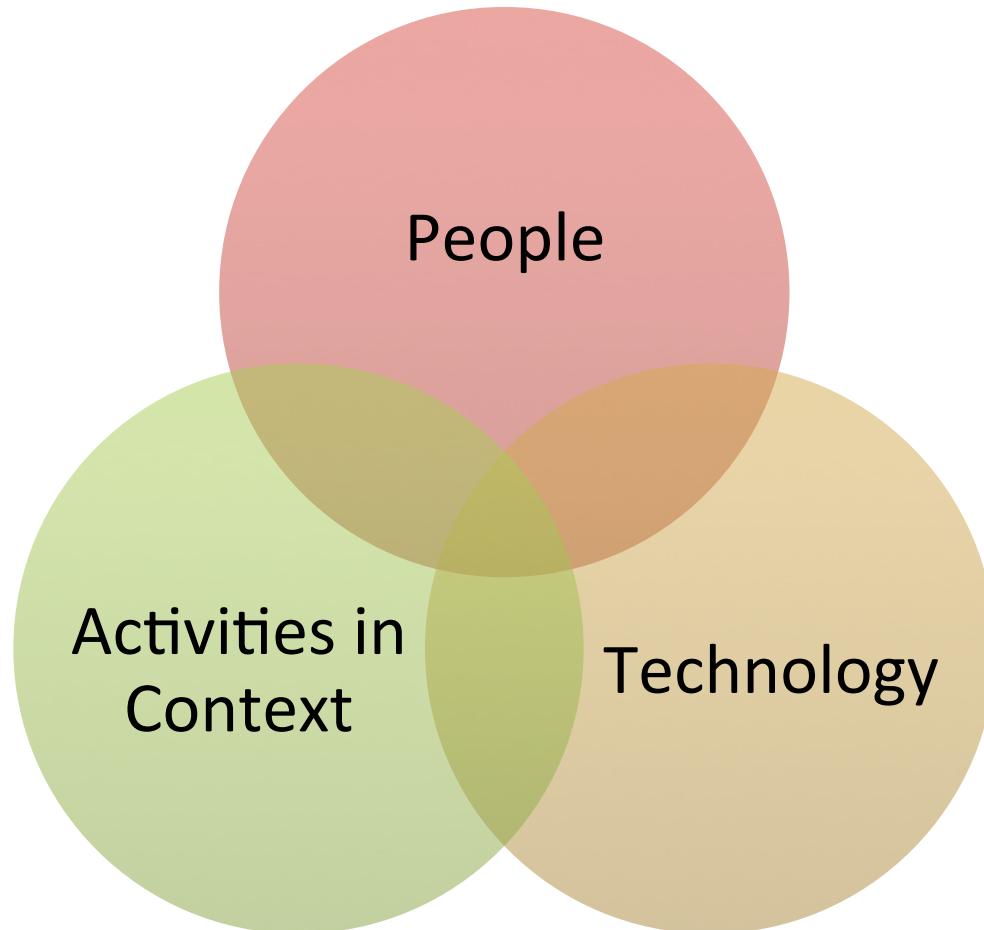


CAB210

People, Context and Technology

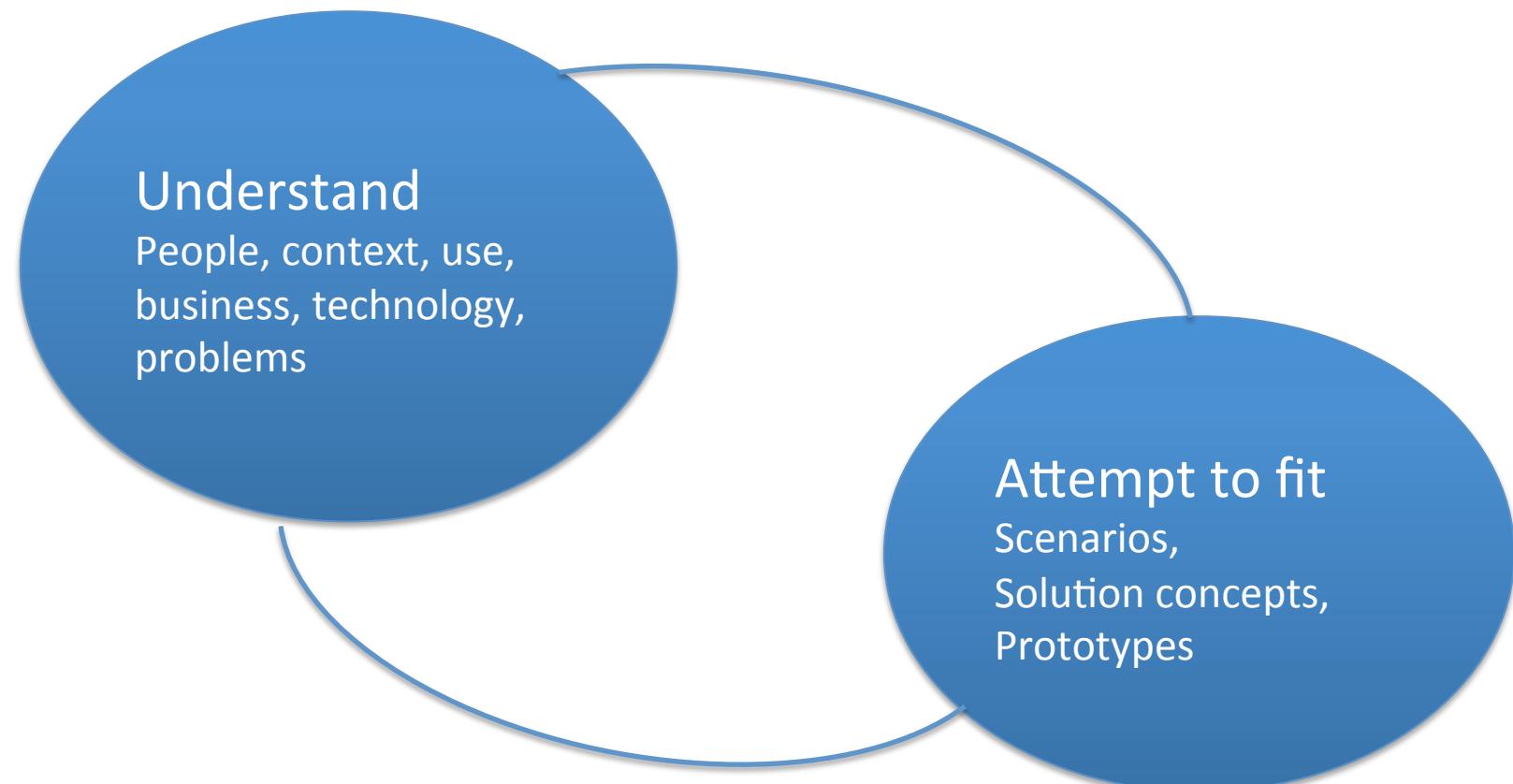
Lecture 2: Lenses on Context

PACT framework



PACT Analysis: Scope out the varieties of Ps, As, Cs and Ts that are likely in a domain

