

# Architecture and Production Revisited (Reflections on earlier work)

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# Reflections on a paper submitted to IFIP 9.4 2015

“Information Systems Architecture as Production:  
Building Health Information Systems in  
Rwanda”

*Bob Jolliffe, Andrew Muhire and Johan Sæbo*

# Reading trail

- Cunningham, D. and Goodbun, J. (2006). Marx, architecture and modernity. *The Journal of Architecture*, 11(2):169–185.
  - Lefebvre, H. (1991). *The production of space*, trans. Donald Nicholson-Smith. Oxford: Blackwell
  - Berman, M. (1983). *All that is solid melts into air: The experience of modernity* Verso.
  - Harvey, David. *A companion to Marx's Capital*. Vol. 1. Verso Books, 2010.

# Claims made in that paper

- that thinking about information systems architecture from the broader perspective of architecture is a valid and useful thing to do;
- that architecture as a practice produces, and it produces a complex mix of products within particular spatial and temporal contexts;
- (context can be usefully analyzed in terms of Marxist category of the mode of production)
- “Global” context of production and use adds a spatial twist. Architecture is conditioned by what is current.

# Architecture is architecture is architecture

- Sidestepping attempts to define and categorize different understandings/types of IS/IT architecture
- There are clear links between the concept(s) as used in IS/IT and the broader discipline
- Zachman (2007) makes the claim in the title

# Software design

- The software patterns "movement" represented by The "Gang of Four" book (Gamma, Helm, Johnson, Vlissides), the Hillside group and the PLOP series of worldwide conferences continues to draw directly on the architectural theory of Chris Alexander.
- Patterns and pattern languages = codification and maturation of the discipline
- Architectural and engineering metaphor also permeates into all aspects of our informatics vocabulary - graphics engines, silos, gateways, frameworks, artefacts, columns etc

# A city is not a tree

“The city is a receptacle for life. If the receptacle severs the overlap of the strands of life within it, because it is a tree, it will be like a bowl full of razor blades on edge, ready to cut up whatever is entrusted to it. In such a receptacle life will be cut to pieces. If we make cities which are trees, they will cut our life within to pieces.”

Chris Alexander (1968)

# An interesting reminder ..

"When the bulk of health staff are engaged in collecting data for others, when they have no influence over what they collect, when they are barely involved in analysis of data, when computerised tools used are inflexible black boxes reducing their operators to mindless keyboard pushers, when they don't get feedback and don't use information for local management, then the structures thus constituted are those of disempowerment"

(Jørn Braa and colleagues early 1990s)

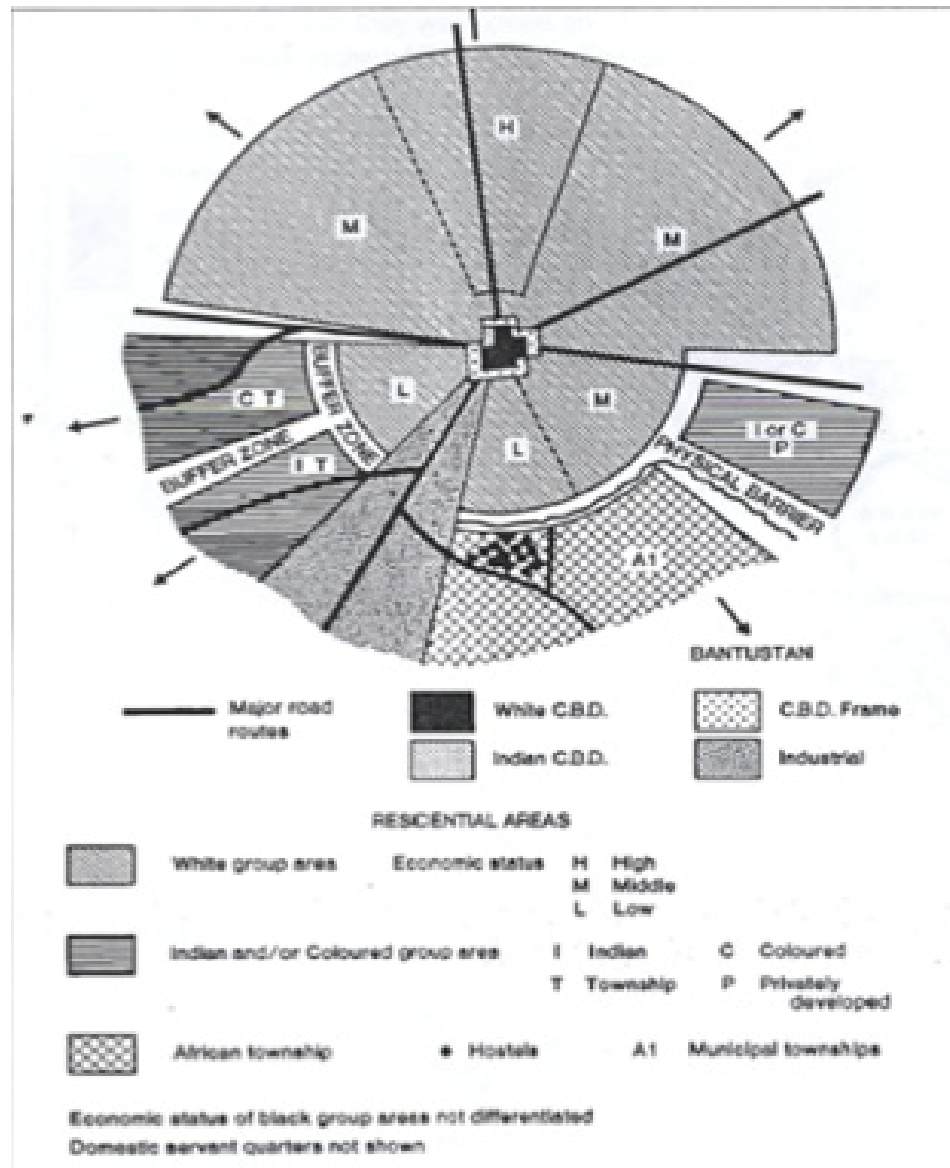


# Architecture history/society/development

- Deeply ingrained in human history
  - Form, function, aesthetics
- “We can understand architecture as a natural reflection of what is current socially, politically and economically” (Adams, Architectural review, 2008)

(who determines what is current? Who has power?)

# Apartheid modernist zoning



# Ceausescu's Palace of Parliament



# Chandigarh



“Let this be a new town, symbolic of freedom of India unfettered by the traditions of the past..... an expressions of the nation’s faith in the future”

Pandit Nehru

# Architecture and ICT4D

- What is current?
  - ICT and D, global health, ....
- “Current” ideas of development are always in flux. From liberation, self reliance through to neo-liberalism. A somewhat vague and imprecise “*set of beliefs and assumptions about the nature of social progress*”
- Similarly ideas in global health – bio-medical vs social health, disease specific programs, integration, public/private, insurance, health-for-all, universal health coverage .....

# Architecture produces ...

- Who produces? For who? How?
- What does it produce
  - Artefacts : designs, standards, software, web sites, databases etc
  - New (and reproduced) social relations, organisational change around the things which are built
  - Knowledge (about architecture and other things)

# Production

- Production is a central concern of Marx and Lefebvre
- “Technology reveals the active relations of man to nature, the direct process of the production of his life, and thereby it also lays bare the process of the production of the social relations of his life, and of the mental conceptions that flow from those relations” (footnote in Capital vol1)

# Lefebvre adds ..

- society actively produces, and is produced within, its own space (Lefebvre, 1991, Ch. 1).
- (Information systems, particularly explicitly spatial ones such as a national health information system, are produced and materialized within space through existing social relations and in turn actively produce and reproduce those relations in space)
- Space's hegemony does not operate solely on the 'micro' level . . . nor does it apply only on the macro level as though it were responsible merely for the ordering of 'flows' within nations



# Two practical and spatial implications

- We recognized the influence of the US HiTECH act on the production of Rwanda HIE
  - Meeting “meaningful use” requirements in health information exchange as (global) best practice
- We recognize the usefulness/attractiveness of DHIS2 in the production of the state

# What does a (marxist) architectural lens potentially give us?

- A different set of references for “reading” IS projects
- Possible opening on culture and aesthetics – (how does it make you feel?)
- Determinism?
  - The concrete conditions, the mode of production, determines what gets built
- Illumination?
  - What gets built provides insight, explanation of the concrete conditions
- A way of understanding the “value” of what gets

# Thank You

- Apartheid zoning - “South African City Planning in a Post Apartheid Era” By David Kay
- Chandigarh  
<http://archrecord.construction.com/news/2013/06/images/slideshow/130612/slideshow.asp?slide=10>
- Ceausescu -  
<http://www.telegraph.co.uk/news/worldnews/europe/romania/7148097/Nicola-e-Ceausescu-palace-to-be-turned-into-shopping-mall.html>