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of Library and
Information
Science

Designing for serendipity and creative experiences in the physical library space

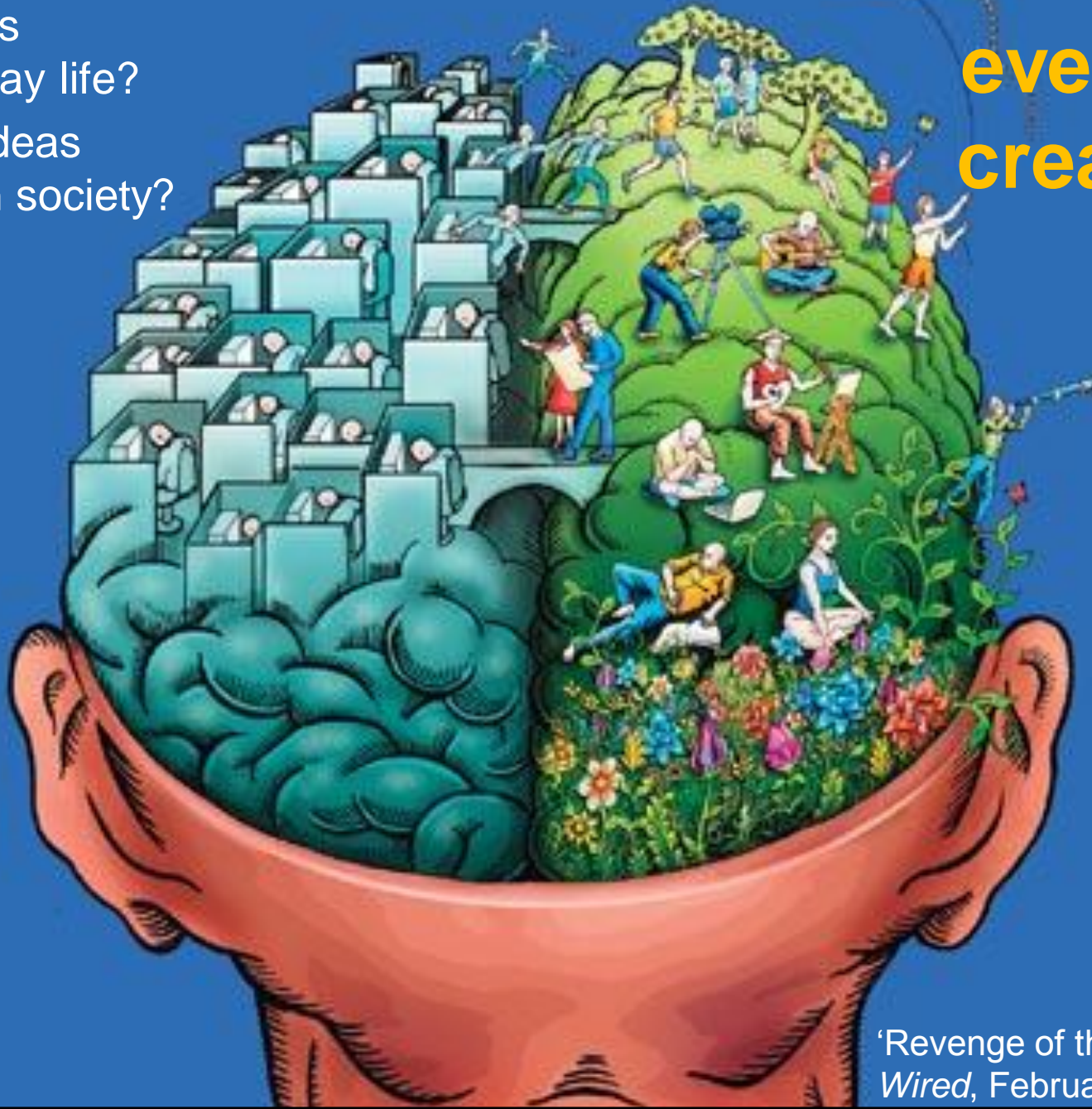
Masterclass, Aarhus – June 13, 2012

Lennart Björneborn

Royal School of Library and Information Science, Copenhagen

libraries in the 'food chain' of everyday creativity

- how do we get new ideas in everyday life?
- how do ideas spread in society?



'Revenge of the Right Brain'.
Wired, February 2005



agenda

- **libraries = affordance spaces**
 - affordances = usage potentials
 - three-way relation between people, places and possible activities
- **libraries = integrative interfaces**
 - human + physical + digital library resources = integrated whole
 - interfaces = all affordances for user participation and interaction
- **libraries = open-minded spaces**
 - supporting both convergent and divergent user behaviour
 - including creative practices
 - user-to-user mediation, behavioural traces, serendipity



*“We shape our buildings,
and afterwards our buildings shape us.”*

- Winston Churchill



- the ways we **design** a space **shape** the ways **users** may **interact** with this space

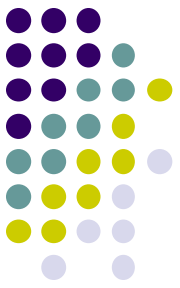


- **affordances** = usage potentials = three-way relation between **people**, **places** and **possible activities**