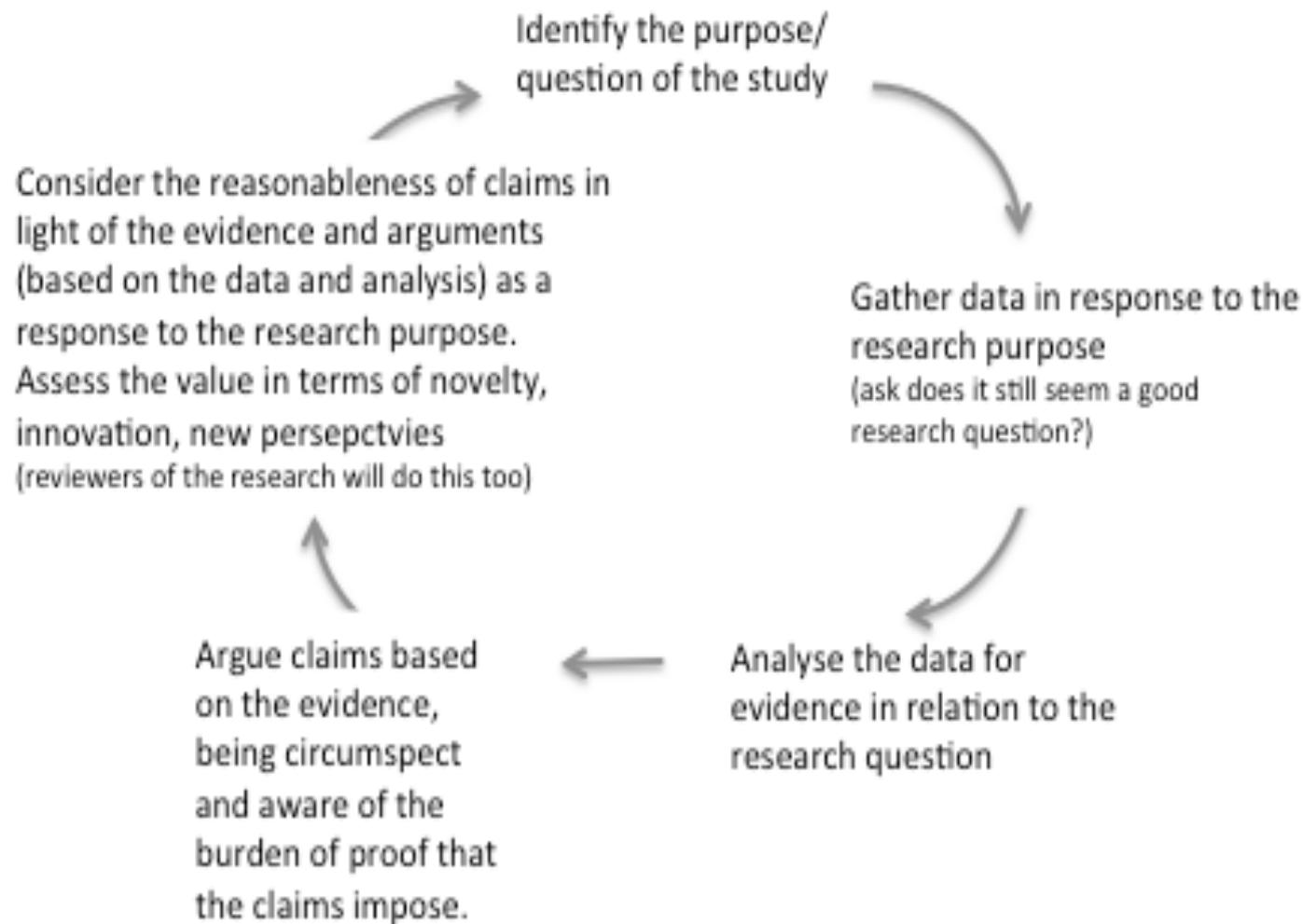
Design process in a nutshell



Lenses on Context

1. People
2. Space and Place
3. Socio-material assemblages
4. Objects
5. Interaction Analysis

Researching a context



Part 1

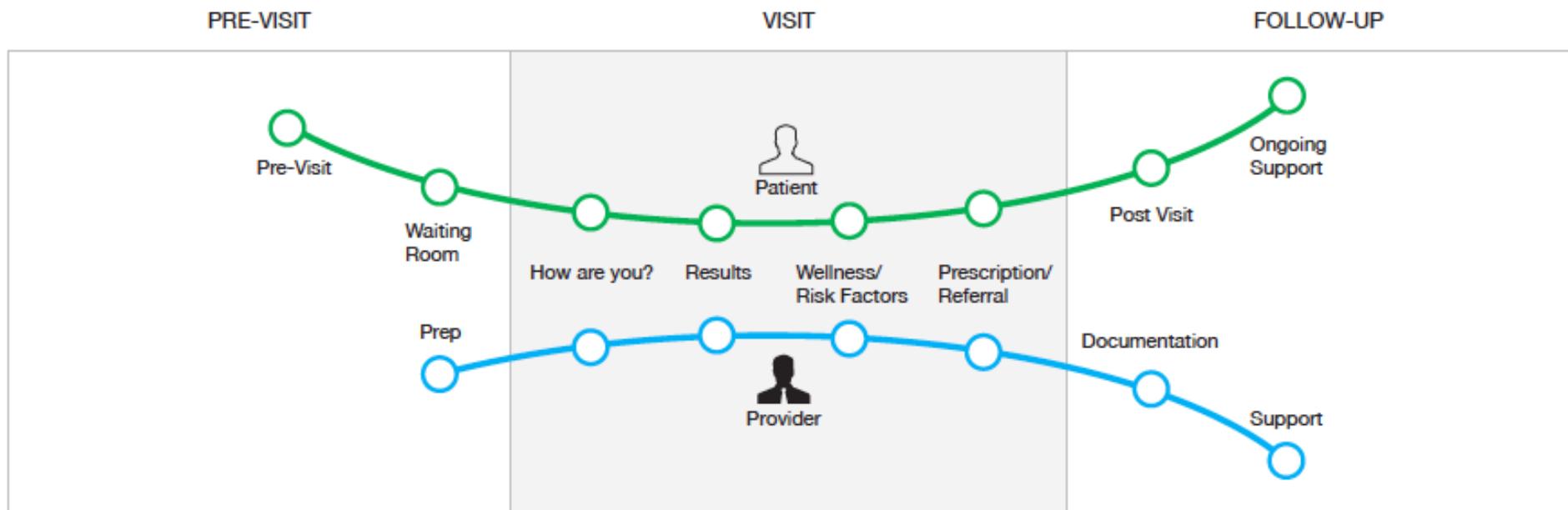
PEOPLE

Case Study: Healthmap

Goal: Interactive self-care plans for people living with HIV and ageing



HealthMap Opportunity Areas



How do we get the patients to ask their own questions about health in a doctors visit?

How do we connect the patients broader desires and aspirations with their health information and health assessments?

How do we make the health risk assessment less medical and encompass the person as a whole? (personal profile vs. health risk assessment)

How do we help people see their locus of control and reflect? How do we assess this and leverage it to help people with HIV?

How do we make the conversation between patient and provider richer?

How do we create opportunities, "hooks" for the provider to discuss chronic disease risk factors. How do we get the provider to recognize those hooks?

How do we represent results in a more meaningful way and use results as a hook for other conversations about risk factors?

How do we get the provider to follow evidence based guidelines?

How do we connect patient health information and patient health results to provide supports for them to take action?

How do we provide tools for structured support for behavior change?



John, Gay, 55

Disability Pension

Single

Darlinghurst, Inner Sydney

Diagnosed in past 25 years.

Own home, half-share with sibling.

I just need help trying to build a routine. If I had a structure, things to go out for, I know that would help.

On anti-depressants

Hep C

Ex heroin user.

Increasingly sensitive to treatment side-effects

Chronic pain: suffers from peripheral neuropathy – can't walk far.

Smoker – 20/day

Not in the scene.

Uses PC for email, spends about 8 hours/day on the internet. Only visits reputable sites for HIV information. Uses internet to pay bills, banking, shopping, download movies.

Is on Facebook but never uses dating sites.

Is positive identifying but uncomfortable with disclosure.

Watches a lot of TV.

Mobile phone for calls and text, not smart

Goal – Build a routine.

Goal – Do some study.

Goal – Get an iPad.

Fear - Getting seriously ill

John is trying to build as much independence into his life as he can. After years of serious ill-health he is trying to find stability.

John has accessed HIV support agencies in the past, but he doesn't like them.

I know I can call on them in an emergency, but I felt like they weren't listening to how I needed help, they have their system and you have to fit in. It wasn't for me.

John was very connected to HIV support organizations in the early 90s. He volunteered and was involved in peer support. He feels these organizations have changed their character now that they no longer rely on volunteers.

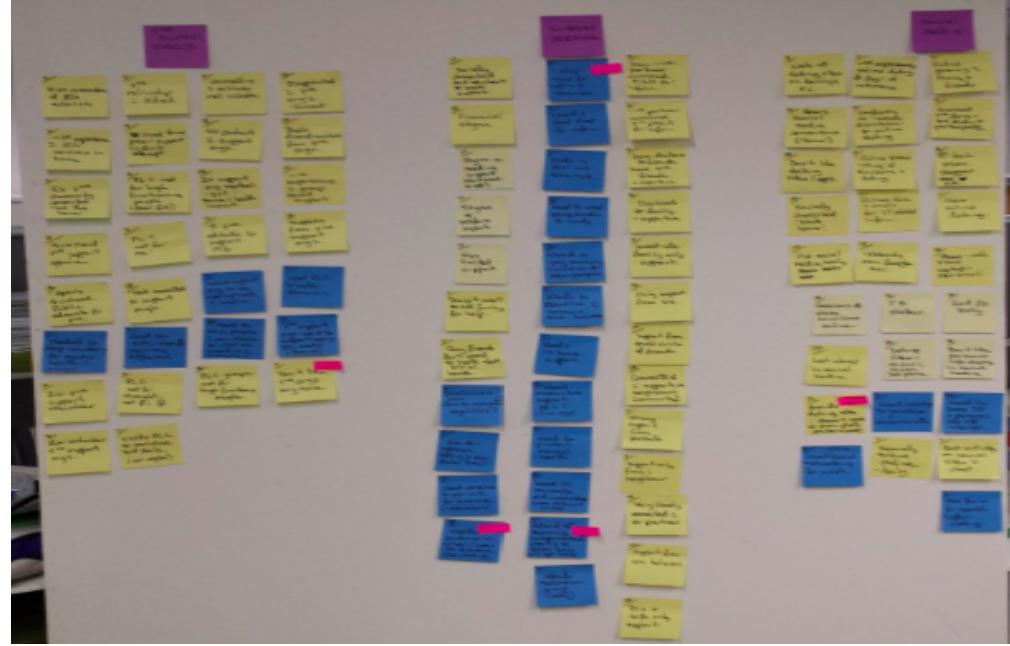
John has put his name down for mailing lists but they never send him anything.

John has been seeing the same Physician for 20 years. He has had a lot of unpleasant experiences with treatments and has had a few treatment breaks. He sees the liver specialist, a Psychiatrist and has seen a Dietician.

Because side effects have been problematic John always uses the internet to research anything his doctor mentions, including

Ageing with HIV

- Semi-structured interviews with 33 people living with HIV.
- Participants were recruited through HIV treatment providers located in metropolitan and regional areas.
- The interview questions addressed topics such as: the impact of HIV, interactions with healthcare providers, use of technology, approaches to self-management of health and wellbeing and psychosocial factors.
- 80% of the HIV positive population in Australia are gay men. The risk of cardiovascular disease increases for the 50+ age group, therefore the primary design user for HealthMap is a gay man over the age of 50.



- eighteen transcripts were used to extract quotations
- notes were made on colour-coded sticky notes and affinity maps were made to search for patterns and themes.
- quotations related to stigma, social connection, social isolation, social media, support seeking and HIV positive support organisations
- identify observations, needs and ‘pain points’ for each topic

Experiencing stigma

So have you been seeing the same dentist?

I have but ... I've got to tell him that I am HIV positive, whereas he should be using total universal care and treating every single patient he has as HIV positive and it's not fair, and I feel like it's like coming out every single time

So you have to disclose every time you go?

Yes ... every six months I dread going to the dentist, so I actually put the dentist – it's actually infrequent health profession I see, and it's because of that experience...

Experiencing stigma

But I also find sometimes I do need support, but my family, ... I can't remember when I've heard the word AIDS or HIV come out of their mouths, it's sort of, it's there, but it's not discussed, and they don't even really ask, they never ask how I'm going or how are the numbers or, they just assume, I don't know why, like if you had cancer surely people would be asking all the time, but HIV seems to still be a topic which people are very wary of getting into.

Lack of connection to HIV positive support organisations

Have you accessed the services of PLC or VAC?

I have gone to PLC and I have used the...kitchen and the whole bit. But if you are someone who, ... if you are someone who is earning decent money in whatever profession you are and happens to be positive, if you go to the PLC ... you don't necessarily get a feeling that it's the right place for you to be.... I have sent a couple of people there and I have gotten comments back, 'I found it really off putting'. ... it's just not a place where professionals will go in and feel comfortable and want to hang out and stuff because it's a little bit of a hangout for people who are not working.

What about VAC, did you try any of their services?

Yeah I went to VAC ... and saw a counsellor initially and that was fantastic. But I found VAC a bit clinical.

There was a perception by many PWHIV that HIV support organisations were for people not managing daily life, people with very high needs or as a last resort if one faced practical difficulties. Not wishing to identify with people ‘not coping’ was one factor in people’s feeling that HIV support organisations were not for them.

Support seeking - avoidance

Well look every one, everyone I know knows about it but when it comes to support the only person I really talk to about it is my doctor. Because the other people I know, I have, yesterday I went out with a friend of mine who is HIV positive and we just grumbled about the same thing, you know, he has the same problems too, you know...And yeah, yeah. I have friends who are heterosexual and not positive and I don't talk to them about it because they wouldn't understand...

(PWHIV interviewed have very narrow or absent sources of support for their health.)

Support seeking - avoidance

... My main problem or concern right now is that my family are all in [regional town], ... I rarely see them. I am living on my own. And as I grow older I have nobody at home and if something goes wrong God knows what's going to happen...I don't know frankly what's going to happen to me when I get to a stage where I can't look after myself.

Is that something that you have discussed with your family ever?

No... they have their own problems to deal with. They don't want their ageing dad on their back as well.

And what about your friendship network? Do you have a lot of friends?

Not a great deal.

Support Seeking – accessing information

What kinds of things would help you? What kind of apps or... internet based kind of services would...

...You know, what are your basic services? Where are key places in that state to go for support, for mental health support period, just say mental health support? You know, These are the places to go where you know you can actually go to a place where someone is non judgemental of the situation you are in but is there to help you for whatever reason... These are places, you know, etc, that are not necessarily ... a haven but they are not going to judge you.

Support Seeking – accessing information

We have talked about technology. Can you think about any particular benefits of that, of technology especially?

Being able to ... look for information on a faceless value means that you don't have to tell people you know, what you have got...So this anonymity that comes with it, you know. And that's so beneficial, like it's paramount.

Can you think of any drawbacks?

... No. No like I suppose it's less personal to certain extents, but that's not what I am looking for...The more ... the easier the access is to information the better it is for everybody

Social Media

You don't use any of the social networking?

I have done, but no, no, nothing but bloody trouble. I don't do Facebook, I refuse. You know, after my experiences on Gaydar or whatever these things are, not where I want to go, you know, I was naïve enough to say well who knows who you're going to meet, but I wasn't looking for what they were looking for you know. It was hideous. No.

So you don't do any of that?

No...I have done, I have tried it, you know, had a look and no, it's not for me.

