

Urban Environment, Place Management and Safety

Architectural Space, Spatial Configuration
and Limits to Freedom



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1

"The public sphere is both ideal and actual. The actuality is a good deal less perfect than the ideal of free and open debate that has policy consequences in a democratic polity."

Jim McGuigan, 2005, p. 427

"Habermas claims that an inclusive public sphere is the only deliberative forum for generating public opinion that satisfies the epistemic and normative conditions underlying legitimate decision making. He adds that digital technologies and other mass media need not undermine—but can extend—rational deliberation when properly instituted."

Ingram and Bar-Tura, 2014, p. 65



Jim McGuigan,
'The Cultural
Public Sphere',
*European Journal
of Cultural
Studies*, 2005.

Jürgen
Habermas, *The
theory of
communicative
action* Vol.2,
1987 [1981].



Jürgen Habermas,
*The Structural
Transformation
of the Public
Sphere*, 1989
[1971].

David Ingram & Asaf Bar-Tura, 'The
Public Sphere as Site of
Emancipation and Enlightenment: A
discourse Theoretic Critique of
Digital Communication' (*Re-
imagining public space*, 2014).



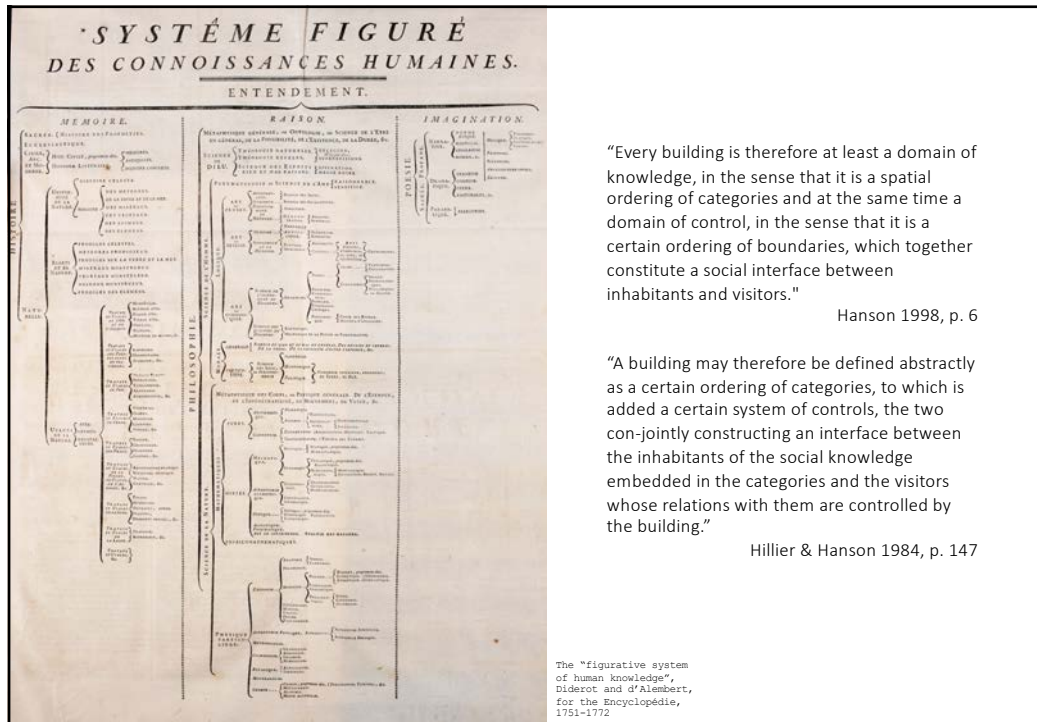
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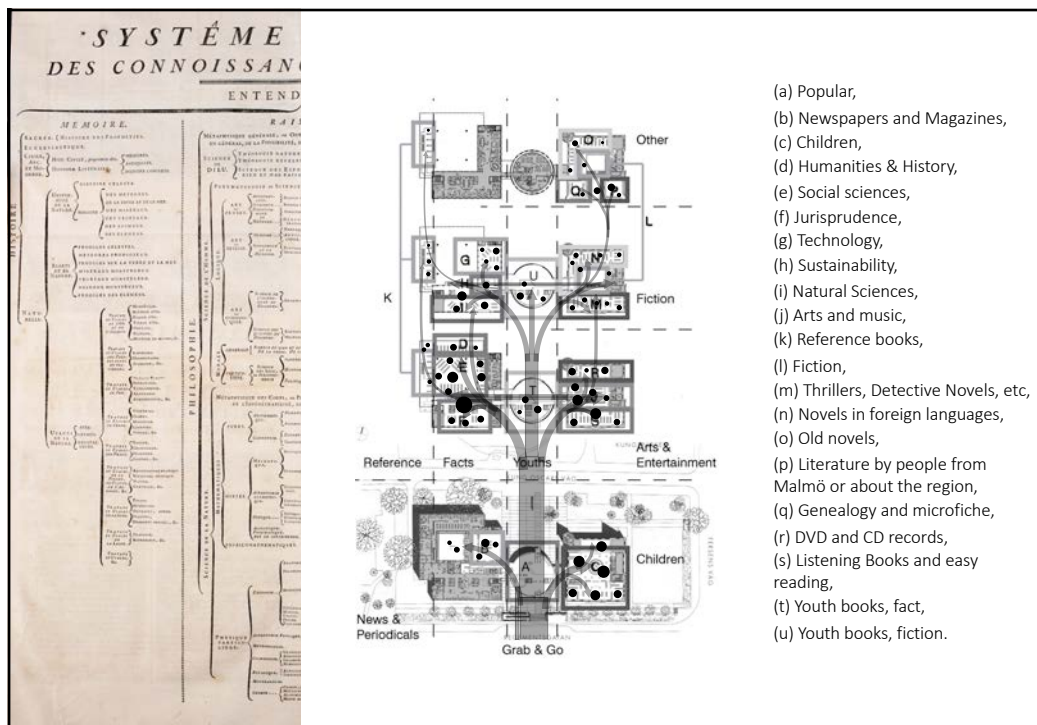
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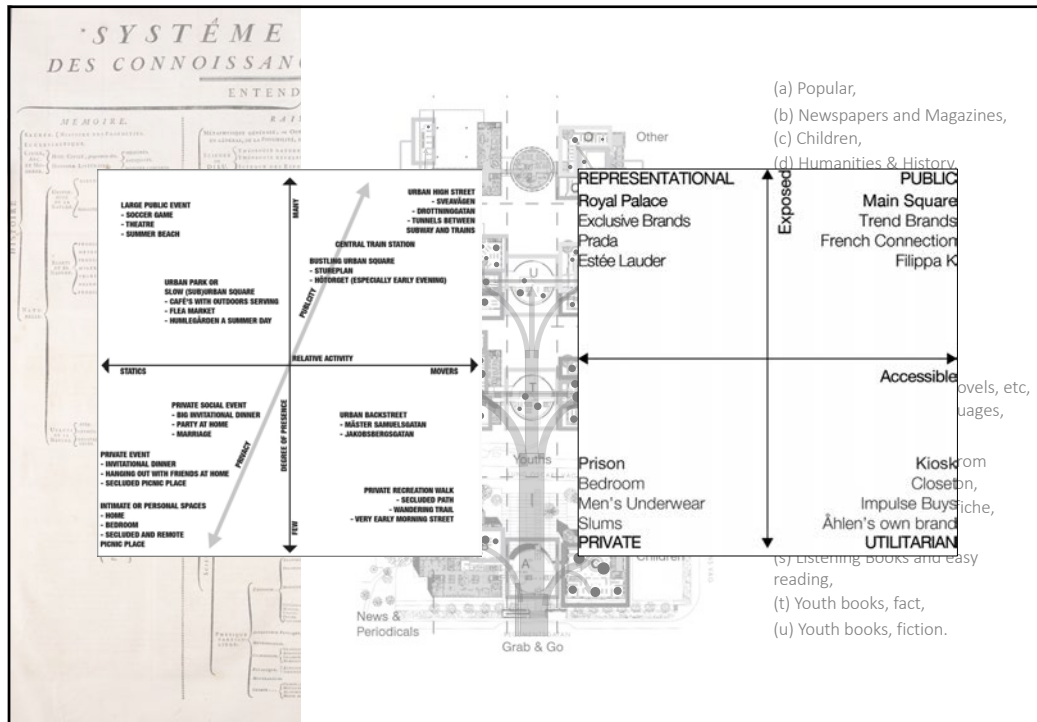
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"That is they describe social relations which I have already described as being of two kinds - those of power and those of bonds. And both exist at three levels.