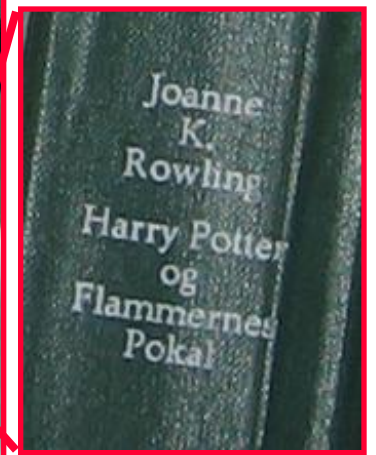
- **design + mediation = room as a tool**
= showing clear **affordances** for interaction
- **aim of design + mediation = to motivate** users
to **explore** og **use** info.resources

		Intended by library	
		yes	no
Perceived by Users	yes	Intended and Perceived -online catalogue -reference librarians -journal databases -inter-library loan	Perceived but not Intended -unauthorized distribution of journal articles to friends -students' fear of technology dependance
	no	Intended but not Perceived -students unaware of information literacy instruction -students do not see new icons or announcements	



Sadler & Given (2007). Affordance theory: a framework for graduate students' information behavior. *Journal of Documentation*, 63(1).

- **'affordance gap'**
= discrepancy between **users' 'perceived affordances'** and **designers' 'intended affordances'**
- users may creatively perceive **'not intended affordances'**



users may creatively perceive affordances not intended by designers

A photograph of a library or study area. In the foreground, there is a blue upholstered chair with light-colored wooden legs. To the left, a blue metal cart with a perforated side panel and wheels is partially visible. The background consists of several white bookshelves filled with books of various colors. A semi-transparent grey rectangular box is overlaid on the center of the image, containing the text "user interface" in white lowercase letters.

user interface

libraries = affordance spaces = integrative interfaces



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- **interfaces**

= all **contact surfaces + mediation flows**

between users and info. resources

= all **affordances** (usage potentials)