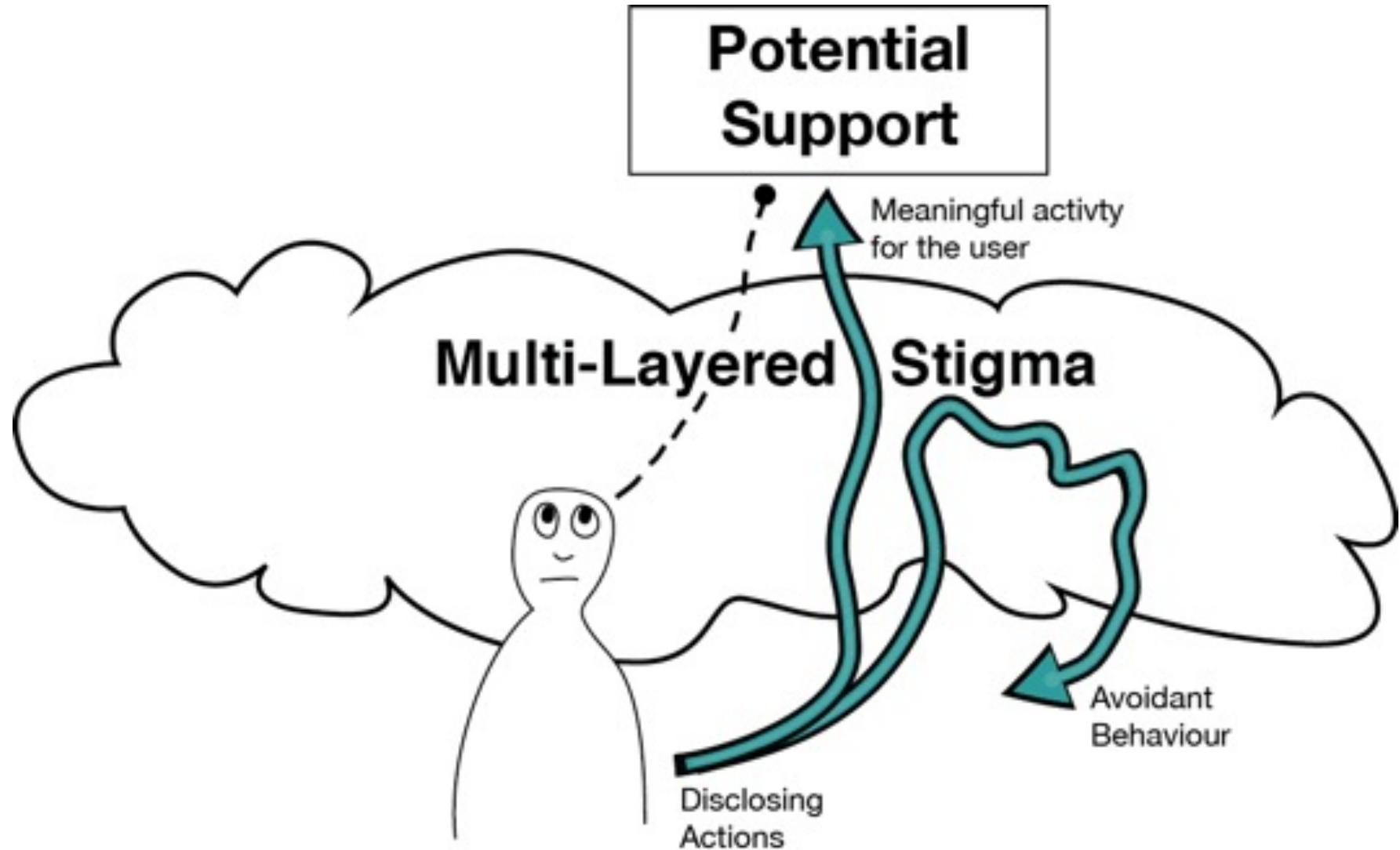
OK

You find out the hard way.

Social media

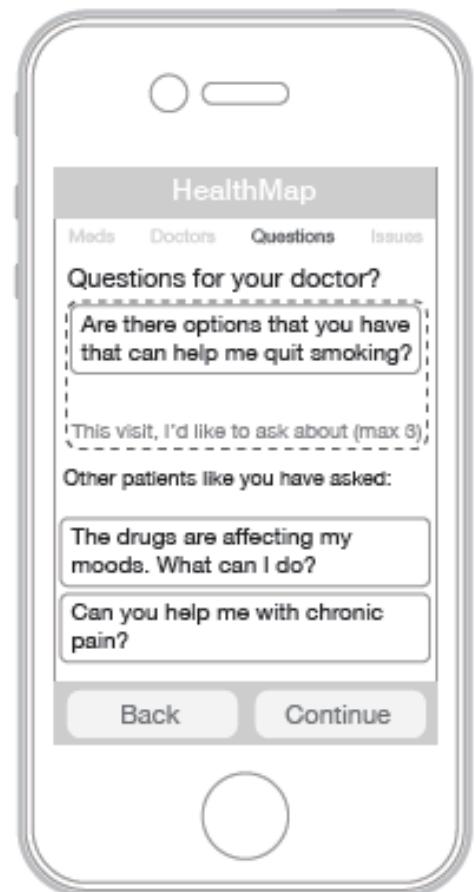
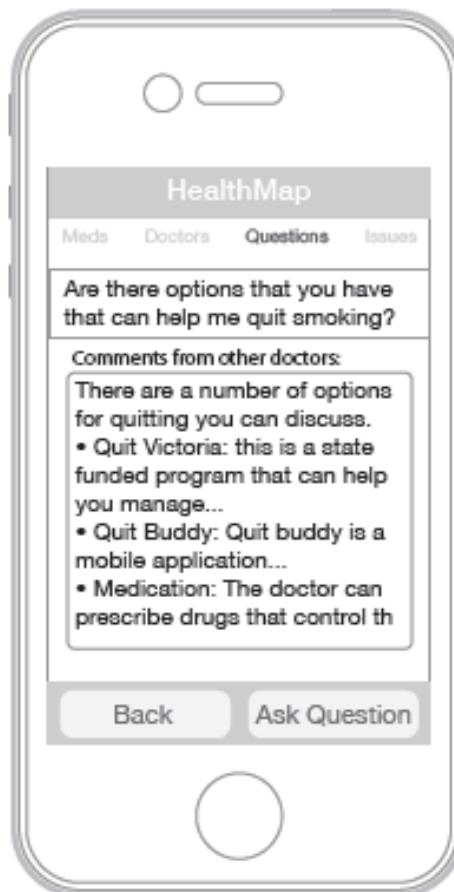
Do you do any dating or cruising, picking up on it?

Look the sites are there and I have tried. But everyone is so ... there is this thing you know like what do you look like? I got a Facebook stalker...They went to a lot of trouble to set up a false profile with a picture...And I thought who is this?...I thought oh they must have went to school with me. And then it slowly started. And then '[Name] the Homo', we don't want your sort at the thing [school reunion]... I went and saw the Federal Police about it...



Conclusion: Any design intervention must recognise stigma and avoidant behaviour. It must work within trusted relationships. Facilitate doctor patient relations.

One of many candidate designs



Part 2

SPACE AND PLACE

Someone rings your mobile and asks
where are you?

What do you say?

Features of space

Space is the structure of the world – it is the three dimensional environment in which objects and events occur and in which they have relative position and direction.

- Relational orientation - Up, down, left, right etc.
- Proximity and action – we act where we are, talk to people near by, pick up things within reach
- Partitioning – walls, distance
- Awareness and presence of others in the space

Features of a place

A place is a space invested with understandings of behavioural appropriateness, cultural expectations.

We are located in space, we act in place.

A space is always what it is, but a place is how it is used – patterns of understandings, associations and expectations depend on the pattern of events we experience there.

(consider a lecture theatre, a church, someone's living room)

Placeness

- Connectedness - the degree to which a place (object) fits with its surroundings
- Distinction - the degree to which a place (object) feels “out of place”

Media spaces and places

- How do people turn a space into a place?
- Bellcore VideoWindow (1990)
- Xerox PARC Media Space (1991)

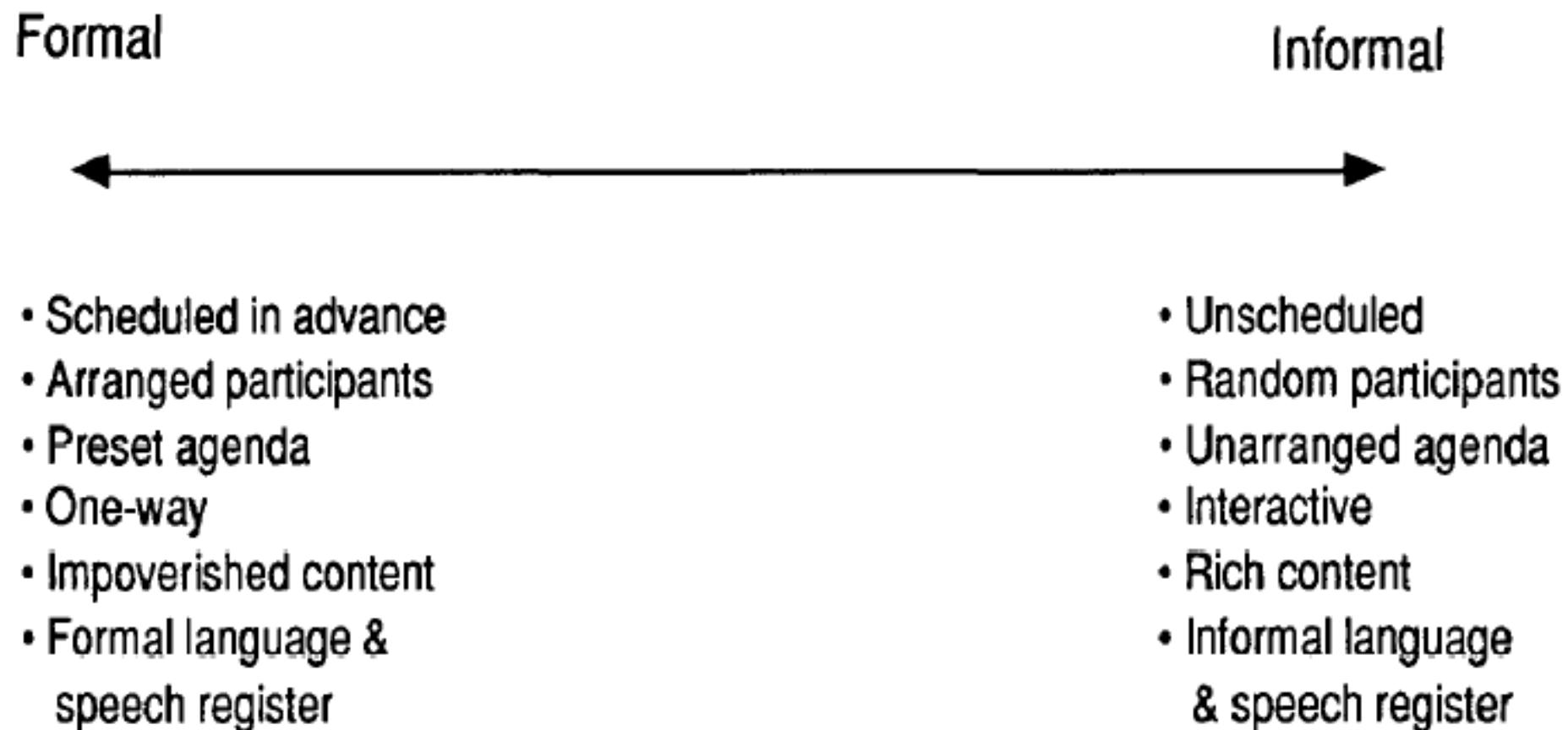


Figure 1. The formality of communication

Bellcore VideoWindow 1990



Figure 2. The VideoWindow teleconferencing system.

High quality audio and video. Life size images. Free food and coffee. Set up 32 in commons areas on different floors of the building

Media space XEROX PARC 1991



Figure 2.

Inexpensive cameras on tripods. Pick them up, move around, play with them



Figure 2. The VideoWindow teleconferencing system.

