

- Introduction
- Web Privacy & Security
- Ubiquitous Computing
- Privacy and Trust

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In this paper, we we basis for CSCW de	vill critically explore the use of space as a esign. We will argue that the critical prop-	MUDs. At the other end of the technology spectrum, the explosion of interest in the Internet has been accompanied by a huge increase in the popularity of MUDs and MOOs [Cur-
Personal Draft submission f	and Ubiquitous Computing (to appear) for CSCW'96—not for distribution.	l Last modified: 3/12/96

THE ARGUMENT

- "place" & "context" are not the issue, a new, Postmodernist philosophy of interaction is
- most work encountered so far in the course has been rooted in an opposing Modernist philosophy
- presents two interpreted challenges to the usable security community

- "Space" is not "place"
- many systems use spatial metaphors
- features of space:
 - relational orientation and reciprocity
 - proximity and action
 - partitioning
 - presence and awareness

"The implied rationale is that if we design collaborative systems around notions of space which mimic the spatial organisation of the real world, then we can support the emergent patterns of human behavior and interaction which our everyday actions in the physical world exhibit."

Harrison, S. and Dourish, P. (1996). Re-Place-ing Space: The Roles of Place and Space in Collaborative Systems. In Proceedings of the 1996 ACM conference on Computer Supported Cooperative Work 67-76.

Thursday, November 5, 2009



- place is socially-(re)constructed
 - adaption / appropriation (<u>link</u>)
 - cultural phenomena (<u>link</u>)
- place is not designed in, but designed for

"The identification of 'placeness' as a cultural phenomenon—or, at least, one rooted in human social action—results in a critical implication for the design of collaborative systems and technologies. It shifts our focus away from the technology of place, since that technology—doors, walls, and spatial distance—only gives rise to 'placeness' through the way in which it is given social meaning."

Harrison, S. and Dourish, P. (1996). Re-Place-ing Space: The Roles of Place and Space in Collaborative Systems. In Proceedings of the 1996 ACM conference on Computer Supported Cooperative Work 67-76.

- Artificial Intelligence
- apparent complexity of human behavior is a reflection of the complexity of the environment
- computers & brains are symbol systems
- planning can be modeled with computers

SUCHMAN SIMON,

- "plans" are not "situated actions"
- SI is (re)constructed in situ
 - adaptation / appropriation
- plans are merely references

plan : situated action *as* space : place *as* security mechanism : actual usage

Suchman, L. A. (2007). Human-machine reconfigurations: Plans and situated actions. Cambridge Univ Pr.

- most systems focus on encoding context
- assumptions about context:
 - it is a form a information
 - it is delineable
 - it is stable
 - it can be separated from activity

"The idea that context consists of a set of features of the environment surrounding generic activities, and that these features can be encoded and made available to a software system alongside an encoding of the activity itself, is a common assumption in many systems."

"The kind of thing that can be modeled, using the four principles above, is not the kind of thing that context is"

Dourish, P. (2001). Seeking a foundation for context-aware computing.aHuman-Computer Interaction, 16(2), 229–241.

Dourish, P. (2001). Where the Action Is: The Foundations of Embodied Interaction. Mit Pr.

Dourish, P. (2004). What we talk about when we talk about context. *Personal and ubiquitous computing*, 8(1), 19–30.

- context cannot be encoded
- alternative view of context:
 - it is a relational property
 - its scope is defined dynamically
 - it is an occasioned property
 - it arises from the activity

"context is an emergent property" that is "continually negotiated and redefined." Furthermore, "people often find ways of using technology that are unexpected and unanticipated. ...Even when the general patterns of technology use do conform to expectations, the meaning of the technology for those who use it depends on how generic features are particularized, how conventions emerge, and so on."

Dourish, P. (2001). Seeking a foundation for context-aware computing.a*Human-Computer Interaction, 16*(2), 229–241.

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Dourish, P. (2004). What we talk about when we talk about context. *Personal and ubiquitous computing*, 8(1), 19–30.

- Modernism on the heels of the Enlightenment
 - rationality
 - objectivity
 - positivism (abstract, quantitative, etc.)

- Postmodernism reaction to modernism
 - rejects notion of objective rationality
 - phenomenology (subjective, qualitative, embedded)



- Husserl, out of concern "crisis"
- social action depends on agency and interpretation
- action precedes theory
- Heidegger ditched dualism
- Shutz added intersubjectivity

Dourish, P. (2004). What we talk about when we talk about context. Personal and ubiquitous computing, 8(1), 19–30.



