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The physical urban environment and reduction of urban insecurity: a general introduction

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THE PHYSICAL URBAN ENVIRONMENT AND REDUCTION OF URBAN INSECURITY: A GENERAL INTRODUCTION

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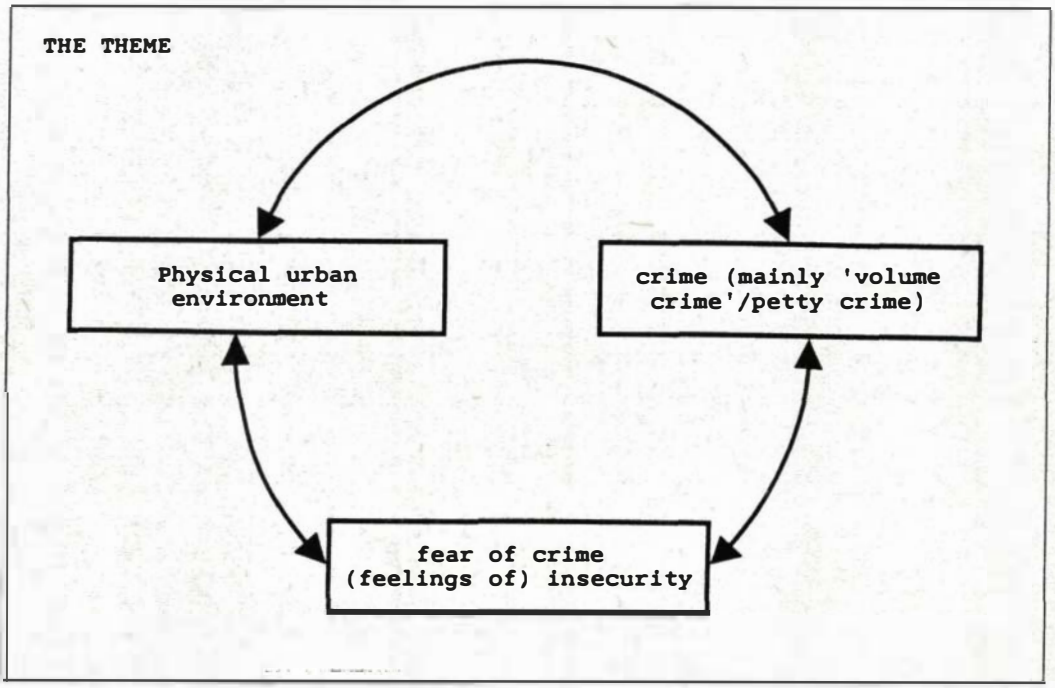
'The Physical Urban Environment and Reduction of Urban Insecurity'.....
Frankly, this theme is as huge and impressive as the Titanic..... and we all know what happened to that.
Yet there's a glimpse of hope and optimism emerging from the store of knowledge and research that is available. In this general introduction some main sources of research and knowledge are briefly summarized. There must be some lessons that can be drawn from such a parade of eminent researchers**.

However, the theme still needs to be appoached in a logical and analytical way. Hence, the main concepts of the theme have first to be pinpointed.



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*= Paul van Soomeren (1952) studied Social Geography at the University of Amsterdam and Urban and Regional Planning at the same University. He worked for three years at the Ministry of Justice (National Crime Prevention Institute) and in 1984 founded Bureau Criminaliteitspreventie, a private consultancy and research bureau specialized in crime prevention.

**= In the appendix this parade of ideas and theories is summarized in one table showing seven 'schools', each school forming a group of researchers sharing more or less the same theoretical point of view. The appendix shows for each school: the authors and key work, area of interest and main questions, answers/theory, critique/remarks and the most useful application.

There are in fact **three** concepts:
- The physical environment: buildings, streets, houses, etc.
- Crime; criminal offenses that really happened: a burglary, an act of vandalism, a robbery, etc.
- Fear of crime, or (more generally speaking) feelings of insecurity.

The three concepts are interrelated, but these relationships are certainly not of a simple causal nature.

Take for example the **relationship** between **crime** and **feelings of insecurity**.
Research has shown this relation to be a dynamic and sophisticated one. Not necessarily all people living in a high crime area feel insecure. Some may, some may not.
Differences in fear may be 'caused' by people's age, lifestyle, experiences in being a crime victim, gender, amount of contact people have in their community, perception of neighbourhood decline or rehabilitation, socio-economic or cultural background.
There are even examples of crime-ridden neighbourhoods where most residents still feel pretty secure.
Crime is obviously "only one of those things" that causes feelings of insecurity. Its influence can be counteracted by other things.
It follows that preventing crime (or bringing crime rates down) does not necessarily mean that feelings of insecurity are tempered too.
I guess this is a warning one should bear in mind when discussing the theme in more depth in the days to come.