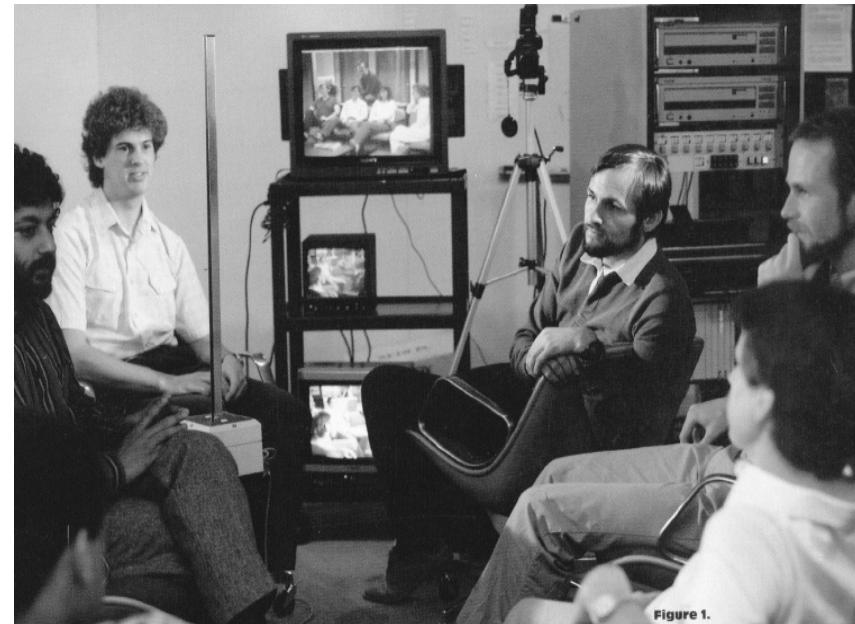


Figure 1.

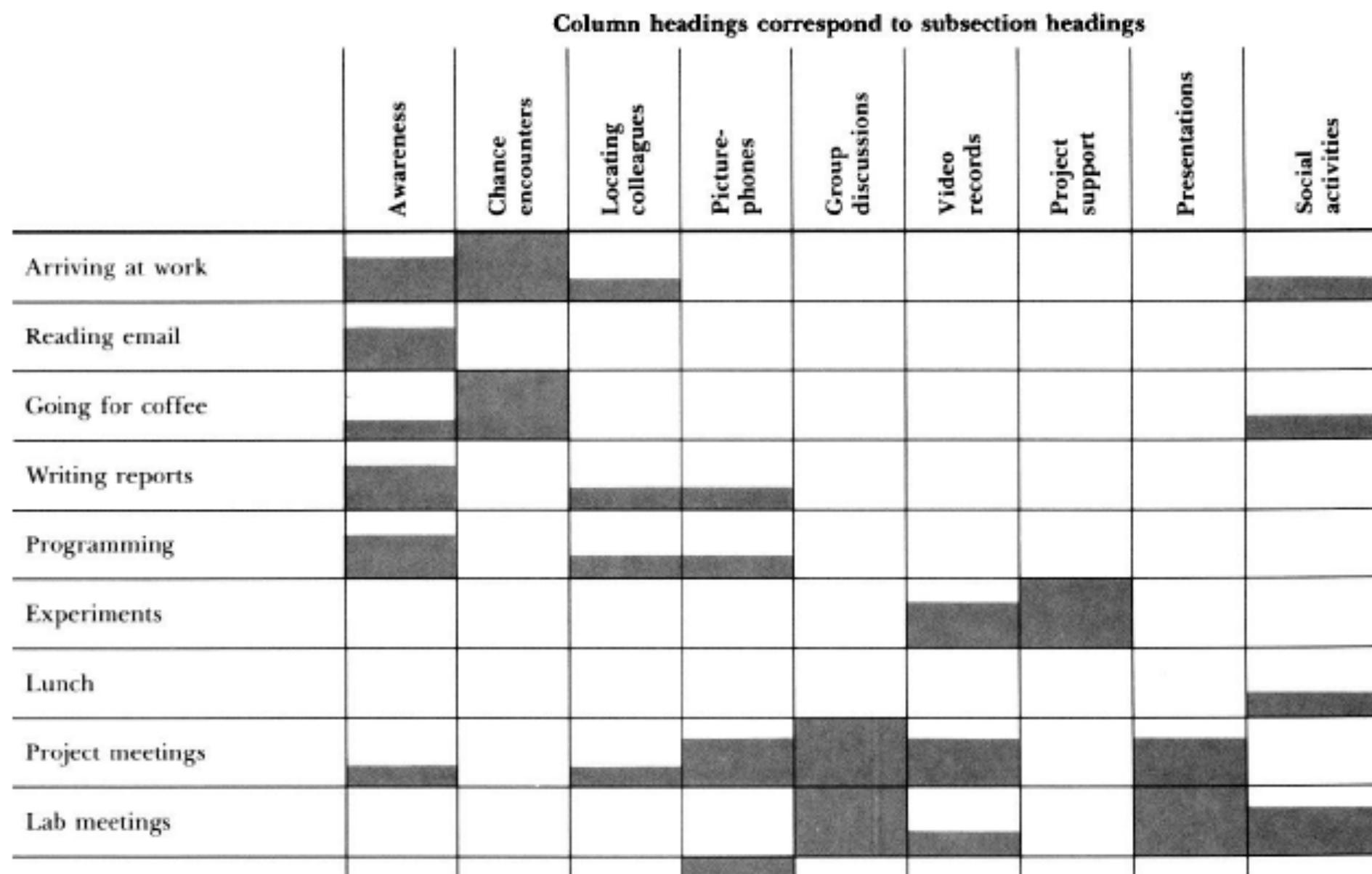
"lacks something due to factors we don't understand"

Fixed.

"the media space offered something wonderful to those of us who experience the Palo Alto – Portland link"

Places emerged through active use, adaptation and appropriation over time.

Table 1. Uses of a Media Space in Daily Activity. This table reflects the scenario of a typical work day in SCL. It is meant to suggest a framework for understanding how a media space was used by individuals. The thicker the box, the more significant the use.





Places without physical space

Chat rooms

Facebook groups

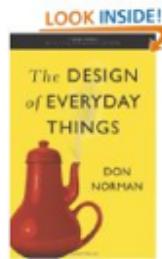
Games

Different social norms emerge, even without physical spaces

Social navigation – Navigation through information collections (e.g Amazon) on the basis of information derived from the activity of others.



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Don Norman (Author)

Average Customer Review: ★★★★☆ (32)

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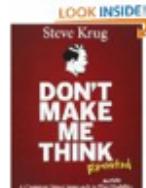
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Hybrid spaces



- Media spaces – while the space is virtual the projections are not
- Shared office etiquette – visitors greet remote as well as local person, as if it were a shared office.
- Seeing out the door – position cameras to allow a view of the door as well as the office inhabitant (to see who's at the door)
- The audio space is more easily shared. The visual space is not shared.

- Places frame appropriate behaviour
- Places have social meaning
- Different media have different spatial properties
- Place making – places reflect conscious arrangement of elements, appropriation and use

When my virtual door absolutely controls access to my virtual presence in a media space, then the opportunity is lost for an appropriate social interpretation of a closed door. My ability to appropriate elements of the world and turn them into cues for availability disappears.

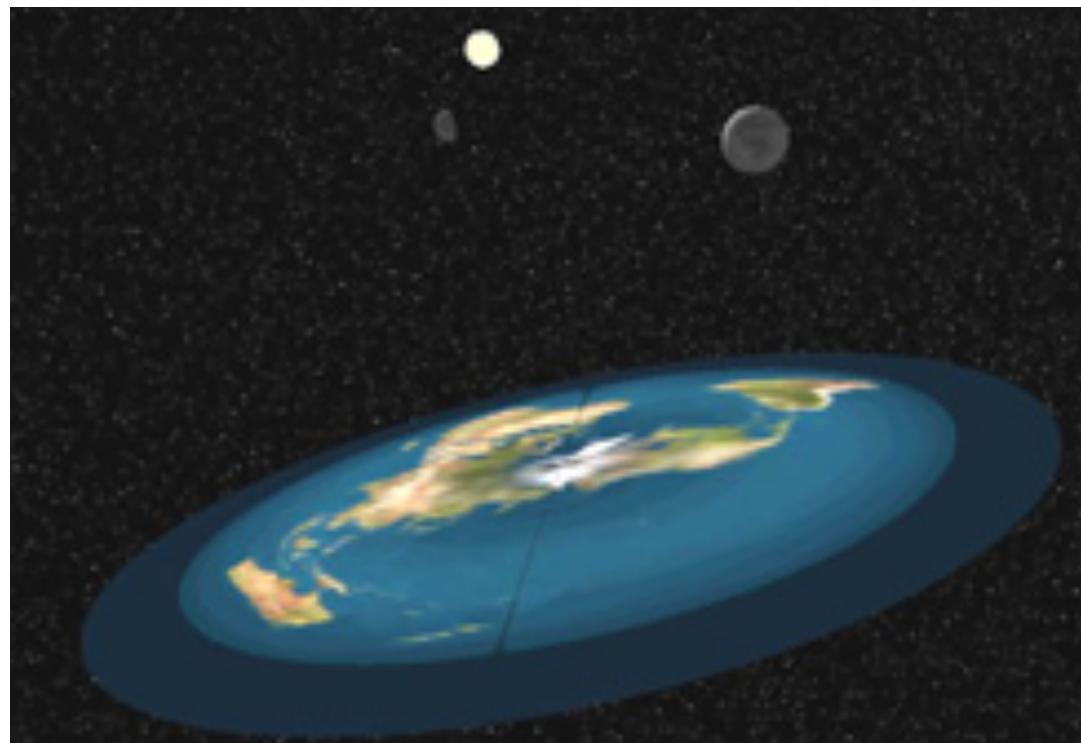
Spatiality revisited

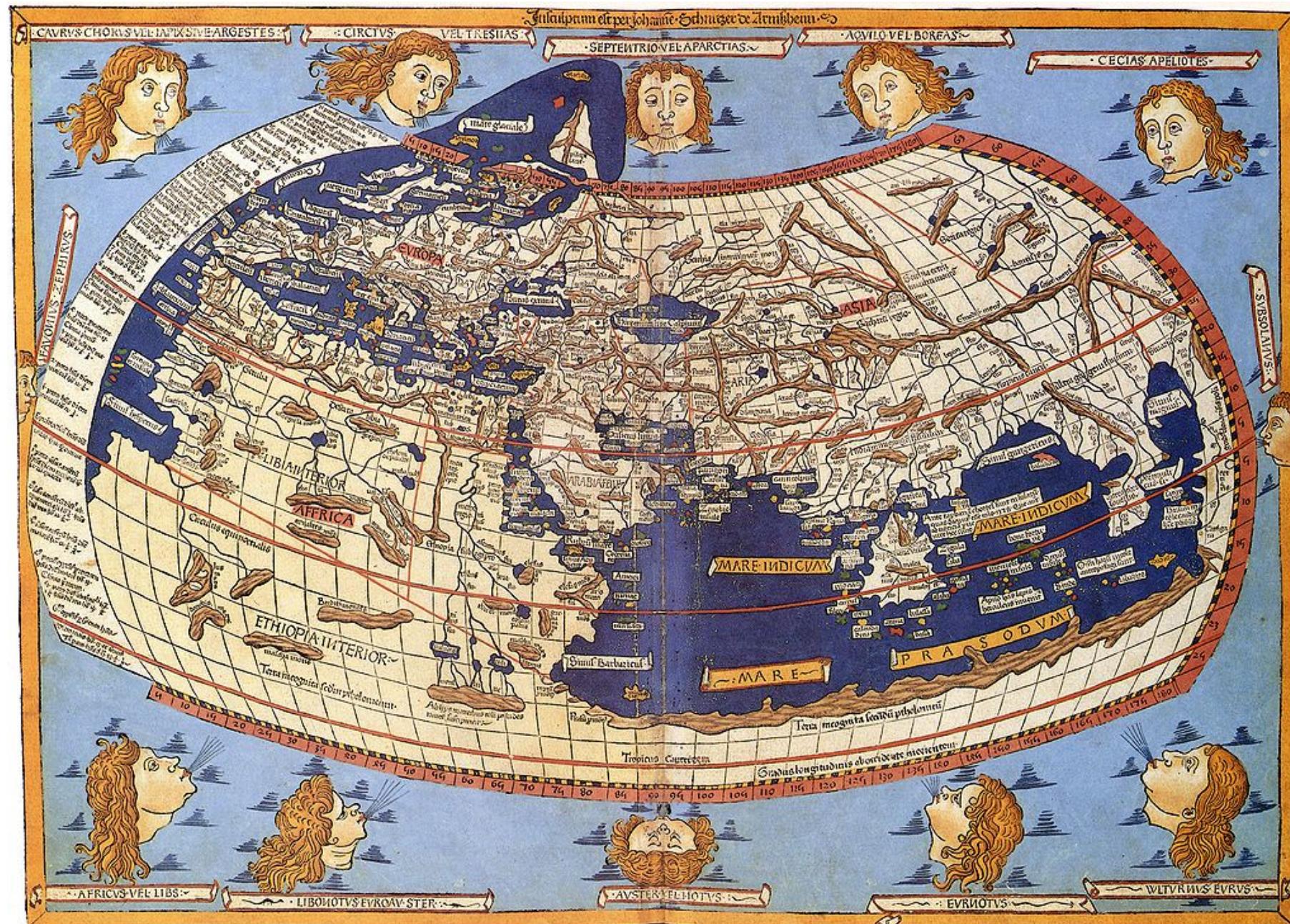
Early models viewed space as given and place as socially constructed and layered on top.