for participation and interaction

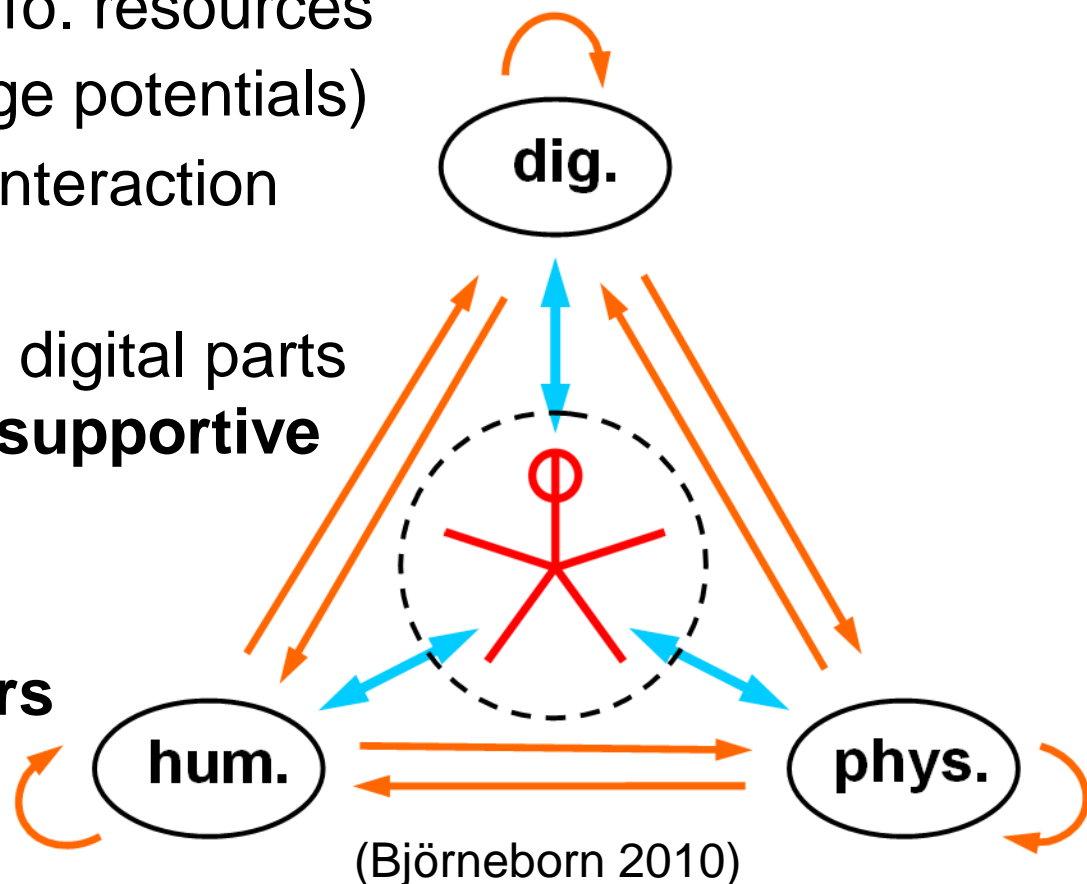
- **integrated whole**

= human, physical, and digital parts

= **supplementary** and **supportive**
parts for one another

- **users**

= important **co-creators**
and **resources**





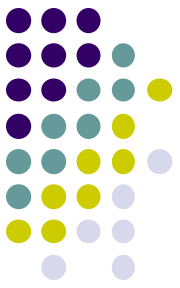
user interface



user interface

user interface





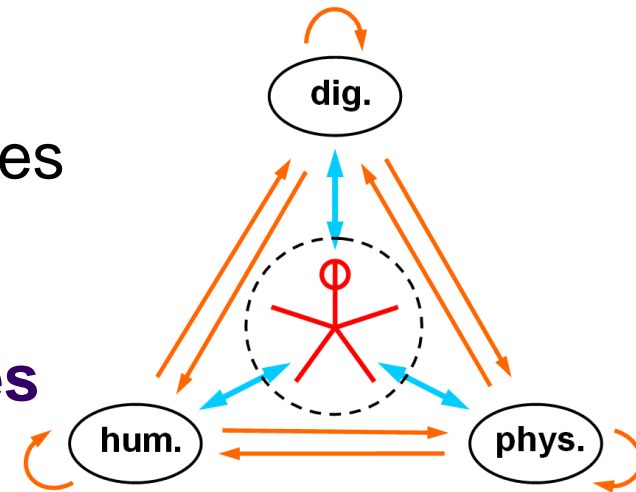
point:

- thinking 'integrative interfaces' suggests thinking **affordances, design, usability, user participation, ...** across **all contact surfaces** between **users** and information **resources**
 - and not only such features in digital interfaces
 - Björneborn (2011)



strength of physical library

- only in physical libraries can users have **direct, close encounter** with human and physical information resources
 - face-to-face, tangible, interactive
- we use our **bodies, mobility** and **senses** when interacting with physical libraries
- we use our **spatial sense** and **tactile sense** to find materials and assess relevance
 - important for many users to **touch** materials
- digital library **supplements** physical library – and vice versa :-)





Bliv inspireret

- [Aktuelt tema](#)
- [Bogbidder](#)
- [E-mail bogkæde](#)
 - ▷ [Afsluttede bogkæder](#)
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Fra læser til læser

Sidst opdateret 06/08 2007 12:47

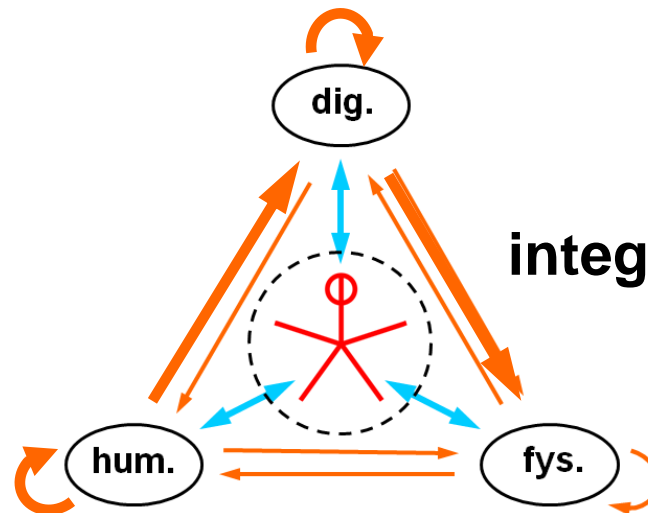
Deltagere i e-mail bogkæden giver deres m...

Krimi/spænding

- [Paul Auster: New York trilogien](#)
- [David Baldacci: Vinderen](#)
- [Rolf Boysen: Operation Tiberias](#)
- [Dan Brown: Da Vinci mysteriet](#)
- [Mary Higgins Clark: Den allersidste dans](#)
- [Arthur Conan Doyle: Det brogede bånd](#)
- [Arne Dahl: Vældige vande](#)
- [James Ellroy: American tabloid](#)
- [Mo Hayder: Tokyo](#)
- [Faye Kellerman: Det rituelle bad](#)