The **relationship** between the **physical environment** and **feelings of insecurity** is a tricky one too.
Some environments are perceived as secure, but are in fact not safe at all. Over and over again research has shown city centres to be unsafe. Nearly all types of crime do flourish in city centres: violence (Ramsay, 1982), burglary (Clarke and Hope, 1984), theft and street attacks (Poyner, 1981 and 1983) and vandalism (Van Dijk en Van Soomeren, 1980).
Yet city centres - or shopping centres - are perceived by people as being safe and secure places.
Other places or neighbourhoods are perceived as unsafe, those places or neighbourhoods in fact being quite safe and harmless.
People can obviously mistakenly interpret certain cues.
- A crowded street, full of people who are cosily shopping and drinking their coffee and beers in or outside pubs, may be wrongly seen as 'security' or 'safety', because nobody is able to see the offenders - as it were - 'hidden' in the crowd.
- A lonely street, littered and vandalized, may again be mistakenly seen as insecure ..... but when all offenders are drinking their beers in the city centre (or burgling otherpeople's homes in faraway well-to-do neighbourhoods), this may in fact be quite a safe street.

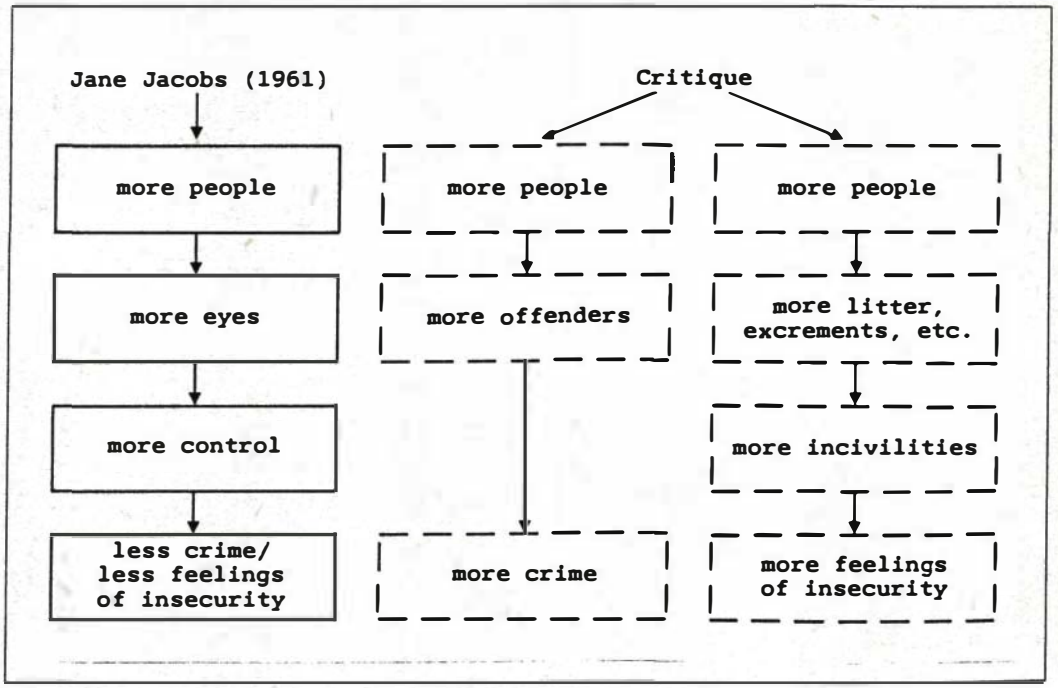
In a nutshell what is summarized here is the scientific debate that followed the publication of Jane Jacobs' book 'The Death and Life of Great American Cities' (and the related work of Elisabeth Wood (1961)).

Jane Jacobs

Jane Jacobs (1961) focussed on the places where crime is committed and the physical characteristics of those places. The essential part of Jacobs' theory is simple. As Jacobs puts it: City streets are unsafe because they are deserted. This problem can be solved by giving streets three main qualities:

- A clear demarcation between public and private space.
- There must be eyes on the streets. Eyes of residents and eyes of people who are just passing by. Buildings must be oriented to the street.
- Streets must be used continuously, both to add to the number of effective eyes and to induce people in buildings to watch the streets.

For Jacobs, crime prevention and 'natural surveillance' are more or less the same. That is why she has placed high hopes on night shops, restaurants, pubs, bars, etc.
Amenities like this draw people onto the streets. Residents then like to watch the busy and crowded street and natural surveillance (or informal control) results. Crime does not get a chance.
At this point Jacobs' theory fails.
Several research findings show pubs, bars, (night) restaurants to be particular trouble spots (Ramsay, 1982). As was mentioned earlier, the same goes for busy city centres.
In her line of reasoning Jacobs clearly overlooked two other lines that hold as well (see also: Mawby, 1977 and Skogan and Maxfield, 1981).



Futhermore, Jacobs seems not only to over-estimate the influence of natural surveillance on offenders; she also over-estimates the influence the physical environment has on human behaviour. Creating better opportunities for natural surveillance (or informal control) does not automatically result in real effective control.

Oscar Newman

In his book "Defensible Space" (1972), Newman - like Jacobs - held that crime was allowed to flourish because housing design prevented residents from exercising informal control over their environment (see also Newman 1973).
Informal control , Newman argues , springs mainly from natural surveillance coupled with a feeling of territoriality deep within the resident's soul: "see what's happening there ..... stop those blokes from violating my environment"!
Newman tried to prove his theory in two ways.
Firstly with an analysis of about 70.000 criminal incidents in 133 public housing complexes in New York. The figures showed that most crime-ridden spots are public in nature and yet hidden from public view (elevator, lobby, stairway, hallway).
Secondly Newman compared two estates. One had good defensible space characteristics whereas the other estate had not. Suprisingly Newman's favoured estate was a virtual paradise compared with the crime that plagued the estate which had bad Defensible Space characteristics.

