Spatial improvement strategies for deprived neighbourhoods

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The deprived neighbourhood

- The Dutch priority list of 40 problem neighbourhoods from 2007
- Improvements made - but few effects on socio-economic life can be seen
- The actions consist in improving the housing qualities, facilitate working opportunities, offering education and playing facilities for children and youngsters, and to enhance social integration and safety
What are the spatial parameters for generating street life between buildings in a neighbourhood?

- What kind of spatial features can contribute to generate social segregation or social integration?
- What are the spatial features for safe and lively neighbourhoods?
- How to communicate the results from research to planners and architects dealing with urban regeneration or planning practice in general?
Space Syntax – a method for measuring street vitality

Calculating axial integration:
- \( n \times d \times a = (S \times d \times a) \)

Calculating the back street size:
- \( S = \text{sum depth} - 1 = 29 \times 2 \times 7 \times 1 \times 3 \times 3 = 312 \)

Integration value of the back street: \( S_{\text{int}} = \frac{312}{31} = 10 \)

The number of axes:
- \( 3 	imes 3 = 9 \)
- \( 2 	imes 7 = 14 \)
- \( 1 	imes 5 = 5 \)
Degree of integration within a large metrical radius - The location of the area in relation to main routes through and between urban areas

Strongly integrated main route going through the area

Weakly integrated main route going around the area
Degree of integration within a small metrical radius – degree of street connectivity inside the area

Area with a well connected local street net

Area with a poorly connected local street net
Degree of inter-visibility between buildings towards streets

Both entrances and windows must be on ground floor level, and they must be like this on both sides of the street before a street is classified as inter-visible.
Correlation between inter-visibility from buildings along main routes

Inter-visible main route

Not inter-visible main route
4 spatial types of problem neighbourhoods

• 1. High values on the micro as well as macro scale spatial parametres
• 2. High values on the macro scale parametres, but low on the micro scale parametres
• 3. Low values on the macro scale parametres, but high on the micro scale parametres
• 4. Low values on the micro as well as macro scale spatial parametres
Type one – Transval, The Hague
Type two–Nieuw West, Amsterdam
Type three– Doornakker, Eindhoven
Type four – Poelenburg, Zaanstad
How to communicate these research results into planning and design strategies?

- What works well and what does not work?
- Think "space" before "form"
9 spatial principles of safe urban design.....

..... or reducing the spatial opportunities for crime and anti-social behaviour.....
1. Main route well integrated and well connected to local streets. The local streets have 1-2 direction changes from the main routes.
2. Entrances connected directly to streets and inter-visible to each other
3. Avoid streets with blind walls, in particular in the streets that are directly connected to main routes
4. Enhance shop or business function on ground floor level instead of storage place. Windows and doors need to be directly connected to the streets.
5. Have a **network** street net instead of a street structure, where the main route has a central position in the area
6. Main routes going **through** the local centres instead of **around** them
7. If not possible to make inter-visible streets, then make them at last constituted

Examples on constituted streets

Examples on unconstituted streets
8. And make sure that the topological depth between private and public space is short.
9. A main route well connected to all streets in a neighbourhood generates a variation of micro businesses instead of a car-based shopping centre.
Thank you........

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