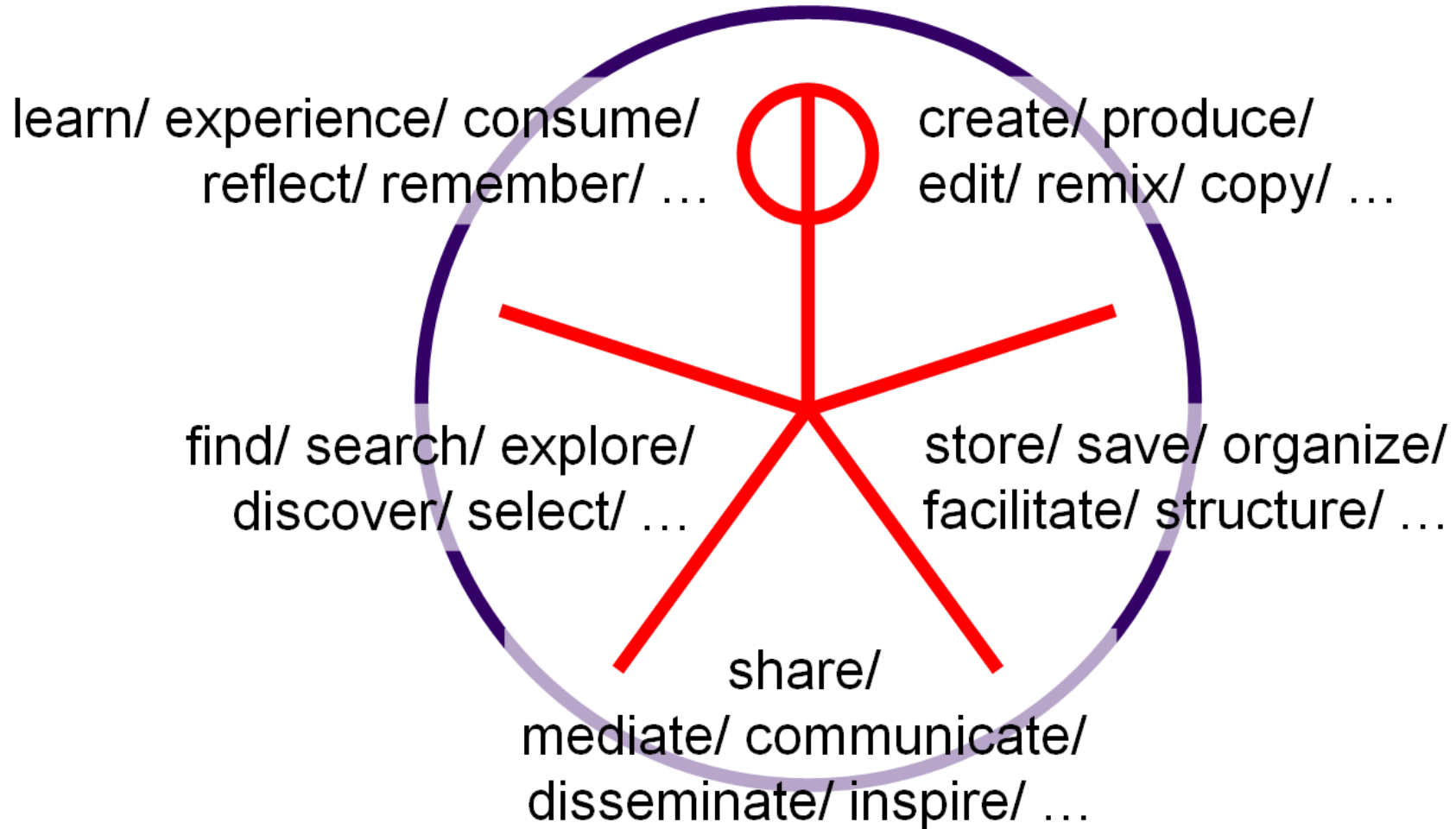


Copenhagen Main Library



integrative interfaces

participatory libraries provide
more affordances for users to take active part
in all aspects of **managing information & culture:**

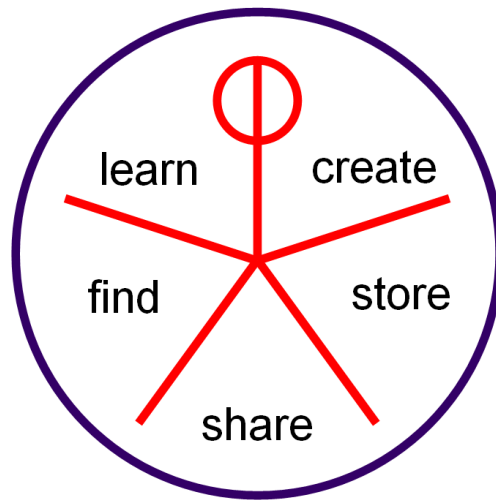


participatory libraries afford all five facets



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- **traditional libraries** mainly provide affordances for users to participate actively in the two facets **find** and **learn**



- truly **participatory libraries** provide more affordances to participate actively in **all five** main behavioural facets
- i.e. users can **leave** behavioural traces (*create, store, share*) as well as **follow** such traces (*find, learn*) in the library



behavioural traces (Björneborn 2011)

- when interacting with information spaces like the Web or libraries users may leave **marks** or **traces** of their **activities** (indirect **user-to-user mediation**) that may guide other users to find and use info. resources (**social navigation**)





indirect, *unintended* user-to-user mediation in physical library



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indirect, *unintended* user-to-user mediation in physical library



