

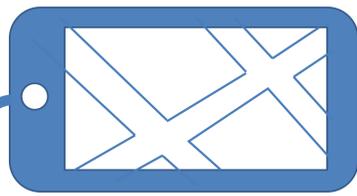
The Effects of Using Digital Mobile Devices on The Process of Way-finding within The Cities: Architecture and Urban Design Role?



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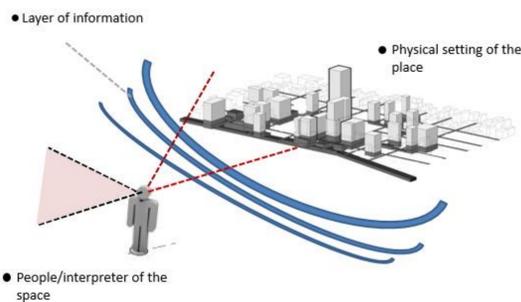
Introduction:

The impacts of digital technology on the shape and behaviour of our cities is just starting to be realised.

However, in fact, as a result of the recent emergence of the fluid, responsive, kinetic, data-driven worlds of ICT and its combination with urban landscape, urban design faces a radical rethink of a number of its principal underpinnings. So, urban designers need to understand the effect of ICTs and digital mobile devices on traditional urban principals (city imaging, way-finding, context, comprehensibility, space, etc.) together with the way people interact with their physical environment in the Information Era to find ways in which they can fruitfully and desirably combine real urbanity and virtual urbanity. Also, in this way, as a necessity for our mediating cities urban designers can learn how to design a discipline that doesn't really exist yet for the cities; a merger of urban design and urban planning with urban informatics. This would lead to the opportunity for creating networked public space that can value the traditional Physical qualities of cities whilst embracing the digital aspects of the developing ubiquitous world. In this light, this study attempts to understand the effects of using digital mobile devices on the process of wayfinding within the cities.



Way finding behavior and the role of urban design in 21th century (Information Era)?



Methods:

The methodology has been broken down in three steps

1-EXPERIMENT

The participants of this study are asked to do a series of wayfinding tasks and then their wayfinding behavior are measured. Two sample groups are studied; One group of participants used mobile phones to carry out self-guided neighborhood tours and the other group explored the case study without using any digital mobile devices.

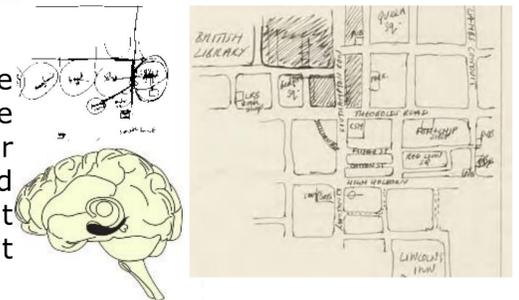
Technology aided group

vs.

Self-experienced group

2-Mental map

extracting information on the way in which the spatial actor mentally structured the environment into a coherent picture.



3-Questionnaire

- Phase 1: Self-report sense of direction
- Phase 2: Feelings test (Feeling of confusedness, feeling of getting lost)
- Phase 3: Architectural factors Test:

Architectural factors affecting wayfinding are examined; complexity of setting, differentiation and visual connection between landmarks.

Initial Results:

attributes	complexity		accuracy	
	Accumulative percentage	General Structure	General Orientation	Accurately Placed landmarks
GPS Users	5.02	2.2	1.6	6.8
Self-experienced Users	3.08	1.94	2.3	3.2

Drawing a map from memory could reflect the act of recreating the selective relationships with the local environment for both groups. This could be seen in the inconsistencies present in the mental maps drawn by participants and the way they tried to resolve these during drawing their mental maps.

In the case of using digital mobile devices for wayfinding, the reflections on making the mental maps were extended into the immediate present. In better words, using digital mobile devices gives people prepared external images with many details. So while participants were drawing the mental maps, they even marked the points and places where they have not been at, but they just saw them in their phones. Therefore, the participant's mode of engagement is shifted from that of a subconscious to a conscious reflective agent.

Environmental wayfinding factors

Environmental Factors	GPS Users	Self-Experiences Users
Coherence of the layout	4.5	6.5
Landmarks overlaps with the main street	3.5	4.2
Details of the streets	5.2	5.4

This table shows the differences in reading the environmental factors