BUT

Space is socially and technologically constructed too!

There is a reciprocal relation between space and place



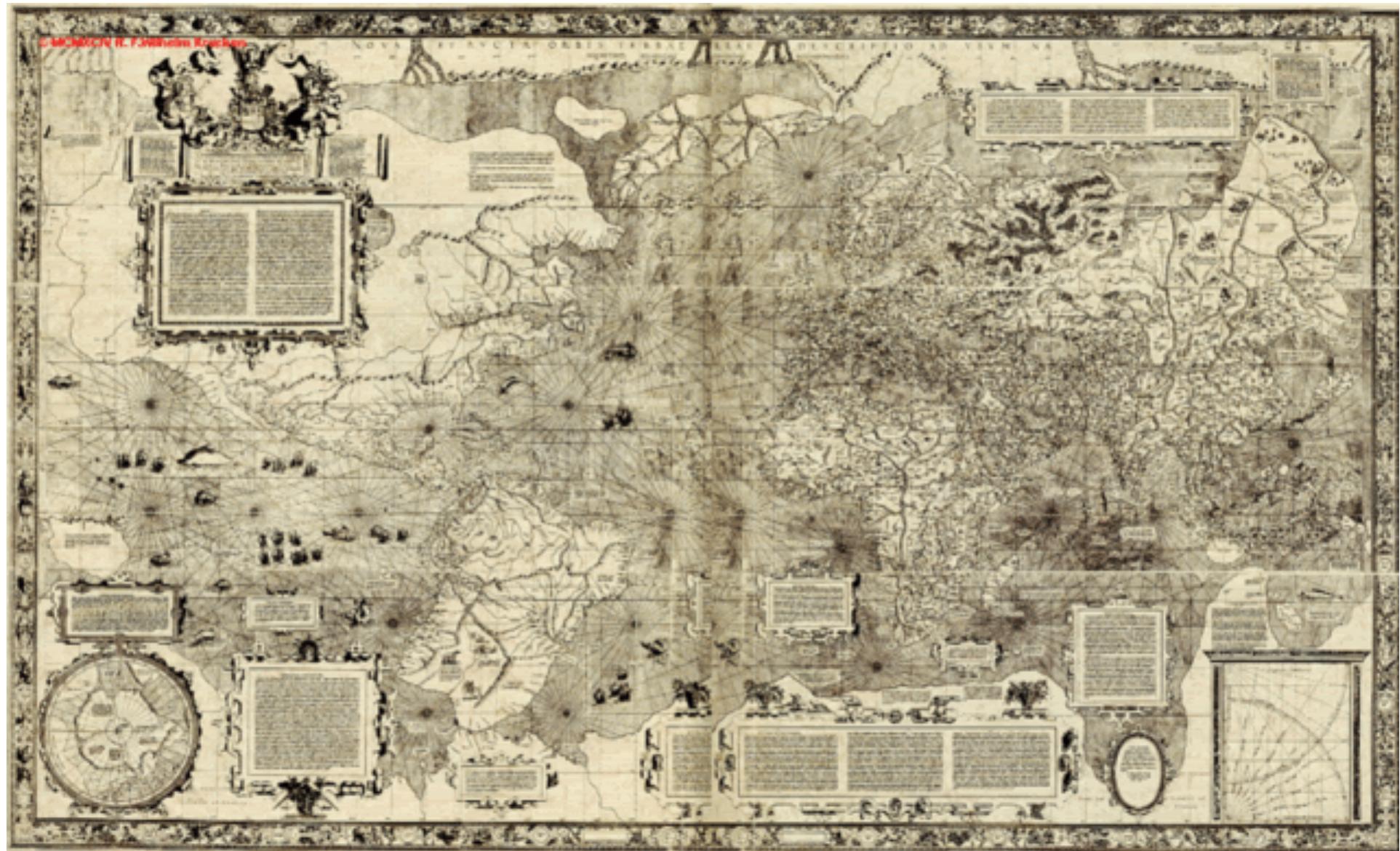


Claudius Ptolemy 1482

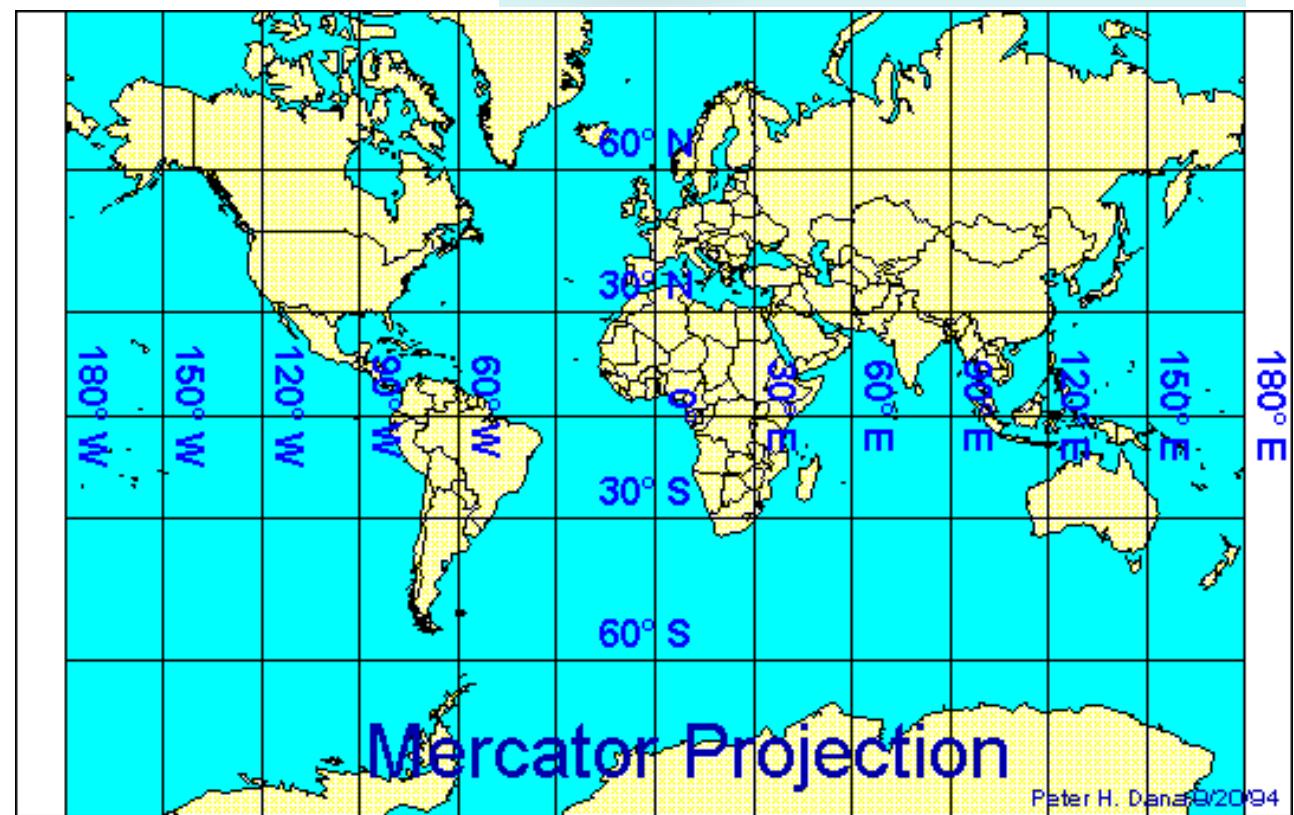
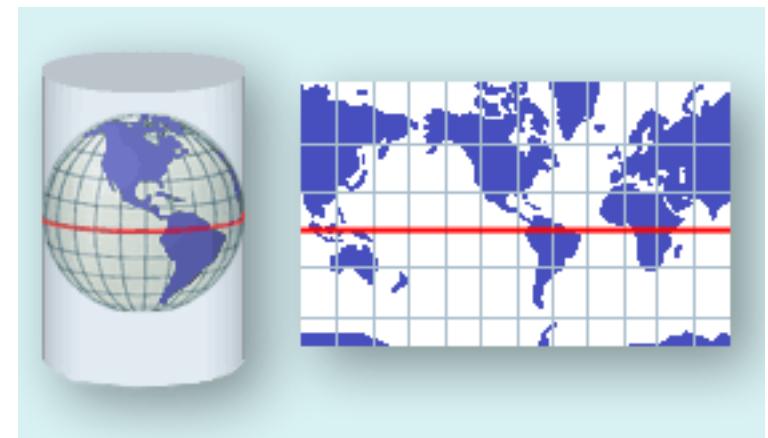