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Fra læser til læser

ALBUM

Imfrugtemærkerne

MARK MADSEN
EN MYSTISK OG
EN HUNDE I HÅND

ET STØRRE
ET STØRRE

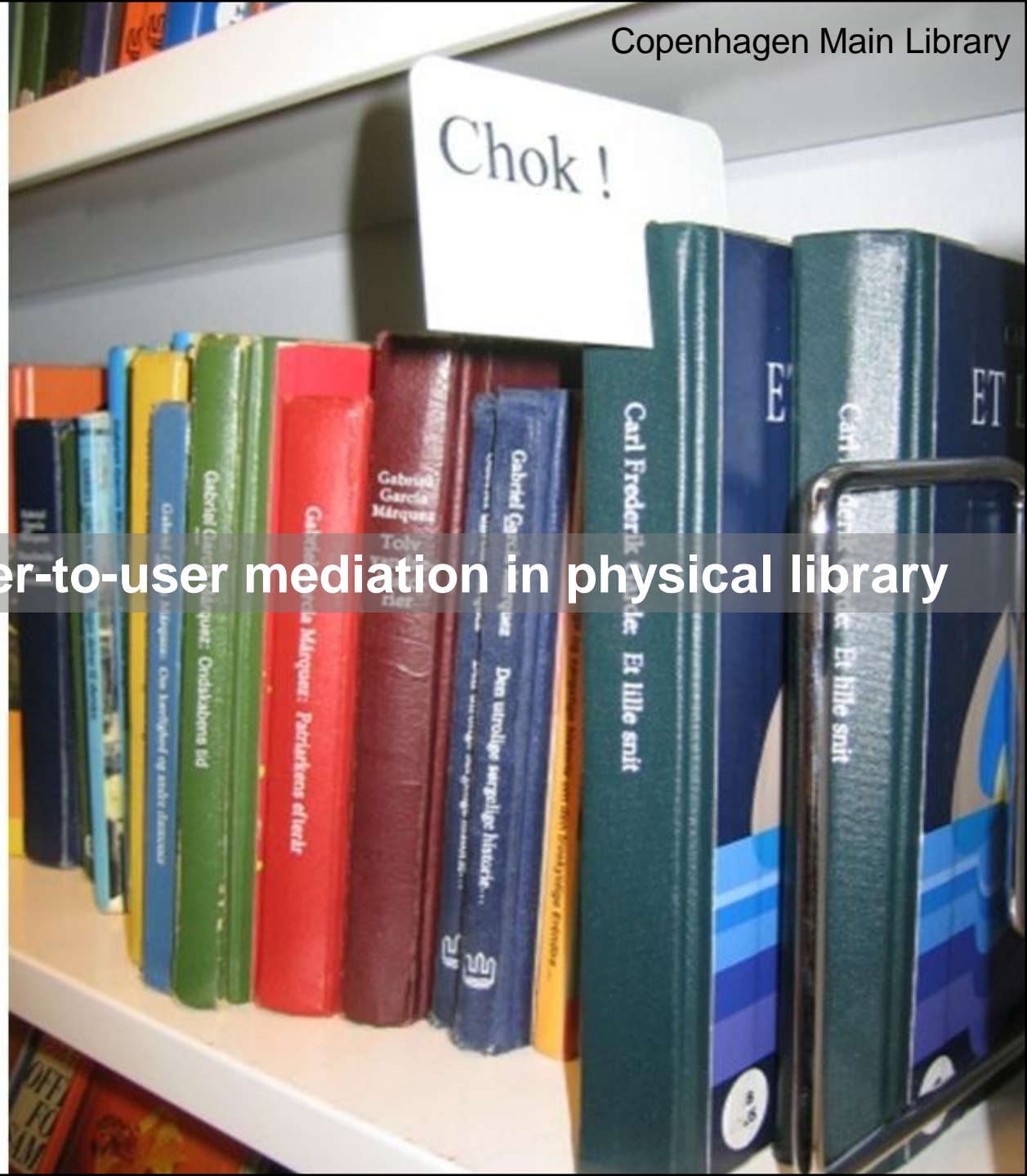
KUNSTEN
KUNSTEN

LISA MARILYN
Nædtælling

INDTOGET I
KALITOKELING

INDTOGET I
KALITOKELING

indirect, *intended* user-to-user mediation in physical library

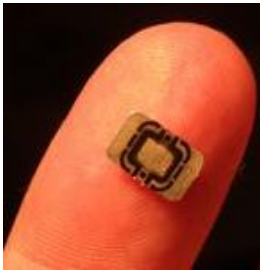


indirect, *intended* user-to-user mediation in physical library



augmented affordances

- new usage potentials for user-to-user mediation and social navigation
- mobile, ambient, and location-based technologies
- used for leaving and finding **digital** behavioural traces in **physical** spaces, e.g. tags, ratings, reviews
- e.g. **RFID** chips or **2D barcodes**