The first is that of the reflective individual. It may seem strange to include this in the sphere of the 'social'. It is that relationship of self-to-self which is behind Gauguin's age-old questions 'Who am I? Where am I going? Where have I come from?'. The second level of self-, or others-, to-others is the common meaning of 'social' - the entire web within which shared goals are achieved, where there is conflict for resources and power, and where institutions are created. But it is also germane to the first level for I discover myself in others. It is in speaking and listening to them that the internal dialogue is learnt.

The third level is of the self, or others, to the Other."

Markus, 1993, p. 21



Thomas A. Markus, *Buildings & Power: Freedom & Control in the Origin of Modern Building Types*, 1993.

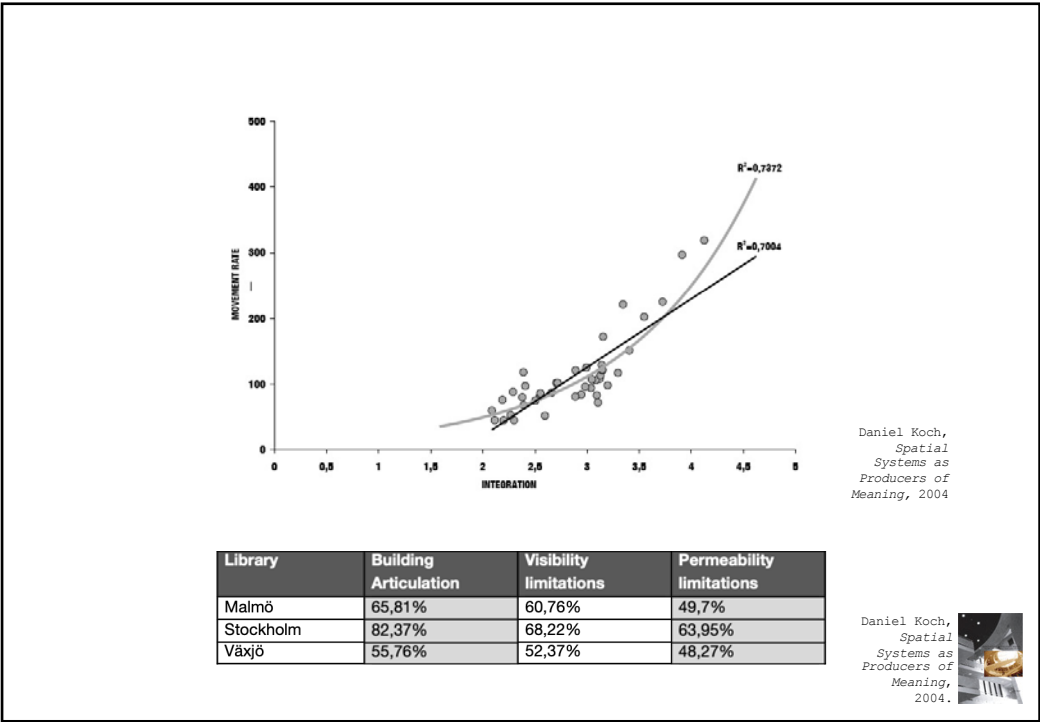
"In this sense, the spatial forms that structure social practices also routinize relational structures, which are in turn capable of shaping evaluative and cognitive function. The nature of social relations are therefore embedded in spatial form in the sense that material structures are able to construct and orient relational praxis, but also in a social sense in that social structures are also embedded in spatial relations: class, race, and gender can be structured spatially and therefore lead to particular kinds of what I have called public reasoning contexts, or those contexts of social relations that come to be regularized to such an extent that an individual becomes used to the specific forms of reasoning and thinking which that context requires."

Thompson, 2014, p. 153

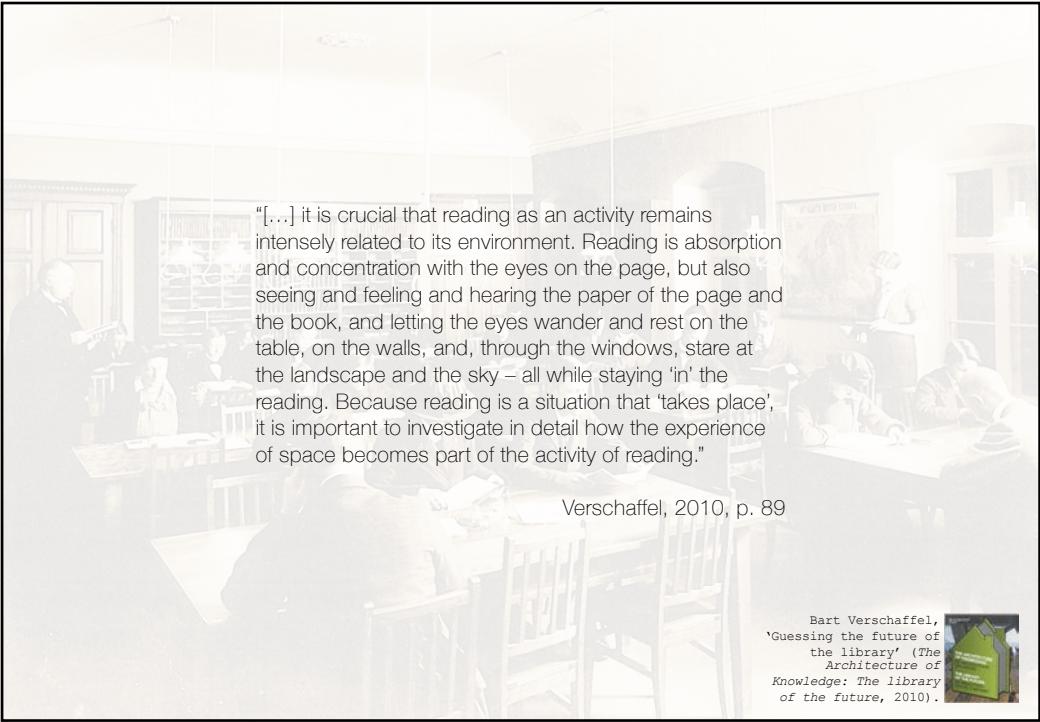
Michael J. Thompson, 'Spatial form and the pathologies of public reason' (Re-imagining public space, 2014).