Pietro Coppo 1520

Mercator projection 1569

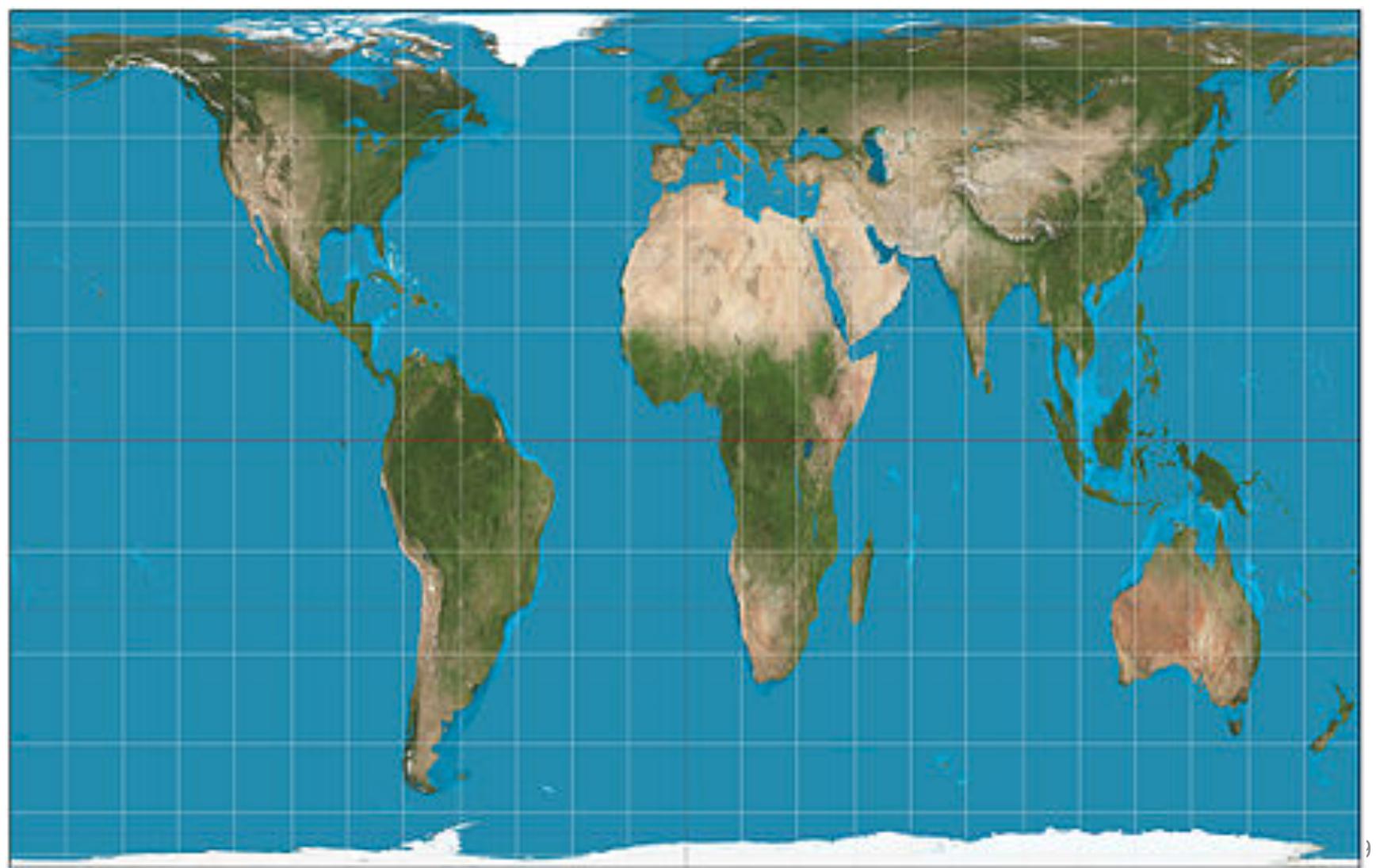


Gerardus Mercator



Gall-Peters projection 1855, 1973





Technologies are always spatialising

- Technologies of movement (transportation systems)
- Technologies of representation (maps, Google Earth, GPS)
- Technologies of navigation (telescopes, sextants, GPS devices)
- Technologies of disputation (laws and legalisms)

Spatial practices

Strategic practices – practices of design

The way large scale narratives are constructed and achieved.

e.g. Haussman's design of Paris (1853-70)

factory floors, theme parks, shopping centres



Napoleon III instructed Haussmann to bring air and light to the center of the city, to unify the different neighborhoods with boulevards, and to make the city more beautiful.

[Avenue de l'Opéra, created by Haussmann, painted by Camille Pissarro \(1898\).](#) 52



Spatial practices

Tactical practices – practices of use

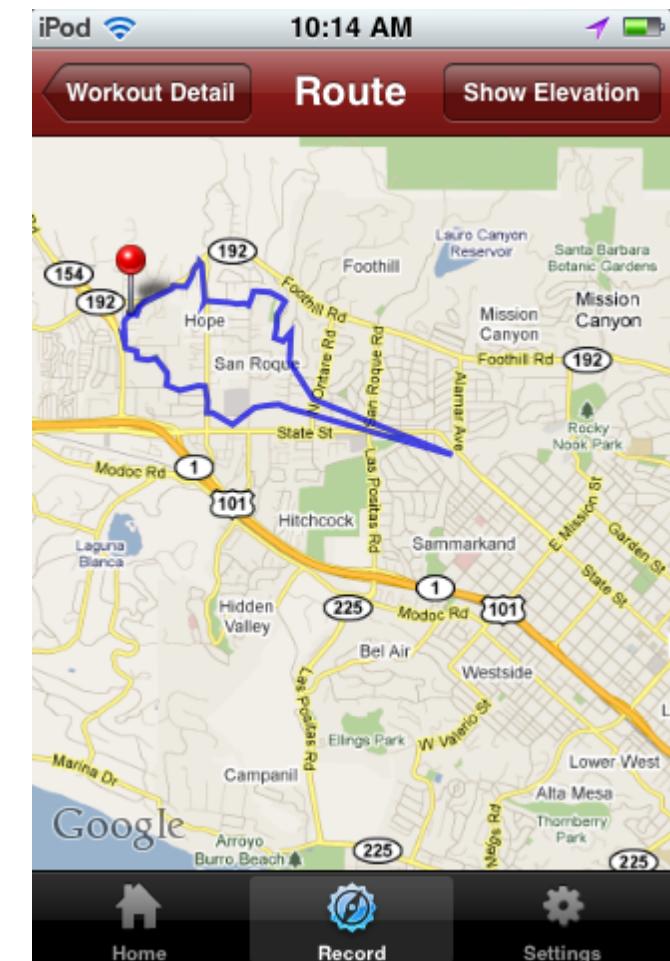
Walking wandering or passing by.

Can be traced, but though visible the operations that make the trace possible are invisible.

Space as practiced place.

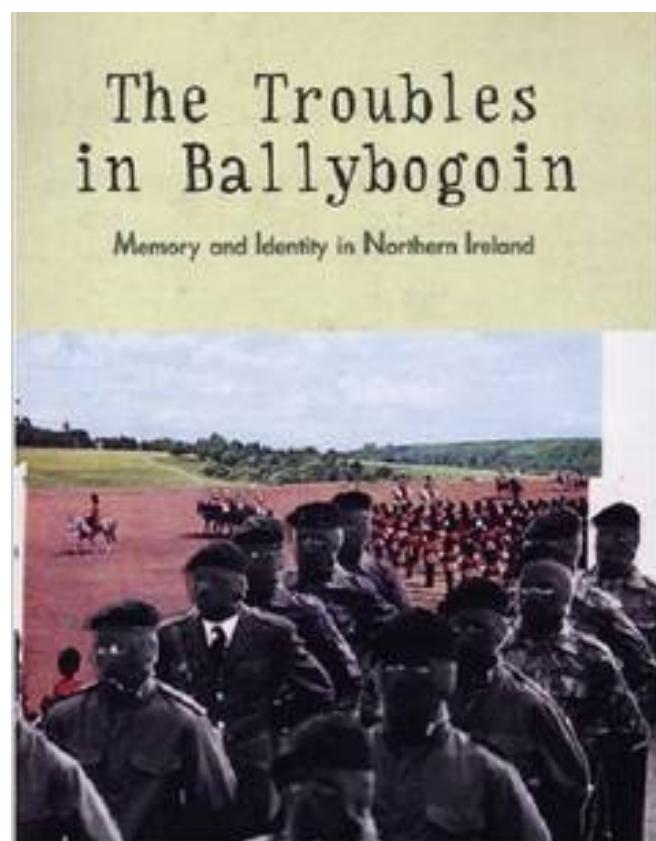
Nancy Munn - cultural and historical obstacles place limits on movement through space.

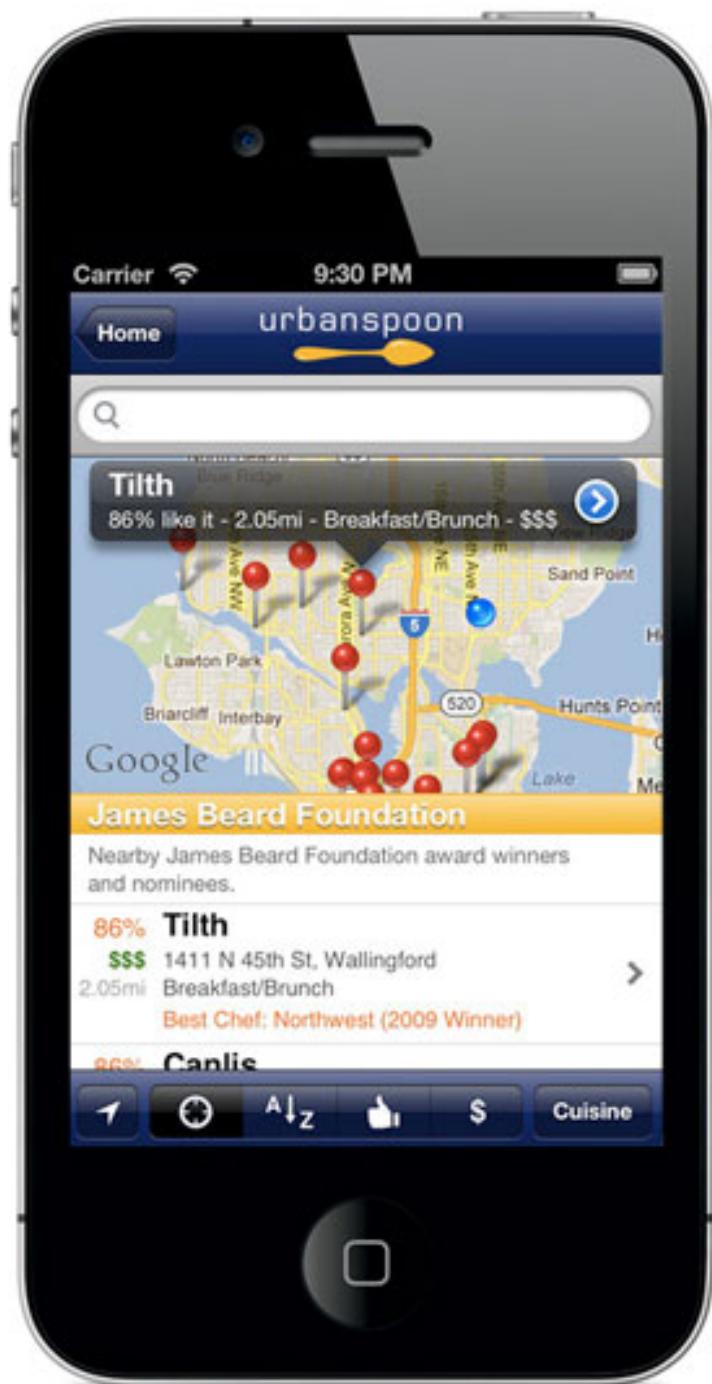
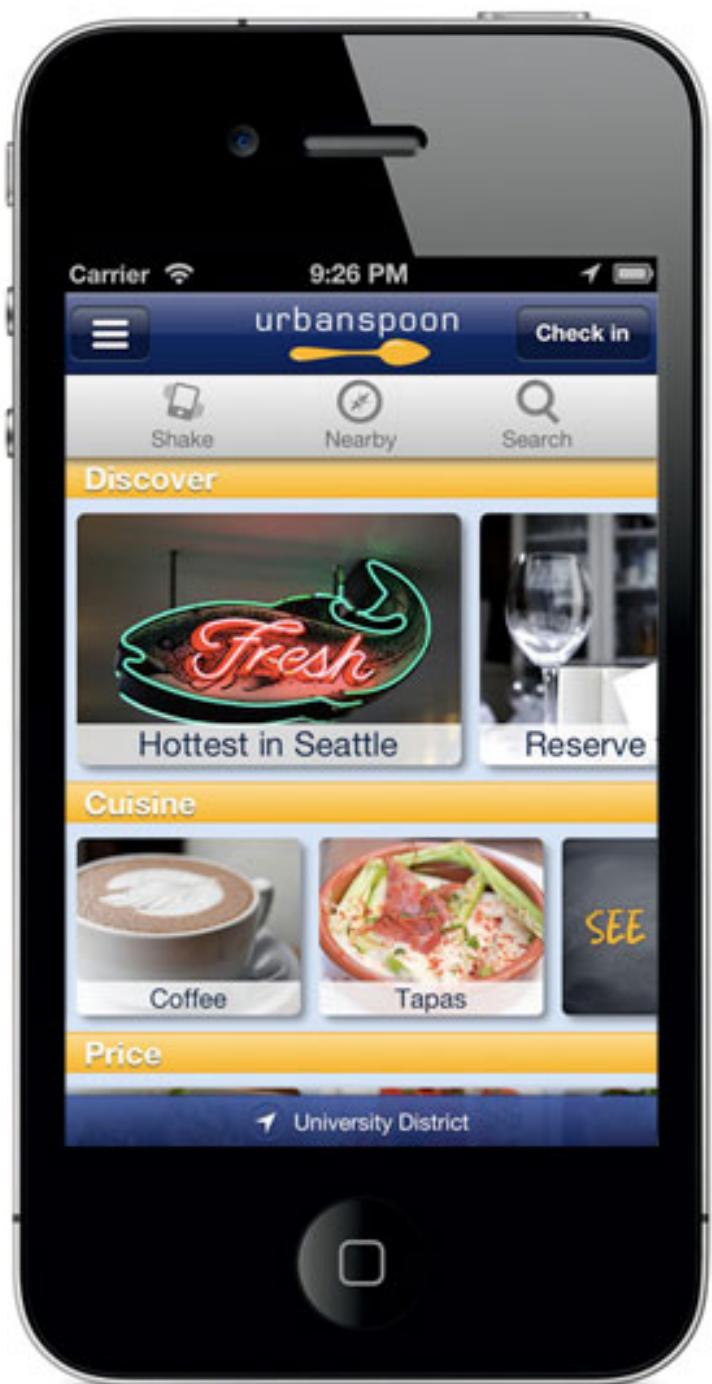
Kelleher Northern Ireland – topography of the city reflects historical moments and movements, sectarian identities that are enacted in everyday life, reinforcing these identities.