new affordances for user-to-user mediation

digital behavioural traces in physical spaces





**Indigo, Bd. 6:
Fast Machine**
Robert Feldhoff



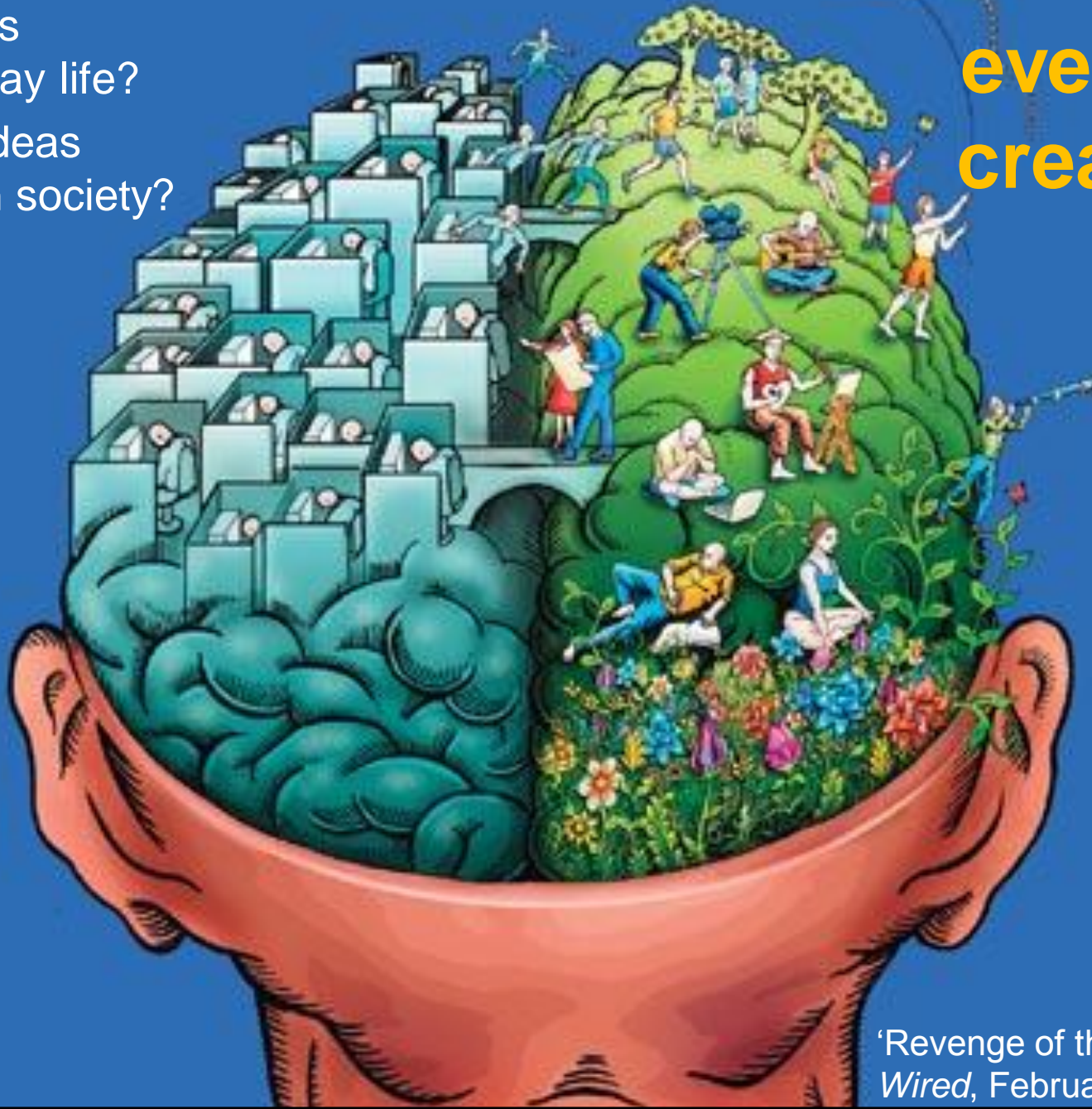
Ratings (42):

Users who read this also read:



libraries in the 'food chain' of everyday creativity

- how do we get new ideas in everyday life?
- how do ideas spread in society?