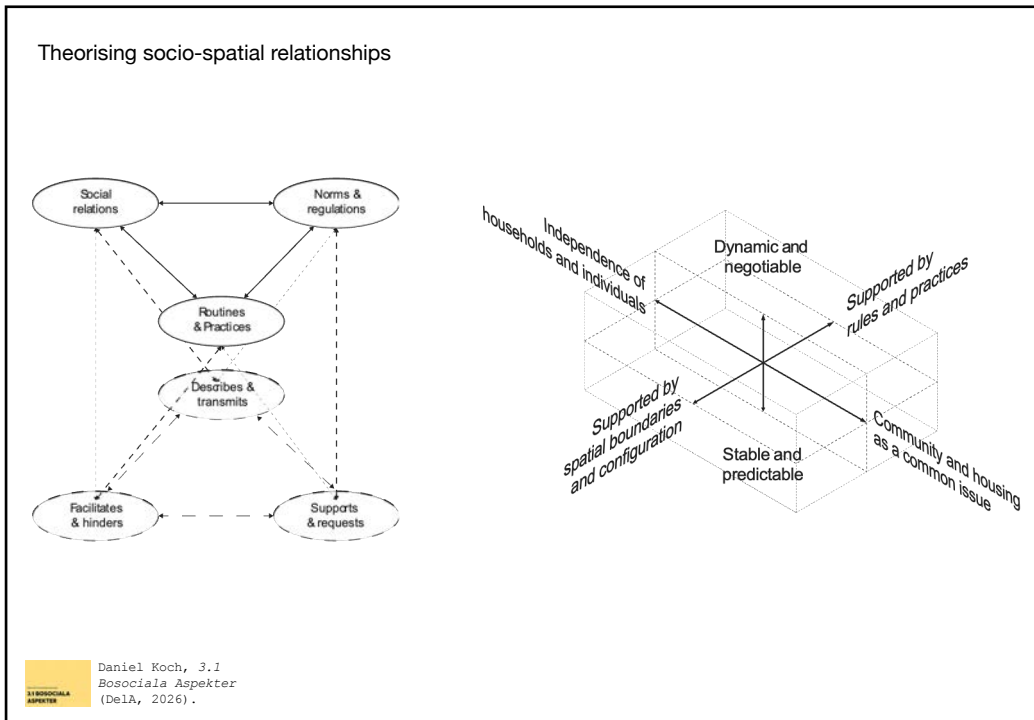
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"I like to think that it would be much more fruitful for the analyst to give up his efforts to predict behaviour directly – an amount of uncertainty is perhaps a valuable part of human existence – and instead focus his attention on how to find out in what ways limits to freedom of action come about and who, if anyone, is responsible for the configurations of such limits."

Hägerstrand, 1975, p. 3

"Clearly the planner as producer of the stage on which activities take place should know how he directly places constraints and opportunities and how he indirectly interferes with the ways inhabitants deal with each other. Therefore I believe that it is a more fundamental task for research to work with the distribution of potential degrees of freedom throughout a population than to try to predict how the available freedom is going to be used."

Hägerstrand, 1975, p. 5

Torsten Hägerstrand, 'Space, Time and Human Conditions' (Anders Karlqvist, Lars Lundqvist & Folke Snickars, Dynamic Allocation of Urban Space, 1975).

13



14

"Milk crates are intended to transport milk to grocery stores, but designers can hardly prevent unintended uses: as bookshelves, playthings for children, bins to store tools, dividing walls, stepladders, or bicycle baskets. For a homeless person, a milk crate can hold priceless possessions. Tied to a pole with its bottom removed, it is a basketball basket. In the hands of an angry person, it can become a weapon."

Krippendorff, 2006, 108

Klaus
Krippendorff,
*The Semantic
Turn: A new
foundation for
design*, 2006.



15



16

"Therefore some of the 'causes' of what is going to happen next are not to be found in the present and past but in the imagined future where the goal has to be attained. From this it emerges that every human being is his own 'scientist' with a unique knowledge of his private perspective of the world and his goals, a knowledge which can never in full be pulled out for observation."

Hägerstrand, 1975, p. 9

 Torsten Hägerstrand,
'Sace, Time and
Human Conditions'
(*Dynamic Allocation
of Urban Space*,
1975).

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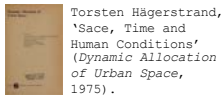


25

"The limited capacity of space to accommodate trajectories at the same time means that every vicinity around every actor always has certain scarcity characteristics. A whole population of a country or even of a city is not just one compact and momentarily available resource. It is divided up into many small spatial pockets each with its own mixture of trajectories.

Clearly the vicinity condition and the limited packing capacity of space and the limited number of trajectories in the universe under consideration mean that there is an unavoidable overlap between planned programs. Parts of the same trajectories, be they persons, tools, buildings or street-spaces, are sought by different goal-seekers as they try to move ahead with their specific programmes."

Hägerstrand, 1975, p. 10



Torsten Hägerstrand,
'Space, Time and
Human Conditions'
(*Dynamic Allocation
of Urban Space*,
1975).