Chapter 6

1. The local union did not have a meeting place. The workers got permission from the local Roman Catholic parish priest to have their strike meetings in his parish hall. The majority of Protestant workers told me they were afraid to go to that hall, located in the Catholic business district, for meetings. To show their solidarity with the strikers, Protestant workers who feared going to the parish hall maintained the picket line while the meetings went on. No female workers were at this decisive union meeting.





Power and space

Mobility

- Where shall I go? What's the latest happening restaurant? Where might I find like-minded people?
Mobile devices encourage appropriation of space

Homeless people – movement is a way of avoiding problematic encounters with police

Taxi drivers – mobility is labour

Commuters - ...

- The production of space is conditioned by one's access to and legitimacy within (and knowledge of) that space.
- Encounters with space occur in specific contexts and resulting spatialities reflect those contexts.

Technologies of spatiality

- Technology opens up new forms of practice, transforming existing spaces
- Ito and Okade's study of Tokyo teens:
 - Hypercoordination
 - Last 100m coordination
 - Presence in virtual communication space is an acceptable form of initial showing up.
- a space is a structure of relations that can be characterized in terms of near and far



<http://www.npr.org/blogs/13.7/2010/10/21/130723964/near-but-oh-so-far>

Jetsam: An Urban Probe

Inspired by a series of Urban Probe studies which have been documented previously [1], we constructed a fully functional augmented trashcan called *Jetsam* (Figures 1 and 2). The augmented rubbish bin exposes city dwellers to the pattern of trash interactions as told from the point of view of a single city trashcan. Two event types can be sensed: interaction events and trash in/out events (including the type of trash involved). We used a simple IR photoelectrical switch to detect a basic interaction with the trashcan such as tossing trash in, removing trash, or simply searching through the trash – all activities we observed in everyday urban trashcans. A sensitive electronic scale determines the current weight of trash entering or leaving the bin. Mounted within the trashcan, an overhead camera records the top layer of trash in the bin. A laptop computer connects the devices and projects an appropriate visualization from the trashcan's opening onto the city street.

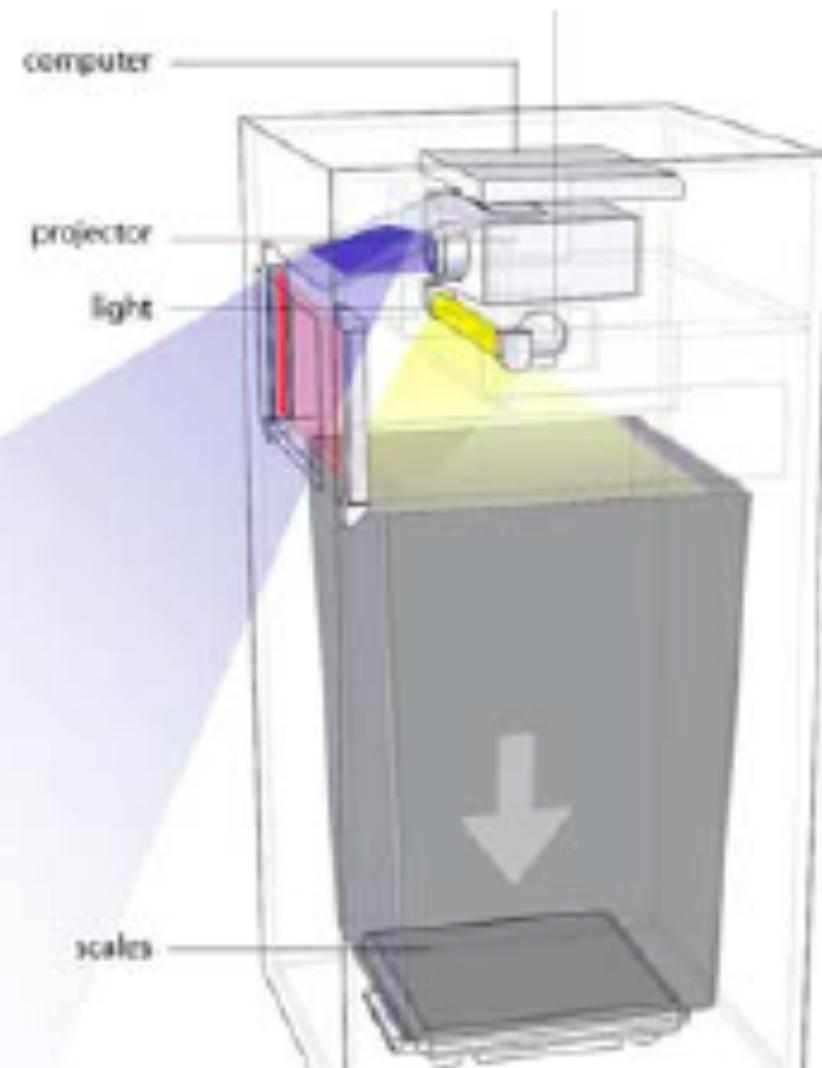
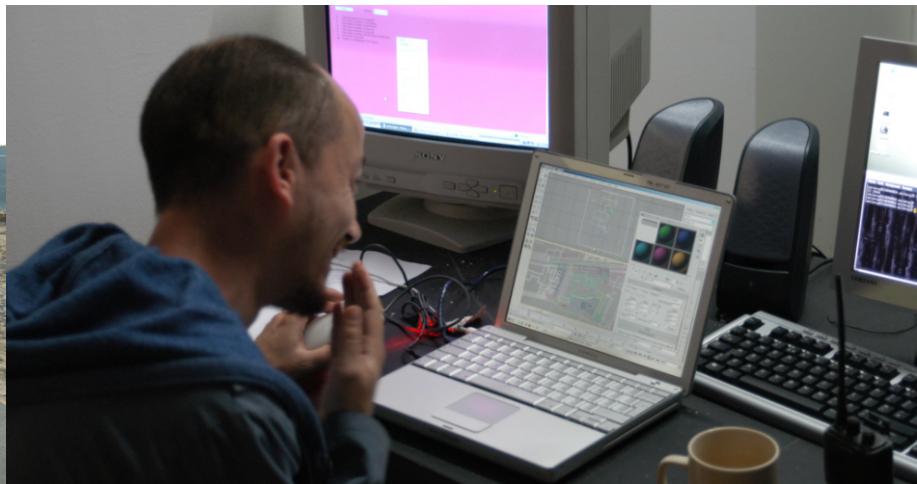


Figure 1: Architecture of *Jetsam*, the Augmented Trashcan

Can you see me now?

- <http://www.blasttheory.co.uk/projects/can-you-see-me-now/>



Walking and the social life of solar charging in rural Africa



- Mankosi, Eastern Cape, South Africa
- Homesteads are connected by foot trodden paths. People walk everywhere - to gather resources – fuel, water – socialising, storytelling
- Walks interconnect people, routines and objects
- Research methods on the move are needed to better understand being on the move.





Fig. 1. Sites of Charging Stations (yellow starred markers) and homes of A1 and operators amongst Mankosi's villages. North: orange arrow; 1km: red line. (Aerial map from Google Earth.)

Walking and Talking

Media sharer emphasized sharing visual media and used MXit text-based chat system on mobile phones.

Audio repository system.

Solar Charging System

- Solar charging stations popular and audio recording system. Visual media not used.
- Audio visual media promote abstracting from spatio-temporal continua in which knowledge is made while walking and talking.

Location and time emphasised vs ongoing narrative development while walking

Importance of activity, kinetic relationships and rhythms in walking and talking

Increase focus on oral and multi-sensory interfaces and walking in design processes

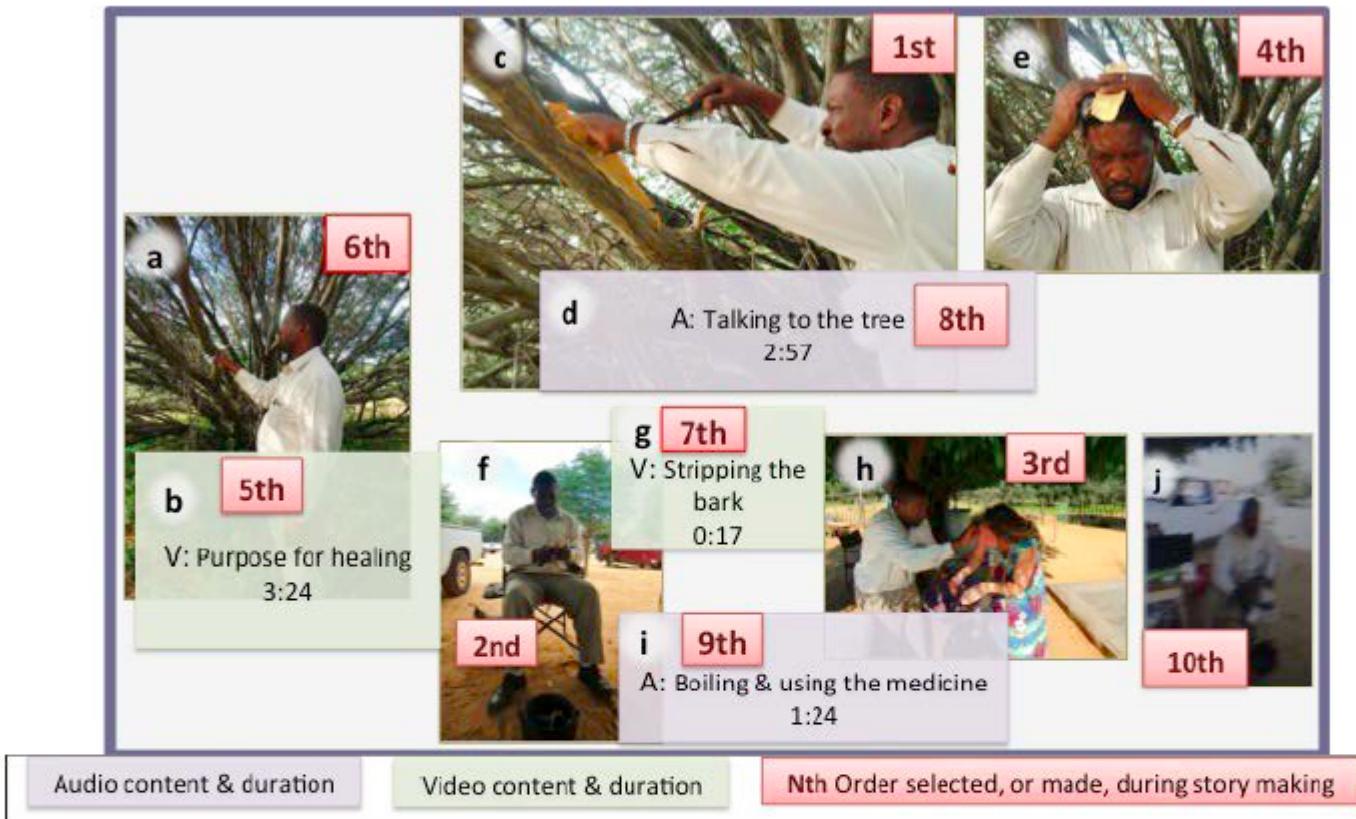


Figure 2: The spatial arrangement and order of media (a to j) selected for the healing story. See Table 1