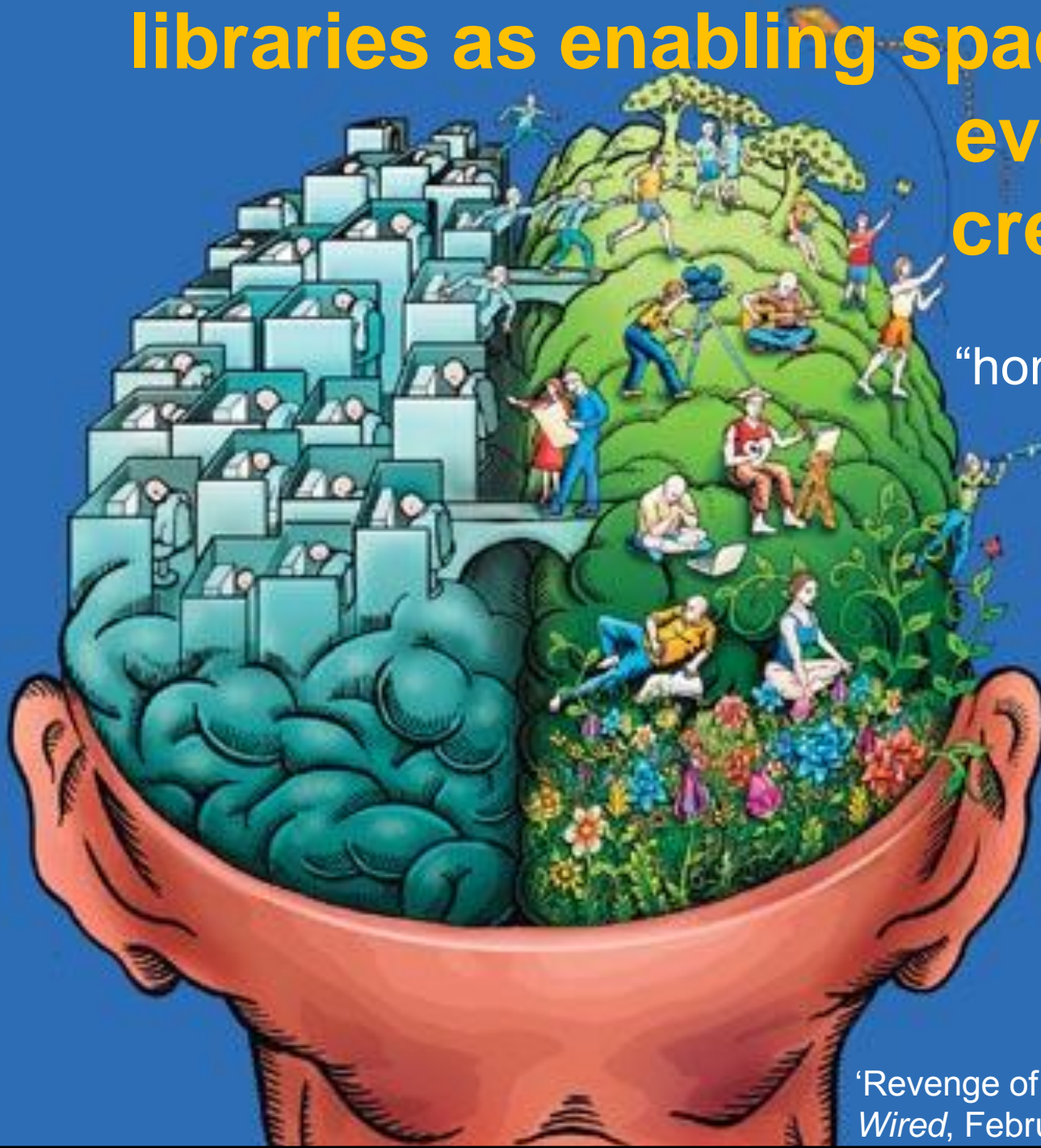


'Revenge of the Right Brain'.
Wired, February 2005

libraries as enabling spaces for everyday creativity

“homo ludens”

“funology”



‘Revenge of the Right Brain’.
Wired, February 2005

convergent vs. divergent behaviour



- **convergent** info.behaviour

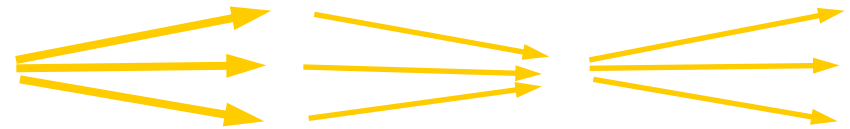
- 'left brain'
- goal-directed, focused, rational



'zooming in'

- e.g., known-item searches
- conscious, explicit info.needs
- problems, work tasks
- 'information **recovery**'

'**Library 1.0**': traditional focus on convergent behaviour + 'convergent' affordances



- **divergent** info.behaviour

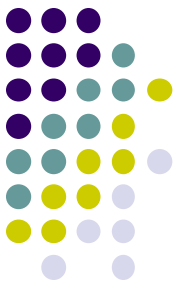
- 'right brain'
- exploratory, impulsive, intuitive



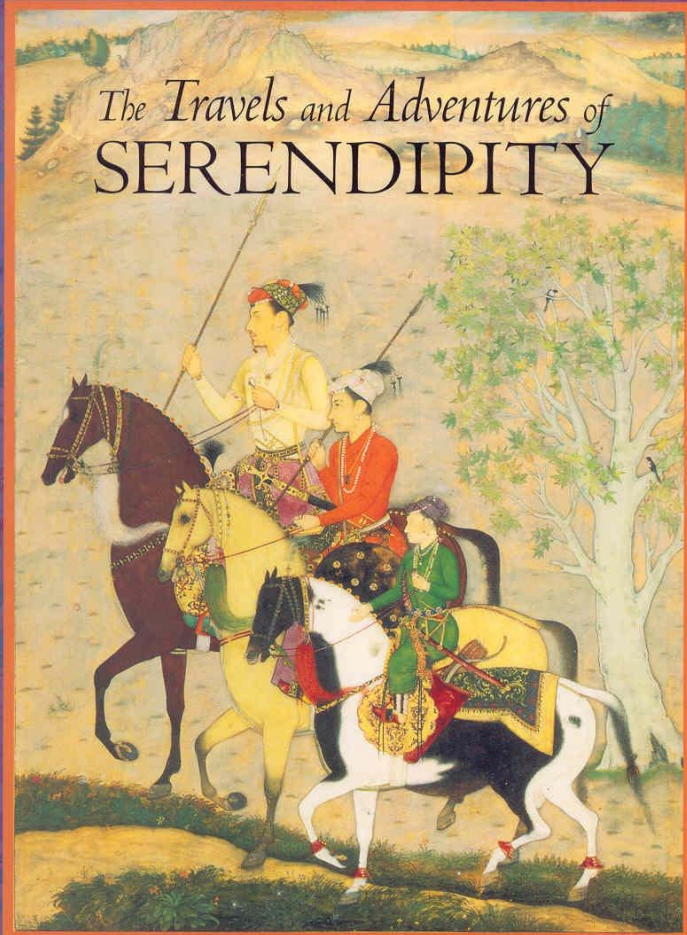
'zooming out'

- e.g. browsing, **serendipity**
- subconscious, implicit info.needs
- interests, curiosity, pleasure
- 'information **discovery**'

'**Library 2.0**': complementary focus on divergent behaviour + 'divergent' affordances