Newman was fiercely criticised on methodological grounds and for failing to consider the social origins of informal control and the origins of crime. In spite of this criticism, the ideas of Newman became very popular in the States. A whole generation of Defensible Space addicts was born. Several CPTED projects (Crime Prevention Through Environmental Design) were implemented and evaluated in the seventies.
Discussion, criticism, trial and error in those projects and new research (also by Newman himself, see for example Newman and Franck, 1980) resulted in a reformulation of the Defensible Space theory. Newman's theory became less physically deterministic.
In his new Defensible Space theory (Newman, 1979), he stressed the importance of social agents. Newman placed his hopes on - as he called it - 'communities of interest', i.e. small clusters of residents sharing more or less the same life-style, age and family cycle. Architecture and urban planning come in when Newman says that one should build houses or appartments for such communities of interest. Hence, town planning can create social cohesion in this way*.

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*= Newman forgets to mention the problems relating to the housing market, distribution of houses etc. (see Bottoms, 1987 or Bottoms and Xantos, 1981).

The theories of Jacobs and Newman are both of great importance and they have brought the discussion to new frontiers.
However, Jacobs and Newman built their theories on quicksand consisting of the magic concept of natural surveillance or informal control. Their theoretical construction stresses the importance of creating better physical **possibilities** for informal control.
But creating those possibilities does not actually result in effective control being exercised because:

- Residents have to make **use** of the given possibilities (which they often do not, or do not want to do).
- Offenders have to perceive control and they must not be able to 'escape' it (for example by hiding).

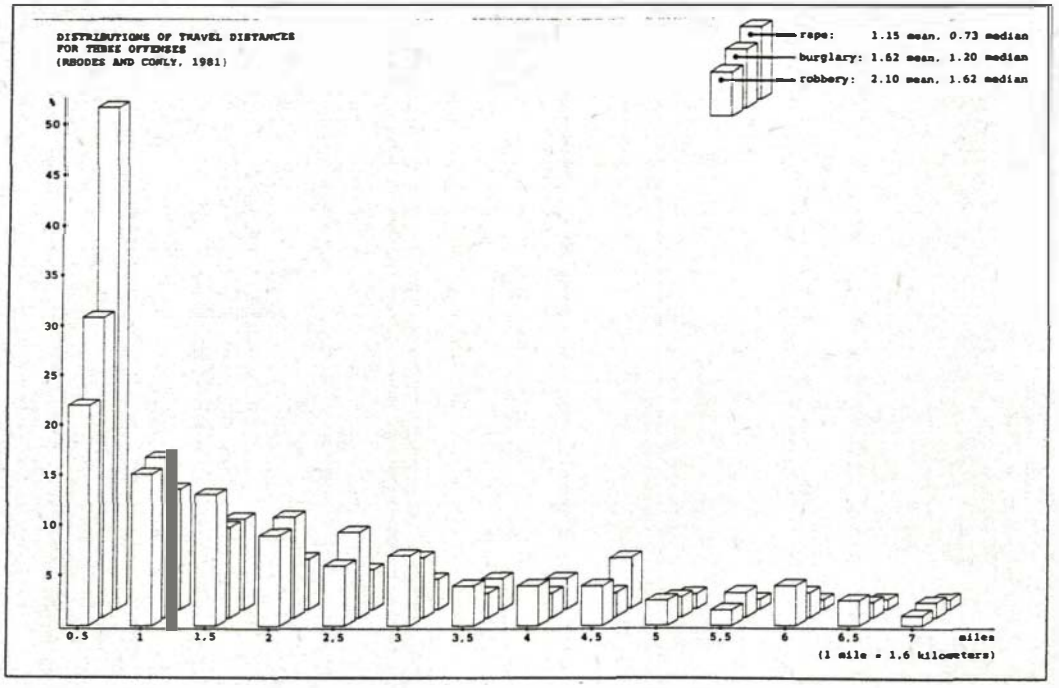
In short Jacobs and Newman forget that it takes two to tango. Not only community life, surveillance or control, but also offenders who are shifting from criminal to non-criminal behaviour.
The theories of Jacobs and Newman deal with the community angle and will be most useful if one wants to reduce feelings of insecurity. If one wants to prevent real crime, however, the most important piece of the puzzle is still missing: the offender. Theories linking offenders and the physical environment they live and operate in have a long history, starting with the work of the Chicago School.