Table 1: Content and order of media selected for the healing story from the set recorded during and after the walk to the tree

| Fig. 2 | Order selected | Media Content | Media & duration | Time line of media recorded (hr: min) |
|------------------|-------------------|--|---------------------|--|
| <i>Into Walk</i> | | | | |
| | | Setting on way to the tree, back view of LRA healer and wife walking | Photo | 00:05 |
| | | Setting on way to the tree, LRA healer and wife walking | Video 17s | 00:07 |
| | | Branches of the tree | Photo | 00:08 |
| | | Healer close to the tree | Photo | 00:08 |
| | | Branches of tree | Photo | 00:08 |

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Part 3

SOCIO-MATERIAL ASSEMBLAGES

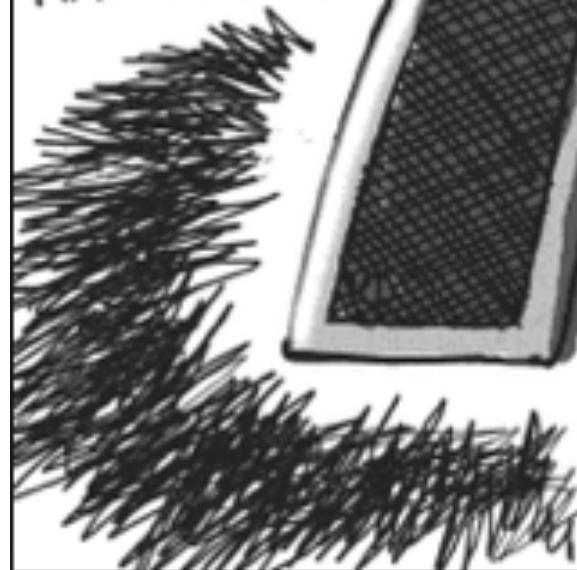
Socio-material assemblages



 guns don't kill people
people kill people

PROTECT YOUR HOME FROM A KILLER

A GUN IN THE HOME INCREASES THE CHANCE OF BEING KILLED BY FIREARMS 72%



A GUN IN THE HOME IS RESPONSIBLE FOR A VAST MAJORITY OF CHILDREN KILLED BY FIREARMS.

A GUN IN THE HOME IS 22 TIMES MORE LIKELY TO BE USED IN A SUICIDE, HOMICIDE OR ACCIDENT THAN TO BE USED IN SELF DEFENSE

A GUN IN THE HOME TRIPLES THE RISK OF A HOMICIDE

AN ABUSED WOMAN IS 6 TIMES MORE LIKELY TO BE MURDERED IF THERE IS A GUN IN THE HOME

A GUN IN THE HOME INCREASES THE LIKELIHOOD OF SUICIDE FIVEFOLD

PARRY
THE DAILY GRIND

IF GUNS KILL PEOPLE

Then pencils misspell words

Cars make people drive drunk

and spoons made Rosie O'Donnell fat



Nothing to See Here. Just a Coincidence.

**Country with the loosest
gun control laws in
the developed world.**



**Country with the highest
gun-related homicides in
the developed world.**



Source: <http://bit.ly/NjYxh3>

You are different with a gun in hand; the gun is different with you holding it. You are another subject because you hold the gun; the gun is another object because it has entered into a relationship with you. The gun is no longer the gun-in-the-armory or the gun-in-the-drawer or the gun-in-the-pocket, but the gun-in- your-hand, aimed at someone who is screaming. What is true of the subject, of the gunman, is as true of the object, of the gun that is held. A good citizen becomes a criminal, a bad guy becomes a worse guy; a silent gun becomes a fired gun, a new gun becomes a used gun, a sporting gun becomes a weapon.

Latour, Bruno. *Pandora's hope: essays on the reality of science studies*. Harvard University Press, 1999.

The twin mistake of the materialists and the sociologists is to start with essences, those of subjects *or* those of objects.

That starting point renders impossible our measurement of the mediating role of techniques. Neither subject or object (nor their goals) is fixed. (1994: 33)

- If I define you by what you have (the gun), and by the series of associations that you enter into when you use what you have (when you fire the gun), then you are modified by the gun-more so or less so, depending on the weight of the other associations that you carry. This translation is wholly symmetrical.

Part 4

OBJECTS

Habituated objects:
taking the perspective of objects

Values and common routines







Spatial placement strategies





Habits and routines

- If I am stirring a sauce, I can use this one here.

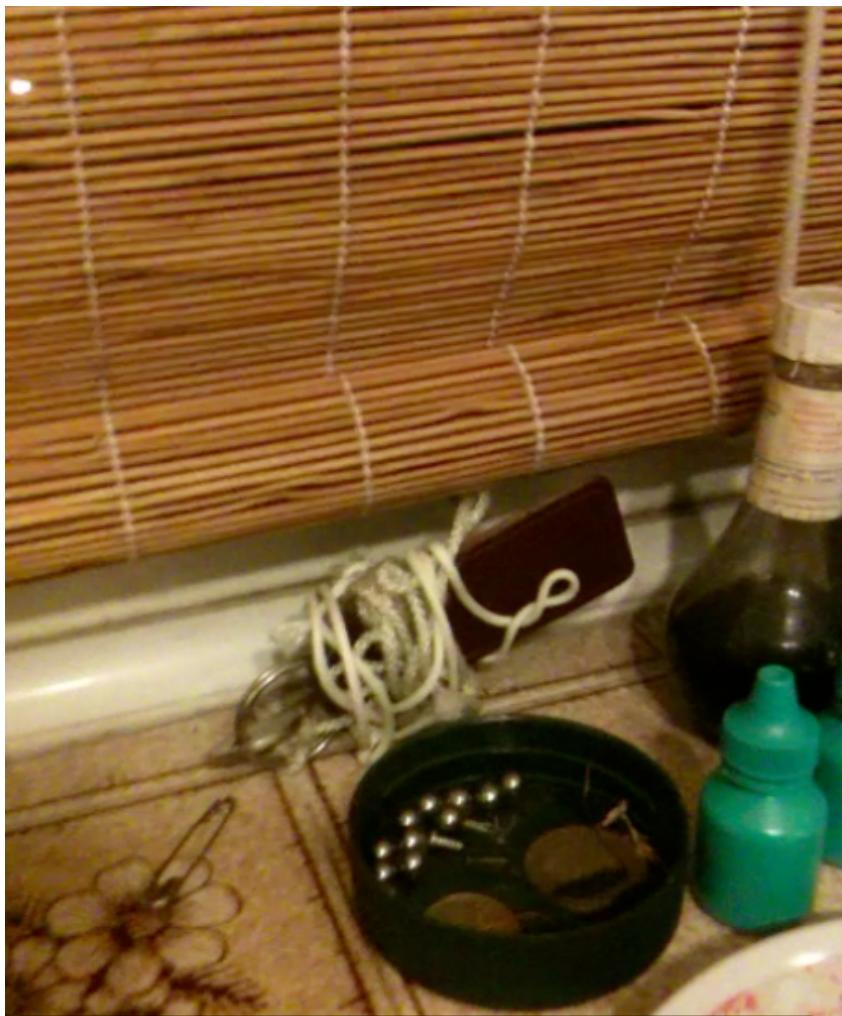




Adaptations for the ageing body



Manipulable qualities



How might we organise the objects into themes

Space/Place themes?

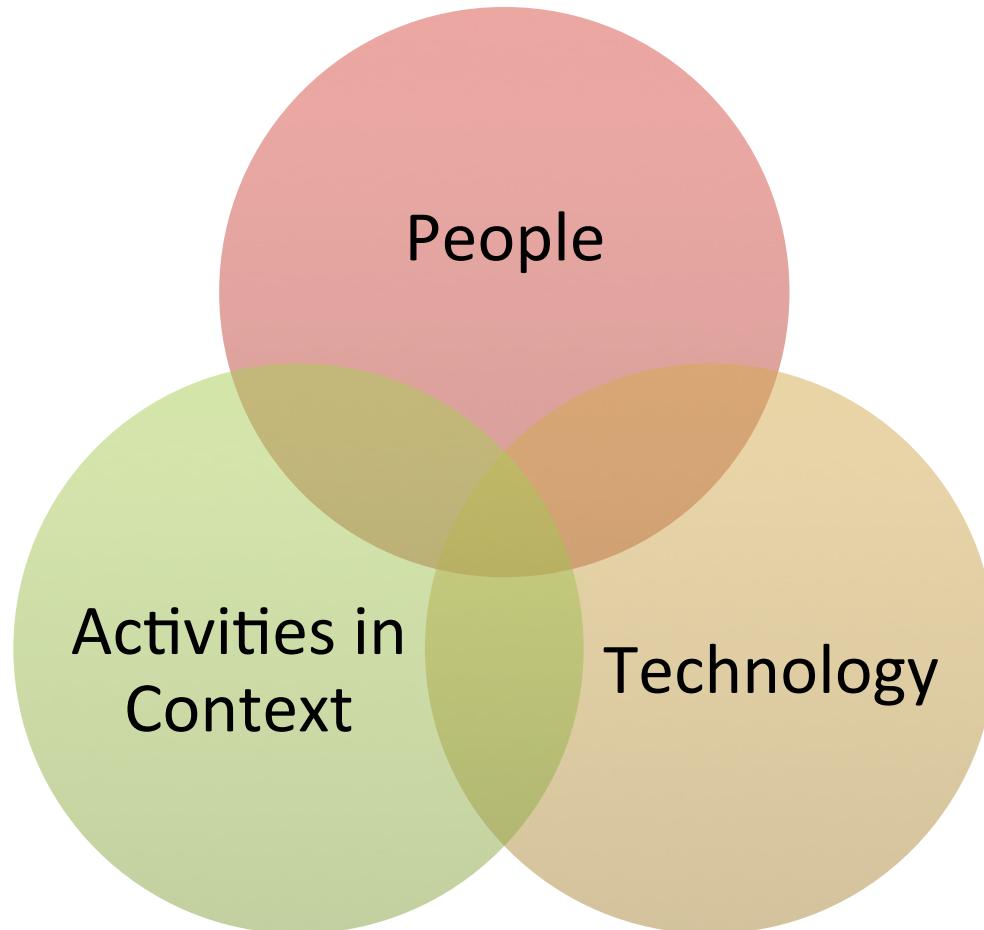
- within home routines
- home/outside boundaries
- outside objects

Social objects?

References

- Brereton, Margot. "Habituated objects: everyday tangibles that foster the independent living of an elderly woman." *interactions* 20.4 (2013): 20-24.
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PACT framework



PACT Analysis: Scope out the varieties of Ps, As, Cs and Ts that are likely in a domain

Week 2 Workshop: Design Exercise:

