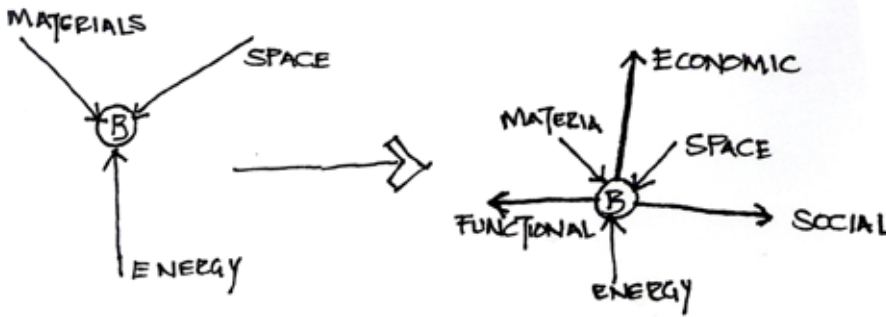
5. RELATIONSHIP BETWEEN CONSUMPTION AND PRODUCTION ENTITIES (AUTHOR 2010).

LITERATURE OVERVIEW

Labour, as described by Hannah Arendt, is distinguished by its never-ending character, creating nothing of permanence. The act of labour mimics natural processes which reuse waste material in an unbroken cycle of perpetually renewing processes so as to sustain life. Labour must always be productive; even though it produces objects that degrade, it further sustains the circulation of labour. Labour is in constant transformation but as a repetitive procedure similar to the cycle of biological survival (Arendt, 1958:109-112).

During the ancient Greek institution the act of a human labourer as a slave was justified through necessity. This lack of freedom for slaves was due to the act of labour as a never ending process. This form of activity was viewed as the lowest form of human activity at the time, as the slaves left no trace of permanent efforts, thus creating nothing worthy of remembrance (ibid).

The shift of importance during the modern age, from the product as an end result to the process involved as a means to an end, focused on describing the underlying structures and processes as more important than the base visual of the object. During the modern age, the act of labour was thus elevated in the hierarchy of human activity due its productivity, as part of human survival; thus occupations that were undertaken for the necessity of life were assimilated to the status of labour. Adam Smith asserted that labour was the source of all wealth and found its climax in Marx's 'system of labour', where labour became the source of all productivity and the expression of the very humanity of man (Frampton, 2002:35).

As Arendt shows, fabrication, which had disappeared into the product, now became an end in itself since science was not interested in the appearance of objects, but rather in the capacity of objects to reveal the intrinsic structure lying behind all appearance (ibid). Parallel to this distinction of process was the dematerialisation of structures in architecture, which illustrated and celebrated the process involved in the making of architecture, affording a more explicit form of structural expression (Frampton, 2002:33-34).

The ambiguity of architecture as both edifice and the cyclic processes of building draws a connection back to Arendt's distinction between work as an artificial world differing from labour as a natural process. Edifice as an integral part of architecture, or as an act from which architecture as a utility object can achieve legitimacy, is derived from the embedded meanings of 'educate', 'instruct' and 'strengthen' in the verbal root aedifcare. Here architecture is more than the built fabric, because, as an agent of change, it constitutes a process which leads to technological advancement (Louw, 2002:18-19).

The objective of this thesis is thus to explore the architecture of a production facility as both artefact and object of utility, exploring all possibilities which manifest in an urban context, to create a building that would enhance its surrounding fabric (as architecture of enablement). The term "building" is further accepted as an integral part of architecture, and the process of making which should be evident in the object, is celebrated.

The built environment to a large extent depends on workmanship related to the idea of craft. During the 19th century this meant 'the application of technique' to making, by using judgement and dexterity.
The act of a building being crafted as an artefact in the traditional sense can no longer be referred to, since most building operations in industrialised countries now consist of assembling preformed parts and fragmented systems, with the job of the on-site workmen being systematically shrunk to that of semi-skilled assemblers of manufactured parts (Louw, 2002:14-15).