The Chicago School

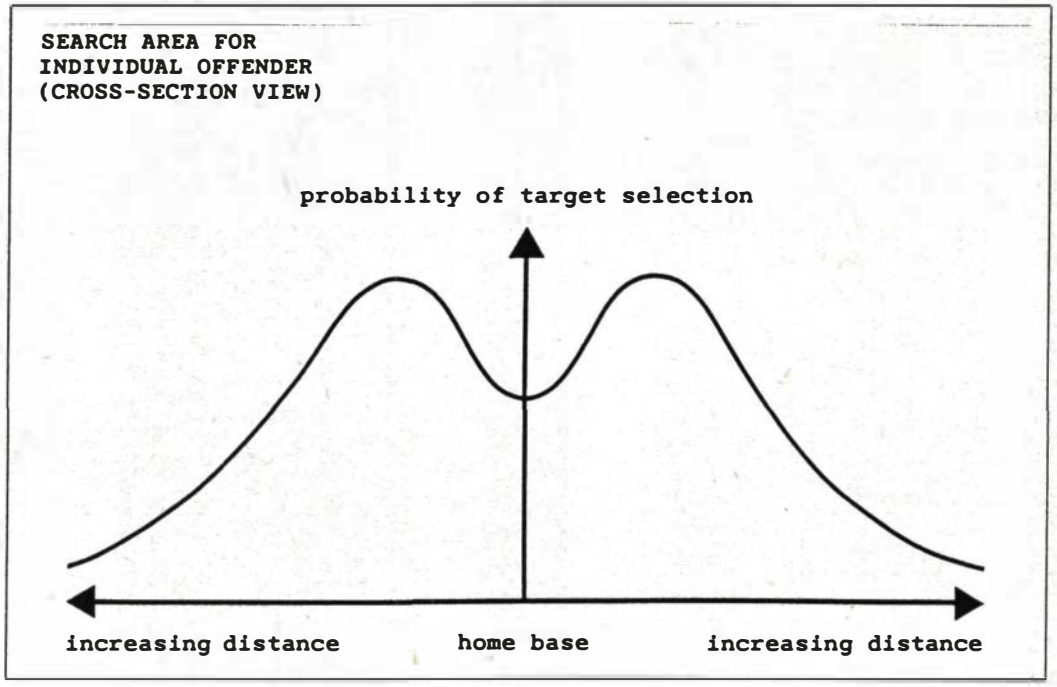
Shaw and McKay (1929/1931/1942) mapped the residences of known juvenile delinquents in Chicago (and some other American cities). They borrowed the zonal model of urban form (developed by Burgess and Park) and showed that the rate of delinquent residences was highest in the concentric zone adjacent to the central business district. The rate declined with increasing distance outwards.
Borrowing yet another component of the Chicago School theory, Shaw and McKay also showed that within specific 'natural areas' a high delinquency rate (delinquent residence!) existed together with other social problems like poverty, broken families, disease, etc. This high delinquency rate persisted until the mid-1960's! (see Shaw and McKay, 1969).
In these slum areas (the zone of transition), the traditional organisations and institutions (like schools, churches, family) had lost their power to teach people respectable (= non-criminal) behaviour. Social control was reduces and social disorganisation had won.
Youths living in such neighbourhoods were taught the (criminal) job by the older boy living next door. In this way a neighbourhood constantly produced new generations of criminals.
The Chicago School focussed on offenders, but the main interest of people like Shaw and McKay concentrated on the neighbourhood level.

The Spatial School

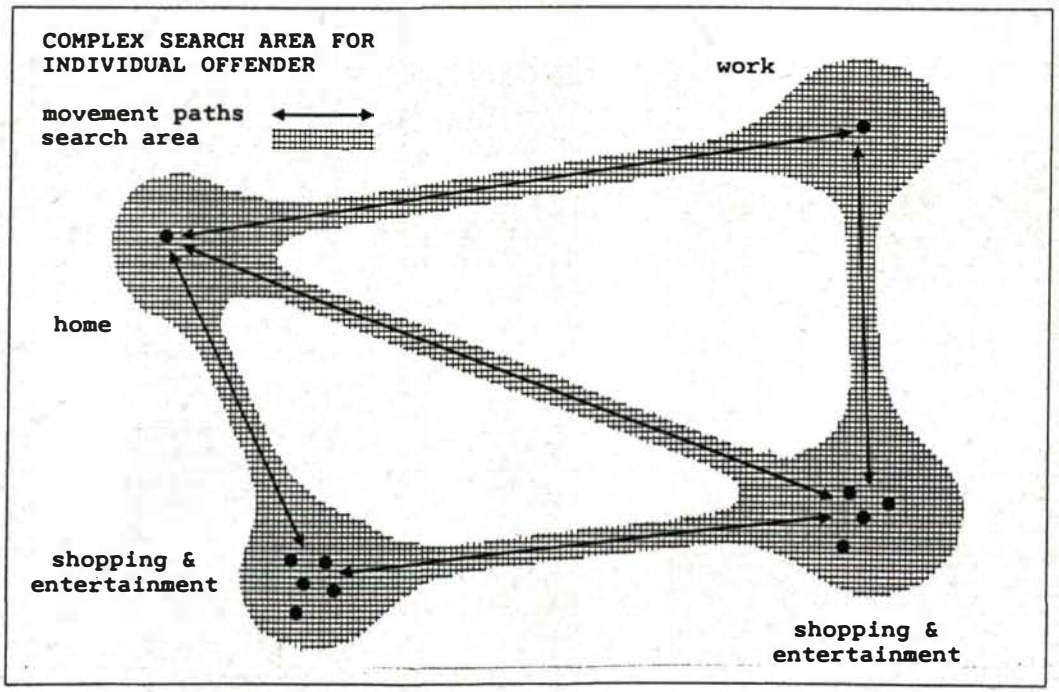
In the seventies offender-based research started to focus on the rational spatial and environmental choices made by offenders. Pioneering work was published and edited by Paul and Patricia Brantingham (1975, 1980 and 1981). They studied the spatial patterning of buglary and formulated a 'spatial choice theory' - most useful for property crimes.
One of the striking things about criminals , they argued , is that most of them behave as ordinary people most of the time. And they like to operate near their home base - as was shown by Rhodes and Conly (1981).

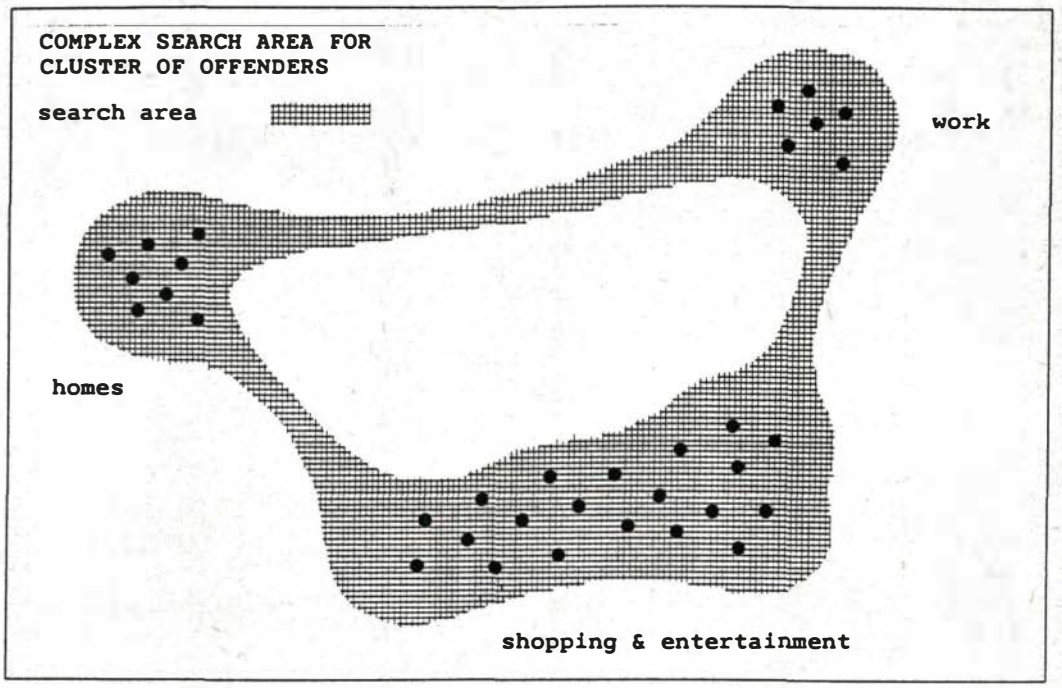


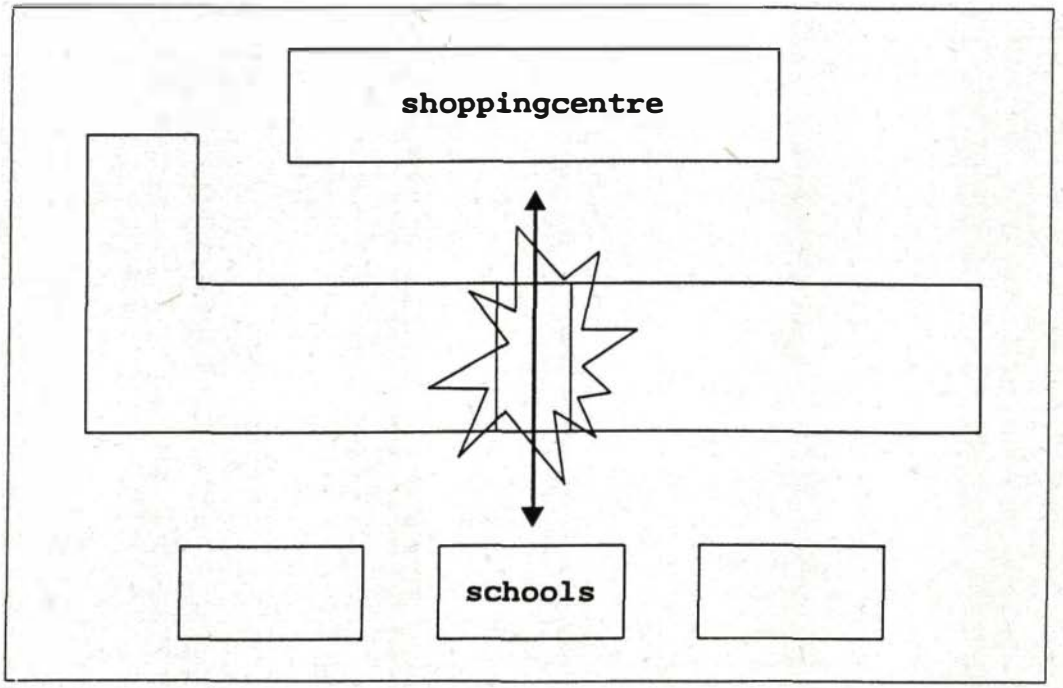
But criminals do not like to work too close to their home base because they fear they will be recognized by neighbours.



However, offenders are - again like most people - mobile. They travel to school, work, shops and entertainment and recreation locations. They develop an action space; a mental map or 'awareness space', the parts of the city they have knowledge about (See also Carter and Hill, 1979). Researchers, urban planners and architects can play with this thought and develop models at the macro level (urban planning, transportation), and at micro level (architecture).







One of the most promising things to be learned from the Brantinghams is the idea of offenders beïng quite rational people making decisions (choices) step by step: "Should I enter this neighbourhood, this street, how risky will it be entering this estate, will I be seen while burgling this house"?

Barbara Brown and Irwin Altman (1981) built a conceptual model on these ideas. The choice-making process of a burglar consists of a step by step judgment of environmental cues.
The table shown below (based on Brown and Altman) summarizes these cues for four different levels (neighbourhood, street, site and house).

VULNERABILITY FACTORS ASSOCIATED WITH NEIGHBOURHOOD, STREET, SITE AND HOUSE (BASED ON BROWN AND ALTMAN, 1981)

Factor	Neighbourhood	Street	Site	House
Detectability	·See: street.	·Design: winding vs. narrow. ·Distance: street to house. ·Lighting. ·Window, door positions relative to street.	·Shrubs, trees, walls, fences blocking burglar. ·Burglar seeing into house - (door and window position). ·Auditory cues, dogs barking.	·General visibility by neighbours or others. ·Window positioned to see returning occupants once inside.
Actual barriers	·River, canal, railway.	·Locked gates, fences, guards.	·Locked gates, fences, guards. ·Is opening large enough to carry away goods?	·Locks, alarm system. ·Is opening large enough to carry away goods?
Symbolic barriers	·Park, shrubs, trees, roads (routing!).	·Welcome signs. ·Neighbourhood assoc. signs. ·Distinctive cultivation for streets.	·Distinctive personalising items in yard - mail boxes, flower garden. ·Marking of entryway from the street.	·Nameplate, signs on door (neighbourhood watch).
Traces	·See: street.	·Cars parked on street. ·Mail, newspapers in box or on street.	·Equipment indicating interrupted activity: lawn mower, toys. ·Sprinklers (working). ·Appropriateness of lighting.	·Hearing TVs, radios, voices telephones. ·Lights. ·Cooking odors.
Social climate	·See: street.	·Reactions by others - staring, questioning, ignoring, looking.	·See: street.	·See: street.

As one can see, some cues are physical in nature and can be well or badly designed by architects and planners.
Take lighting or example, a theme that will be discussed in more depth by John Parker in one of the working sessions on Thursday.
Or take improvements in the layout, design, density and materials of housing and its related surrounding space, this being the theme Herr Kube will be discussing more in depth on Thursday. As one can see, quite a lot of the cues shown in the table are social in nature, a theme Mme. Harburger will explore in the working session.

The perspective of criminal behavior as the outcome of the offender's rational choices and decisions appears to provide the most immediate pay-off to crime control efforts aimed at reducing criminal opportunity (Clarke and Cornish, 1985).
This perspective was, as I mentioned earlier, developed in the Chicago School tradition and by the publications of Paul and Patricia Brantingham. However, this perspective was made really useful for crime control policy by writers on the subject of 'situational crime prevention' (for an overview of which see Clarke and Mayhew, 1980, or Heal and Leycock, 1986). The 'situational approach' stressed the importance of developing specific crime prevention strategies.

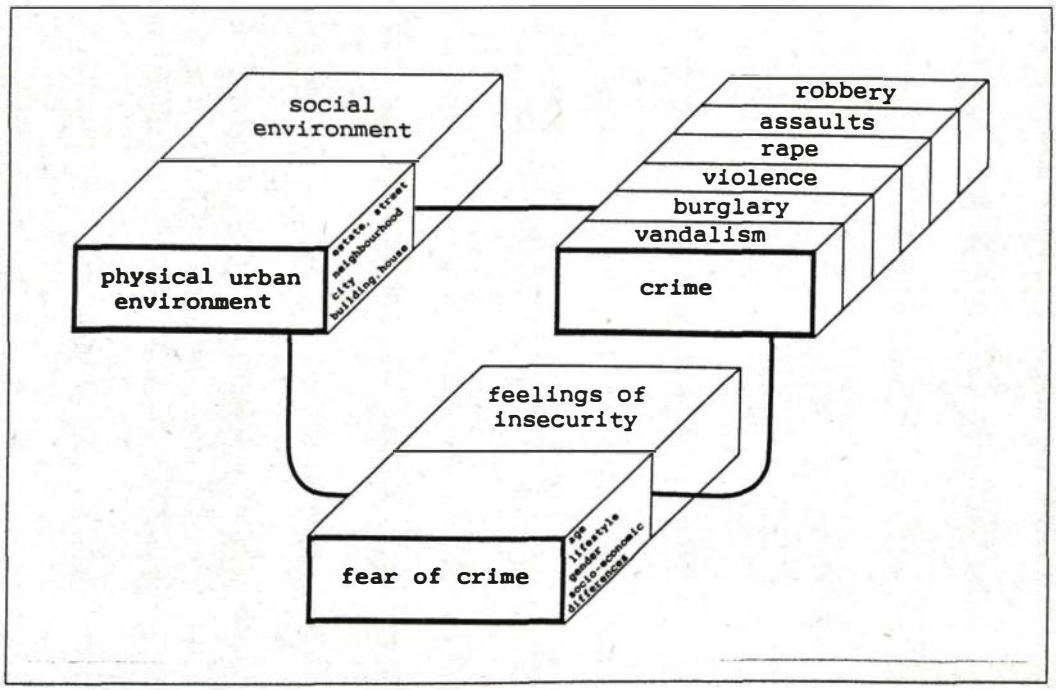
The container called crime has to be opened; one has to see that within are particular forms of crime one has to analyse and prevent: vandalism, burglary, violence, etc.
Hence, crime experts have to analyse one form of crime in a situational way. They should study for example, burglars and burglary in one part of the city to learn which social and physical conditions prevent burglars from burgling. These conditions can then be implemented by town planners, architects, social workers or municipal institutions.

Lessons

The ideas and theories reviewed in this introduction do not give a clear-cut answer as to how to prevent crime or feelings of insecurity through environmental design.

First of all, it is clear that two different perspectives can be distinguished:
- The Jacobs/Newman theory is aimed at **residents** and the environmental influence on residents' fear of crime and residents' ability to exercise control. The most useful application is not crime itself, but social cohesion and feelings of insecurity.
- This perspective is complemented by **offender**-based theories suggesting that it is useful to analyse the decision-making process of criminals.

Secondly, it became clear that the main concepts discussed here are in fact 'container concepts'.



- The container called crime is a box full of quite different types of offenses, each needing a different approach.
- The physical environment is a 'container concept' too; it contains a **social** environment (filled with thousands of residents, employees, police officers and offenders) and a **physical** environment consisting of houses, streets, public buildings, etc.
- Fear of crime or a feeling of insecurity is clearly a black box too, containing striking differences as to age, gender, life style groups, etc.

An important lesson is that standard solutions for reducing (fear of) crime by changing the physical urban environment are unlikely to work. What is needed first is an analysis of the crime problems in a specific environment and then an analysis of the responses to crime in a specific environment. Both analyses must be specific to the area and the type of crime, i.e. no sweeping theoretical generalizations, no multi-user blueprints on how to complete the job of environmental crime prevention - just grass root solutions for specific crime problems. Crime prevention must be viewed as a multi-agent process, and not a set of standard tricks.

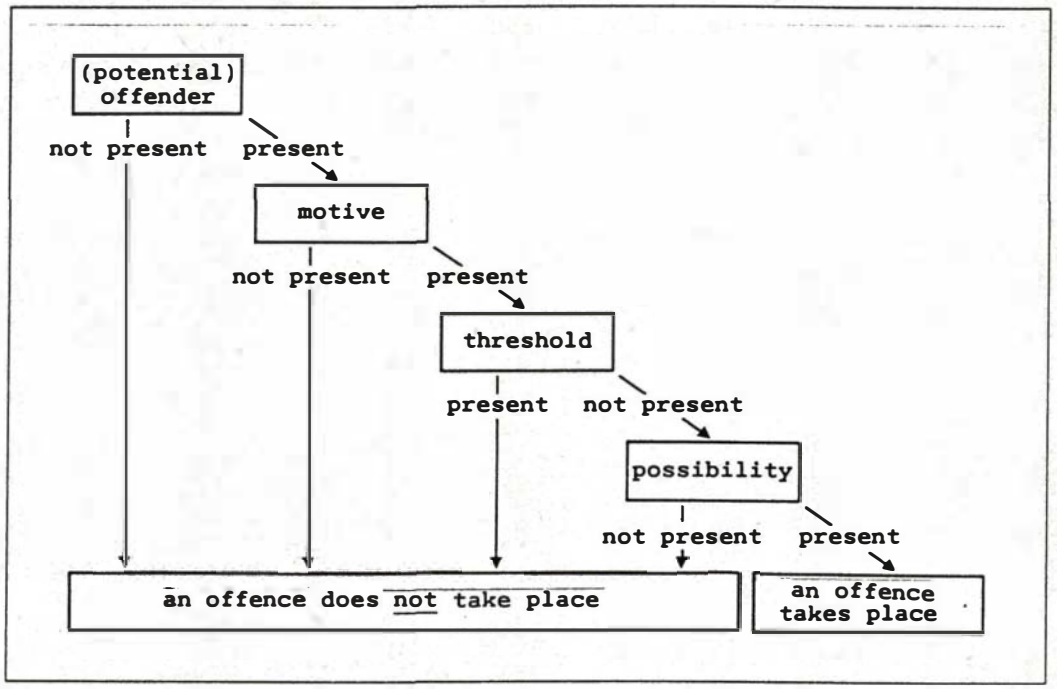
Starting from this point of view there are several problems one has to face. These problems can be placed in two broad categories: research and implementation problems and the problem of policy-makers having too high expectations of (physical) environmental crime prevention.

1. Research and implementation problems
   - Offender-based theories and residents/control-based theories are not interchangeable. The perspective a researcher takes has consequences for the answers he can give.
   - Research often has a slippery basis because of dark numbers in crime (or offender) data.
   - Responses to crime have to be implemented. Here, many problems arise: unwillingness of institutions, bureaucracy, lack of communication and co-ordination, lack of knowledge.
     The outcome of this process is that the best (or even good) responses to crime are seldom implemented. Steering the process of implementation is probably even more difficult than formulating responses (or crime prevention measures).

   To overcome these problems at best one can try to improve communication, coordination and the transfer of knowledge. This is a theme which will be discussed in more depth in the working sessions.

2. Too high expectations
   - The physical environment certainly influences both crime and the fear of crime (or feelings of insecurity). However, the influence may not necessarily be the same for each. In Jacobs' work we are confronted with this dilemma: pubs, restaurants and nightshops may promote community life and reduce feelings of insecurity, but these amenities all too often cause crime figures to rise in a neighbourhood.

- Buildings don't commit crime. Crime is the work of man. An offense only takes place if there is a potential offender who is motivated (not predestined!) to commit an offense, and who is not withheld by social thresholds or the physical impossibility to commit a crime.



It follows that a physical environment always plays a secondary role. The physical environment is at best a prerequisite for **informal control** (natural surveillance) **or** the physical environment can help to block (by physical or symbolic means) an offender from entering a neighbourhood, estate, building, corridor or appartment.

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Appendix

School:	Chicagoschool	Pragmatic school	Newman the Young	Newman the Purified	Situational approach	Spatial school	Rock hard school
	USA; 1920	USA; 1961	USA; 1972	USA; 1980	UK; 1980	USA; 1980	World wide since 10.000 B.C.
Authors:	Shaw and McKay	Jacobs, Wood	Newman	Newman	Clarke, Mayhew and others	Brantingham and Brantingham and others	
Key work:	Juvenile Delinquency and Urban Areas	The Death and Life of Great American cities	Defensible space	Community of interest	Designing out crime		
Area of interest:	Residence of juvenile offenders	Unsafe city streets. Crime site in relation to surrounding buildings.	Architectural design of unsafe estates. Physical possibilities for control.	The physical setting of social communities	Crime specific. Criminal acts resulting from offenders meeting or seeking opportunities. Physical and social environment.	Environmental criminology Analysis of the location of crimes, to sort out patterns in where, when and how crime occur	Physical strength of objects or parts of buildings
Main questions:	Where do juvenile offenders live? Why do they live there?	How to give city streets good crime preventional qualities?	Does a different housing design gives residents possibilities for exercising informal control over their environment?	See: Newman 1972	How to reduce opportunities for offenders?	Where? Why there?	How to prevent (by physical means) people from breaking or demolishing an object or a building
Answer/theory:	Where: Zonal model of Urban form (Burgess/Park). Highest number of delinquents living in the concentric zone adjacent to the central business district (zone of transition/slums). Rates declining with increasing distance outwards. Why there: Social disorganization. Youth learn criminal behaviour from peers.	1. A clear demarcation between public and private space 2. Eyes on the street (eyes of residents and eyes of people passing by). Buildings orientated to the street. 3. Streets must be busy and used continuously. Night shops, pubs, bars, etc. can create late hour activity.	Defensible space = natural surveillance coupled with residents feelings of territoriality	Informal control will flourish in a residential environment whose physical characteristics allow inhabitants to ensure their own security. Community of interest (grouping of life-styles)	Prevention strategies are different for each type of crime. In general: 1. Target hardening 2. Target removal 3. Removing the means to crime 4. Reducing the pay-off 5. Formal surveillance 6. Natural surveillance 7. Surveillance by employees 8. Environmental management	Without offenders no crime. Offenders make rational choices. Attention has to be paid to the decision-making process of an offender This process however is time/spatially constrained: offenders prefer to operate in areas they know. So crime risks are highest along movement psths of offenders (e.g. home <--> leisure) and on borderlines of affluent districts (where a lot of offenders reside)	Target hardening and alarm-systems. Strength of the target has to keep pace with: - the offenders profit when he succeeds after all (Fort Knox high profit --> this target must be quite hardened) - time needed to react (police, neighbors, employees, etc.)
Critique/remarks:	Research in Europe showed totally different pattern of residence. Danger of ecological fallacy.	Research proved Jacobs 'safe streets' to be unsafe! More people = more trouble (especially pubs/bars). Physical determinism See also Newman critique	Changing the physical environment does not necessarily result in different response to crime. The offender is neglected: how does he perceive D.S.; there are always ways to avoid surveillance. Methodological errors in research.	Again: too much physical (or architectural) determinism. Offender still neglected. Strange: Newman 1980 causes little debate; is neglected or unknown in most European countries.	In the eighties the opportunity-focused Situational approach and the Spatisl school become strongly intermingled. See e.g. Clarke and Cornish 1985 (Modeling Offenders' Decisions): Criminal behavior is seen as the outcome of the offender's broadly rational choices and decisions (not only spatial choices and decisions!).	See: Situational approach	Displacement of crime Creates Bunker environment. Target hardening can promote fear of crime.
Most useful application	Preventing youngsters from initial involvement in crime	Reduction of fear of crime by promoting community life	Creating better possibilities for natural surveillance and thus reduce feelings of insecurity. Effects on offenders seem to be at best moderate	See: Newman 1972	Preventing a specific form of crime in a very practical (manageable) way. Fear of crime is hardly incorporated in the theory.	Predicting which areas or routes are at risk; modeling offender's decisions by physical environmental changes makes rational crime policy (displacement policy) possible.	Preventing victimization in a particular case.