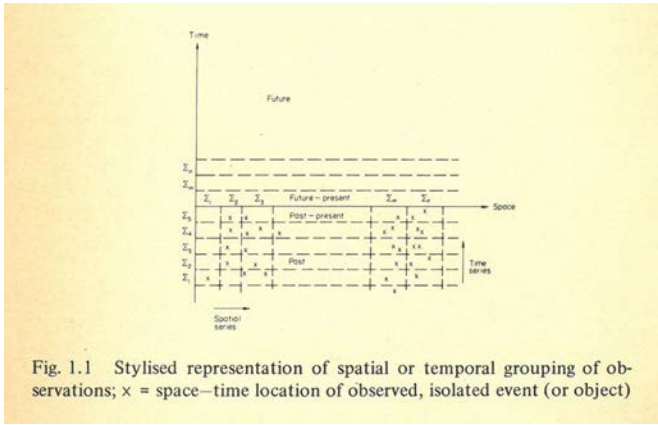
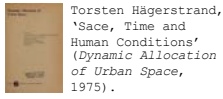


Fig. 1.1 Stylised representation of spatial or temporal grouping of observations; x = space—time location of observed, isolated event (or object)



Torsten Hägerstrand,
'Space, Time and
Human Conditions'
(*Dynamic Allocation
of Urban Space*,
1975).

"The joint outcome of the overlap between demands and the barriers which are supposed to avert conflicts means that modification of programmes is a more common feature of the process than undistributed movement towards the goals of each actor. At every conflict around a piece of a trajectory all except one of the programmes in question have to give up their claims, at least for the time being. The losers can perhaps come back later or they can find substitutes elsewhere if time and money permit. A common reaction is to modify the goal and the programme. A tremendous number of goals which have been conceived as programmes and towards which steps have been taken, will never be attained in reality."

Hägerstrand, 1975, p. 11



Torsten Hägerstrand,
'Space, Time and
Human Conditions'
(*Dynamic Allocation
of Urban Space*,
1975).

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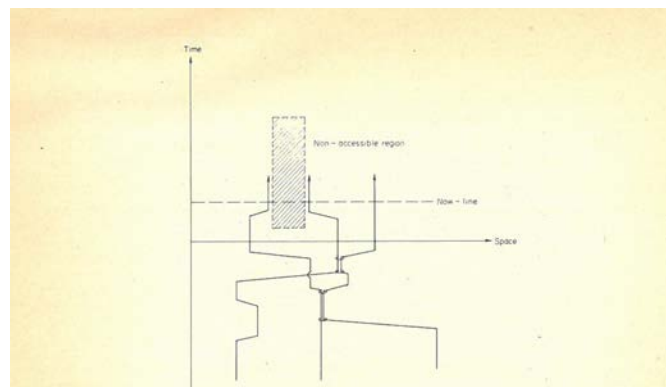


Fig. 1.2 Space-time trajectories of three indivisible entities forming two 'bundles'



Torsten Hägerstrand,
'Space, Time and
Human Conditions'
(*Dynamic Allocation
of Urban Space*,
1975).

29

Borrion Crime Science 2013, 2:6
http://www.crimesciencejournal.com/content/2/1/6

Crime Science

a SpringerOpen Journal

THEORETICAL ARTICLE

Open Access

Quality assurance in crime scripting

Hervé Borrion

Abstract

Background: With the growing interest in the use of crime scripts and attack scenarios for the development of control measures comes the need for more systematic scripting methods. Information about those sequences of actions that offenders carry out to commit a given type of crime can be extremely valuable to designers as control measures may be designed to influence the possibility to actualise criminal plans. However, there exists limited guidance as to what qualities crime scripts should possess in order to support the creation of suitable requirements, and how they should be handled in a design framework.

Discussion: This theoretical work contributes to the production and sharing of scientifically robust, useful and usable crime scripts. Drawing a link with the main application considered in this paper, it details the ways in which scripts can contribute to the development of functional requirements for control measures. It presents a list of defects commonly encountered with requirements specifications, and identifies those that could originate from poorly constructed scripts. This section adopts a modelling approach to identify and discuss the sought qualities of crime scripts, but the results apply to all scripts developed for the purpose of reducing crime.

Summary: The author presents a list of twelve quality criteria that could be used to evaluate crime scripts. These were identified by considering the common defects of requirements specifications, and tracing back their potential causes within crime scripts. The criteria relate to the following modelling aspects: typology, traceability, transparency, consistency, context, completeness, parsimony, precision, uncertainty, usability, ambiguity and accuracy.

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Potential, planned and performed scripts
To apply the concept of script to real world problems, it seems useful to differentiate between potential scripts, planned scripts and performed scripts.