The traditional crafts of the building site have been driven close to extinction by forced commercial mechanisation. The architect is further removed from the actual making process than any of his historical forbears, yet still employs related tools where the act of drawing has come to assume a more craft-like connotation. Louis Khan said "I believe that in architecture as in all art the arts instinctively keeps the marks which reveal how a thing was done ... If we were to train ourselves to draw as we build , from bottom up , when we do stopping our pencil to make a mark at the joint of pouring and erecting , ornament would grow out of our love from the expression of method ... the desire to express how it is done would filter through the entire society of building "(Louw, 2002:16).

The making of a building should become an important aspect of architecture, in that the process of making becomes evident in the product. Furthermore, the functioning of the building should also be evident in the way in which it consumes energy, where distribution, disposal and recycling become part of the program in order for events and processes to occur within the space. Furthermore, the building should embody a high level of legibility in the way in which it treats connections, and plugs into existing networks of resources and the flow of the urban environment.

A clothing production facility supports the theoretical premise of cyclic processes contributing to the necessities of the context, through extending the production line of apparel wear to processes of washing, repair, re-use and recycling. The facility advocates an inclusive environment which contributes to the social and economic context of Pretoria.

PRECEDENT STUDY

CENTRE DE POMPIDOU
1971-1977
PARIS, FRANCE
RICHARD ROGERS AND RENZO PIANO

During the 1970's architecture developed as a response to post-war culture and the machine industry, prompting building technology to develop as a kit of parts. Structures became lighter and more flexible in response to the contextual conditions presented (Buchanan, 1997:89-95). The Pompidou centre , built in 1977 was designed so that systems is emphasised within the public realm .Here the supporting structure, movement and flow systems were relegated to the outside of the building, and the service ducts were colour coded for legibility of function. The transparency of the main facade permits people to view indoor activities from the centre of the piazza (ibid).

The building was designed in two parts on the lines of an 'evolving spatial diagram' (refer to Fig.7): first, a three-level infrastructure housing the technical facilities and service areas consists of a network of frames, ventilation and service pipes, corridors and escalators, all which allow the facade to showcase its technical performance. Second, a vast seven level glass-and-steel superstructure, including a terrace and mezzanine floor, concentrate most of the Centre's areas of activity together in unobstructed volumes.

The Centre aims to maximise spatial movement and flow to foster an interdisciplinary approach. Where museums were once regarded as elite monuments, the centre is transformed into a popular place of social and cultural change (http://www.architectureweek.com/2003/1203/building.html).

The relevance here is that processes of both making and functioning of the building becomes part of the public realm, the structure is legible in terms of connections, and services, circulation, further allowing for the maximum liberation of space within.

SERVED

STRUCTURE + SERVICE FACADE

PIAZZA

SERVICE   UNINTERUPTED SPACE   SERVICE
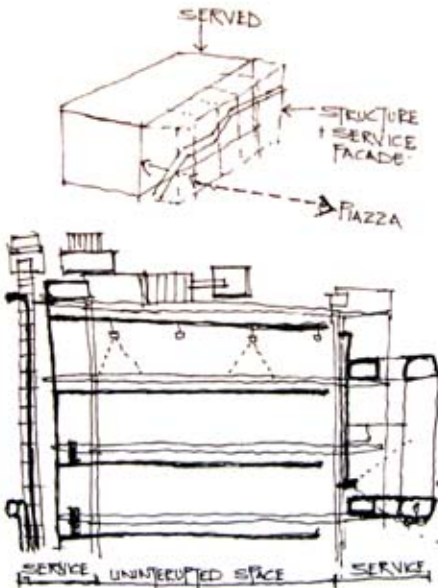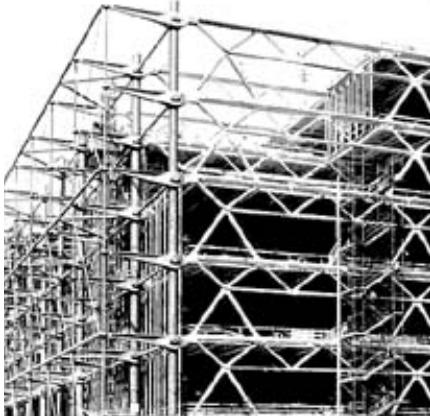
6. POMPIDOU EXTERNAL STRUCTURE [HTTP:// WWW.ARCHITECTURE- WEEK.COM/2003/1203/ BUILDING.HTML]

7. FUNCTIONING OF CENTRE DE POMPIDOU [AUTHOR 2010].

8. CIRCULATION AND SERVICES [HTTP://WWW. ARCHITECTUREWEEK. COM/2003/1203/BUILD- ING.HTML]

9. STREET FACADE WITH CIRCULATION [HTTP:// WWW.ARCHITECTUREWEEK. COM/2003/1203/BUILD- ING.HTML]T

COUNCIL HOUSE TWO (CH2) BUILDING
2006
MELBOURNE, AUSTRALIA
DESIGN INC.

Fritjof Capra speaks about a scientific understanding of life according to various living systems, such as organisms, social systems and ecosystems, that these systems form parts of a larger whole, where changing the properties of one system will intern affect other systems (Capra, 1996:36-38).
In the design of the CH2 building contextual systems thinking is applied, based on the building becoming a third skin for humans in relation to the urban environment.

The functioning of the building mimics nature (bio mimicry).The facades of the building ages, as well as responding to the change in climatic conditions throughout the year. Each facade differs in order to maximise internal efficiency of the building (refer to Fig.10).
Part of the design aesthetic, is the elaboration and legibility of servicing, educating society about how the building functions, and responds to the environment (http://www.architecturemedia.com/aa/issue.php).

This building is relevant to the argument in terms of a building being able to sustain itself through the processes which occur within in the building where distribution, use and recycling of resources have become part of the program, further the building responds to the environment in order to maximise comfort for the workforce, optimising conditions of a productive workspace. The building advocates an approach of contributing to the surrounding urban fabric, by lessening the carbon output, and responding to existing street conditions.
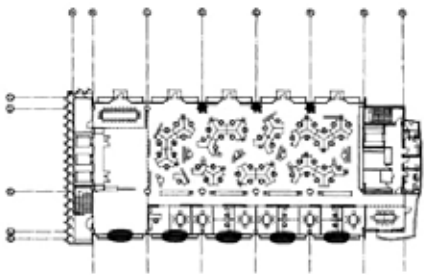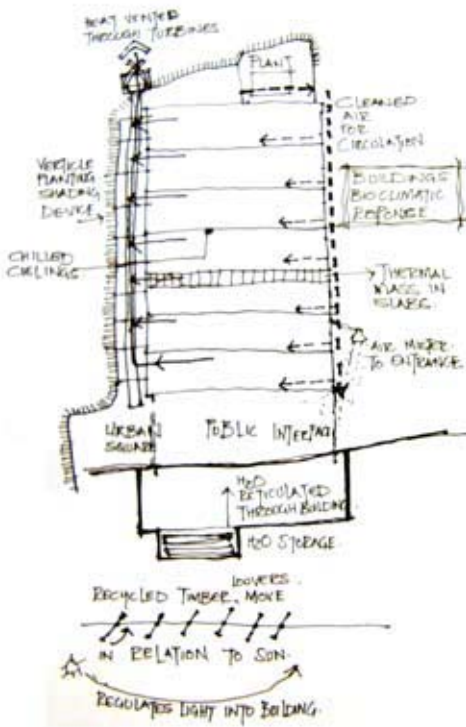
10. FUNCTIONING OF CH2 BUILDING (AUTHOR 2010).

11. PLAN ORIENTATION OF FACADES(HTTP://WWW.ARCHITECTUREMEDIA.COM/AA/ISSUE.PHP)

12. RECYCLED TIMBER VERTICAL LOVERS (HTTP://WWW.ARCHITECTUREMEDIA.COM/AA/ISSUE.PHP)

13. ROOF GARDEN WITH AIR VENTS (HTTP://WWW.ARCHITECTUREMEDIA.COM/AA/ISSUE.PHP)

14. FACADE/ SKIN RESPONSE TO ORIENTATION(HTTP://WWW.ARCHITECTUREMEDIA.COM/AA/ISSUE.PHP)

CHURCH SQUARE
CITY CENTER

SKINNER
MAJOR EAST WEST ROUTE

SITE

GATEWAY

BEREA PARK
RESIDENTAIL
SURROUNDING

PRETORIA STATION
TRAINS AND BUSSES

GATEWAY

15. PRETORIA CITY AND
SALVOKOP
(AUTHOR , 2010)

SALVOKOP : WORLD HERITAGE
SITE

STUDY AREA

N