Modernist	Refs.	Postmodernist
environmental complexity	Harrison&Dourish (1996), p2; Simon (1969), p52, 53	human/social complexity
model construction, meaning-embedding	Suchman (1987), p177; DourishA p239, 240	social construction / meaning-making
enabling machines	Suchman (1987), p43	enabling people
a priori reasoning precedes theory	Suchman (1987), p70, 177, 179; Dourish (2001), p235, 237;	contextualized inquiry precedes theory
pre- / machine determined behavior	Suchman (1987), p70, 72, Harrison&Dourish (1996) p4; Simon (1969), p21, 23	situationally / human determined behavior

Dourish, P. (2001). Seeking a foundation for context-aware computing. Human-Computer Interaction, 16(2), 229–241.

Harrison, S. and Dourish, P. (1996). Re-Place-ing Space: The Roles of Place and Space in Collaborative Systems. In Proceedings of the 1996 ACM conference on Computer Supported Cooperative Work 67-76.

Simon, H. A. (1996). The Sciences of the Artificial. MIT Press.

Suchman, L. A. (2007). Human-machine reconfigurations: Plans and situated actions. Cambridge Univ Pr.



SUMMARY \vdash ERNIS (POST)MOD

Weiser, Mark. Building Invisible Interfaces. Keynote Presentation from UIST 2004. http://www.ubiq.com/hypertext/weiser/UIST94_4up.ps.

Thursday, November 5, 2009

- true story: doctor & patient at checkout
- hypothetical: PDA that allows doc to show medical records

 Modernism: use static elements of context (place, userid), and predetermined reasoning constructs to grant access Postmodernism: context is constructed moment-by-moment, meaning that critical contextual elements and the way users reason about them vary

- "place" & "context" are not the issue, a new, Postmodernist philosophy of interaction is
- most work encountered so far in the course has been rooted in an opposing Modernist philosophy
- presents two interpreted challenges to the usable security community

Modernist	Examples		
environmental complexity			
model construction, meaning-embedding	Systems: Grey, Bardram's hospita apps, PeopleFinder, Privacy Bird		
enabling machines	Frameworks : end-to-end enterprise security frameworks, Aura,		
a priori reasoning precedes theory	semantic web & description logics, even Dey & Abowd		
pre- / machine determined behavior			

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- Modernist: place, space, and context are the rich environmental resources we can model *a priori* and sample *in situ* in order to support semiintelligent ubiquitous computation
- Postmodernist: place, space, and context demonstrate the complexity of humanconstructed behavior in situ that cannot be modeled a priori, but must be acknowledged in design

- to side with the camp you identify with now
- to investigate, deeply, the opposing side, most of all

- "place" & "context" are not the issue, a new, Postmodernist philosophy of interaction is
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- Which camp do you belong to? (or have the camps been incorrectly defined?)
- What impact does acknowledging your camp have? On design? On evaluation? Others?



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Extra slides

What does this mean for social science theory?

This is a significant shift in orientation towards ethnography in design, which has until now explored a foundational concern with studies of *situated action* [33]. In a design context, ethnography has largely focused on detailed empirical studies of what people do and how they organize action and interaction in particular settings of relevance to design. In contrast, the dominant concern for new approaches is to engage designers instead in a critical dialogue based on *cultural interpretations* of everyday settings, activities, and artefacts.

Dead objects, self-reflecting humans

The hermeneutic-phenomenological argument takes its point of departure in a critical difference between natural and social sciences: the former studies physical objects while the latter studies self-reflecting humans and must therefore take account of changes in the interpretations of the objects of study. Stated in another way, in social science, the object is a subject.



- M. Arch
- PARC
- design, meaning-making



"I am currently conducting research on the meaning of cheating in games, the relationship of art and computer science, the role of space and place in ICT – and the the way that ICT changes space and place, and creativity in design."

- "The internet is a place where people who don't have lives go to read about people who do."
- "Do I think that [Herbert Simon] is a bad person? No. Do I think that greatly he mislead a heck of a lot of people? You bet!"

UC, Irvine EuroPARC, PhD, Apple, PARC



"My research lies at the intersection of computer science and social science, with a particular interest in ubiquitous and mobile computing and the practices surrounding new media."

 in his graduate days at EuroPARC, romantic rival with Minneman for attentions of Victoria Bellotti I

Wittgenstein's aphorism about games:

What is common to them all? - Don't say: "There must be something common, or they would not be called 'games'" - but look and see whether there is anything common to all. - For if you look at them you will not see something that is common to all, but similarities, relationships, and a whole series of them at that... To repeat: don't think, but look!

Writing about these developments in the context of <u>global warming</u>, Bruno Latour noted that "dangerous extremists are using the very same argument of social construction to destroy hard-won evidence that could save our lives. Was I wrong to participate in the invention of this field known as science studies? Is it enough to say that we did not really mean what we meant?"