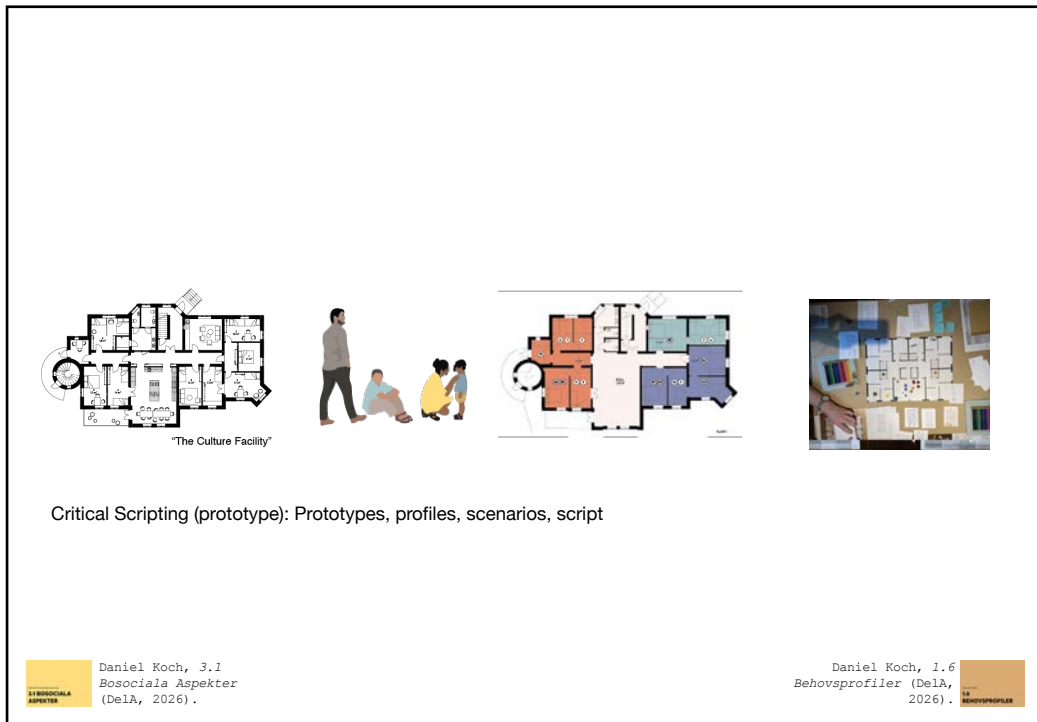
- Potential scripts describe hypothetical sequences of actions. They are closely related to Heuer and Pherson's definition of scenarios (2011): "*plausible and provocative stories about how the future might unfold*" and to misuses cases. For example, an attack scenario against a nuclear power plant can be build from a potential crime script that represents the various tracks that a terrorist could follow to break into the plant. This approach can be very risky as the scripts may not be sufficiently realistic or specific to develop effective measures with limited resources. However, it may be the only option available to derive risk scenarios for rare crime events.
- Planned scripts are a subset of potential scripts, and represent sequences of actions that someone intends to execute. Typically they are generated from information obtained through the collection of intelligence. An example of planned script may be an instrumental script that has been selected for a specific operation, e.g. a bank robbery. Planned scripts can be established on the basis of incomplete, uncertain, and sometimes incorrect contextual information. If the context has changed since the planning phase, the actualization of a planned script may result in a (performed) script that only shares a few similarities with the planned script. This would be the case if, for example, covert control measures successfully influence the course of a robbery.
- Performed scripts concern sequences of actions that actually occurred. Most of the crime scripts published in the crime science literature are developed based on empirical data and can be regarded as performed scripts. However, when they are used to develop new control measures, they are then interpreted as a model of what may happen in the future, and consequently also constitute potential scripts.

Table 1 Computer input-fraud script (Willison, 2006)

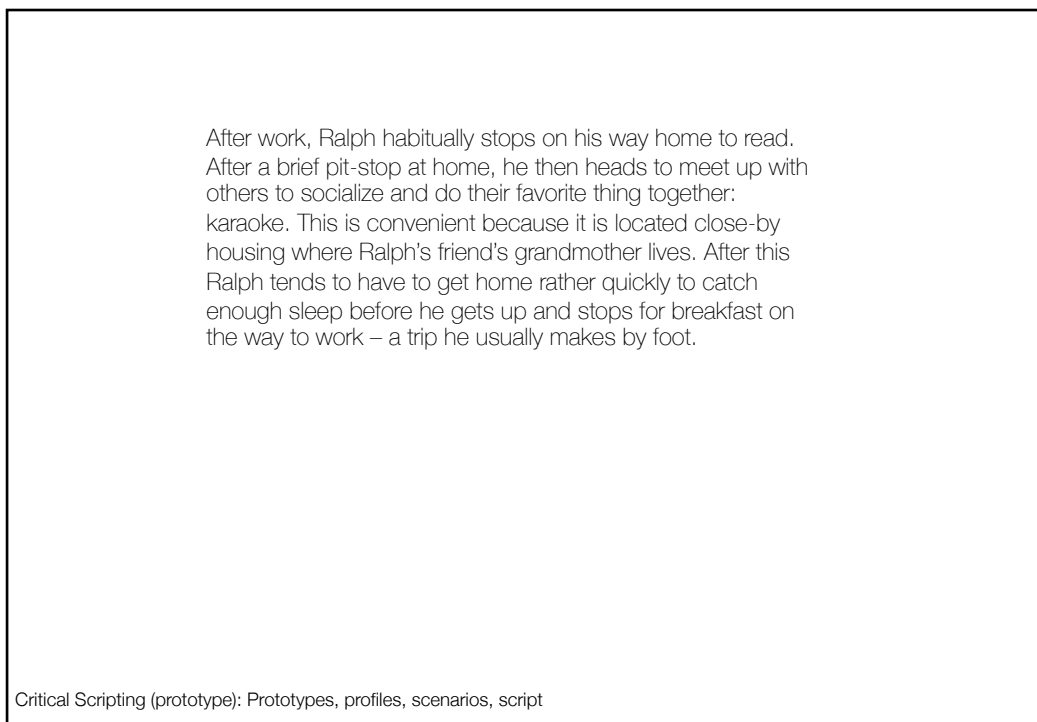
SCRIPT ACTION	
A ₁	Deliberately gaining access to the organization
A ₂	Already authorized as employee
A ₃	Wait for employees' absence from offices.
A ₄	Access colleagues' computers
A ₅	Access programmes
A ₆	False customer account construction
A ₇	Authorization of fictitious invoices
A ₈	Exit programmes
A ₉	Exit the system
A ₁₀	Spend the transferred Money

local council employee who committed computer fraud. Taking advantage of poor access security (colleagues failed to lock their computers when leaving the office for a substantial period of time), the employee would wait until other members of staff had vacated the office. He would then access their computers to process the fraud. In total £15,000 was embezzled, through the setting-up, inputting and authorization of fictitious invoices'. (Willison 2006, Commission 1998).

Over the years, a number of crime scripts (or similar models) were produced to describe and analyse different types of crime. These include robbery, vandalism and auto theft (Cornish 1994a, 1994b), resale of stolen vehicle (Tremblay et al. 2001; Morselli and Roy 2008), burglary (Nee and Meenaghan 2006), check forgery (Lacoste and Tremblay 2003), employee computer crime (Willison and Siponen (2009), crimes in public transport (Smith and Cornish 2006), explosive attacks (Clarke and Newman 2006; Le Sage et al. 2013), corruption (Zanella 2013), organised crime (Hancock and Laycock 2010), kidnapping (Yang et al. 2007), sex offenses (Cornish 1998; Beauregard et al. 2007a, 2007b; Deslauriers-Varin and Beauregard 2010; Brayley et al. 2011; Leclerc et al. 2011; Savona et al. 2013), drug manufacturing and drug dealing (Chiu et al. 2011; Jacques and Bernasco 2013), illegal waste activities (Tompson and Chainey 2011), stalking (Yanowitz and Yanowitz 2012; Leclerc 2013) and wildlife poaching (Hill et al. 2014). In addition, many crime scripts were created



32



33

On most days after work, Ralph habitually stops on his way home to engage in a cultural activity. After a brief pit-stop at home, he then heads to meet up with others to socialize at a meeting place where they can do their favorite thing: communal cultural activity. This is convenient because it is located close-by elderly housing where inter-generational meetings can happen. After this, Ralph tends to have to use an efficient mobility solution to get home rather quickly to catch enough sleep before he gets up and visits the food service provider for breakfast on the way to the workplace area, using active mobility solutions.

Critical Scripting (prototype): Prototypes, profiles, scenarios, script

34

On ~~most days~~ a regular Thursday after work, Ralph habitually stops on his way home to ~~read~~ have some time alone, usually reading. After a brief pit-stop at home, he then heads to meet up with ~~others~~ his partner Fabio to ~~socialize~~ for a date at ~~a meeting place~~ the small and cozy local bar with miniature outdoor amphitheater where they can do their favorite thing: ~~cultural activity~~ karaoke ~~with other people~~ with a few close friends and others in the small karaoke community. This is convenient because it is located close-by ~~housing~~ where Fabio's ailing mother lives ~~where they can meet across generations~~ in case she needs help with something suddenly (though this usually doesn't happen). After this Ralph tend to have to get home rather quickly to catch enough sleep before he gets up and ~~visits the food center~~ stops by his favorite bakery, where he's become friends with the staff due to his regular visits, for breakfast on the way to ~~work~~ the electric car assembly factory he works at – a trip he usually makes by foot.

Critical Scripting (prototype): Prototypes, profiles, scenarios, script

35

Main profiles				
 P1 "single dad"	 P2 "mother of three"	 P3 "cohabitants with kids"	 P4 "extended family"	 P5 "generation housing"
Single dad (37) with two kids (4, 7)	Single mom (43) with three kids (9, 11, 14)	Two young parents (34, 38) with two kids (6, 10)	Remarried couple (35, 40) with six kids (two shared, 3, 3, 7, 10, 7, 8)	Couple (37, 40) with two kids (5, 14), one elderly (72) and youth relative (23)
Preschool teacher who has the kids every second week, and tends to his own interests when they are not there. Need to do some work from home, and may need to jump in for sick personnel. Likes to play games and stream series and movies. One of the kids trains sports 1-2 times per week and needs parent to come along.	Landscape architect who can work fairly much from home, but this work may require continuous space. Age difference of children creates tensions as they also develop different interests. Likes to be active in her spare time. Family and other relatives live far away, so no easy solutions for others to take care of the kids.	Parents with highly diverging and shifting working hours (public transport and translation services). One needs to be away a lot, the other can work from home if undisturbed—available office is far away. Unsafe employments and low salary requires overtime. The whole family has diverging spare time interests and social circles.	Remarried couple with two small kids of their own, and two kids with previous partners. Usually four kids at home, but sometimes up to six. One works in the building industry with early hours, the other works shifts in healthcare. Both heavy works with long trips to the workplace. Children are growing to have conflicting spare time interests.	A pair who got children early and have small incomes, who live together with one of their dads with some aging troubles. In addition, they are caring for a young relative with anxiety issues after a previous troubled relationship leading to intense needs of privacy or contact. One can work from home a pair of days a week, the other often works evenings and weekends. Young relative insecure employments as hotel receptionists. The different ages of the kids are creating challenges in spare time activities.

Critical Scripting (prototype): Prototypes, **profiles**, scenarios, script

Daniel Koch, 1.6
Behovsprofiler (De1A, 2026).

36



Critical Scripting (prototype): Prototypes, profiles, **scenarios**, script

Daniel Koch, 1.6
Behovsprofiler (De1A, 2026).

37



Critical Scripting (prototype): Prototypes, profiles, scenarios, **script**

Daniel Koch, 1.6
Behovsprofiler (DeIA,
2026).

38

"The most intoxicating aspect of my return to Paris in September 1929, was the freedom I now possessed... From my fifth floor balcony I looked out over the Lion of Belfort... I was free to come and go as I pleased. I could get home with the milk, read in bed all night, sleep until midday, shut myself up for forty-eight hours at a stretch, or go out on the spur of the moment. My lunch was a bowl of borsch at Dominique's, and for supper I took a cup of hot chocolate at La Coupole."

de Beauvoir, 1984, pp. 11-12

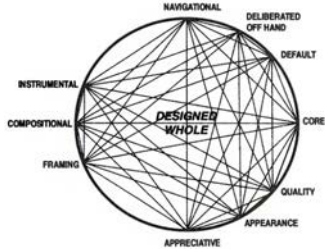
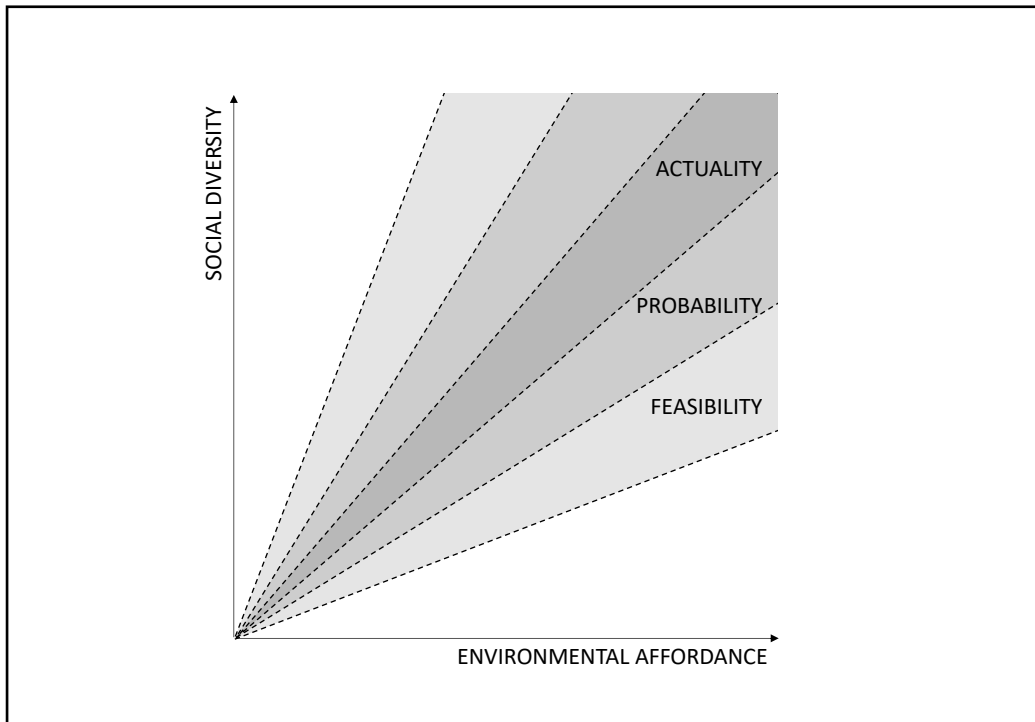


Fig. 8-5 Design Judgments

Simone de Beauvoir, *The Prime of Life*, 1984

Harold G. Nelson & Erik Stolterman, *The Design Way: Intentional change in an unpredictable world*, 2012.

39



40

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43