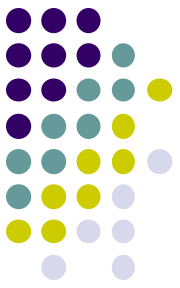
ROBERT K. MERTON & ELINOR BARBER



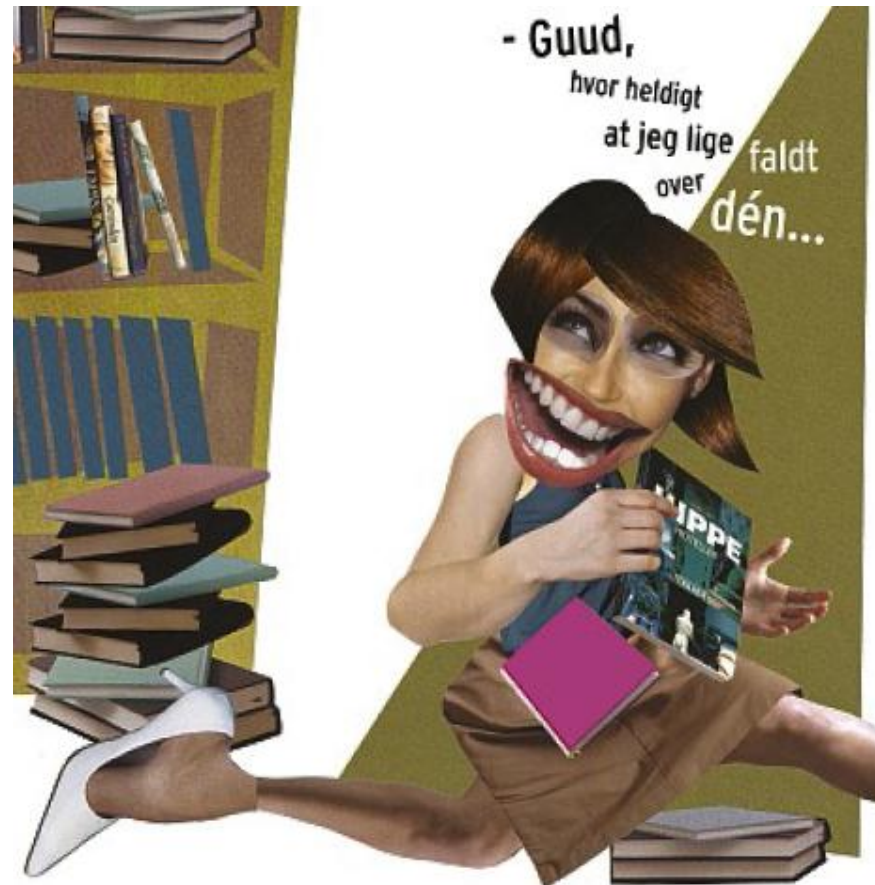
serendipity

- “art of making an unsought finding”
(Van Andel 1994)
- **“The three princes of Serendip”**
 - Persian fairy tale
 - Serendip = Sri Lanka
 - the princes discovered more interesting things on their journey than planned for
- **library serendipity**
 - finding interesting materials, information, etc., not planned for

triggering senses and locomotion: affordances for serendipity in physical library interface



- accessibility
- diversity
- display
- contrasts
- pointers
- imperfection
- cross-contacts
- multi-reachability
- explorability
- 'stopability'



(Björneborn 2008 + 2010)

- How lucky I was to find this :-)

serendipity dimensions 1+2+3



Albertslund

accessibility + diversity + display

serendipity dimensions 1+2+3



Hjørring

accessibility + diversity + display

serendipity dimensions 1+2+3

Fordelingsreol

Voksenmaterialer



Vanløse

accessibility + diversity + display

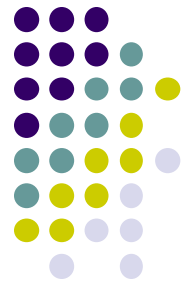
serendipity dimension 4



Vangede

contrasts eye-catching differentiation / quiet zones + display zones

serendipity dimension 4



Malmö

contrasts eye-catching differentiation / quiet zones + display zones

serendipity dimension 5

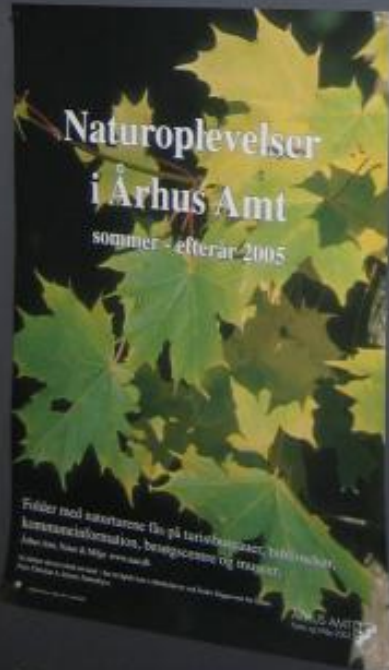
34 - 39 39 - 48

Lov & ret Folkeliv

Pædagogik Geografi

Social forsyng Danmark

Folkeliv Rejser



Randers



pointers signage, tags, maps, references, etc., may trigger users' interests

serendipity dimension 5

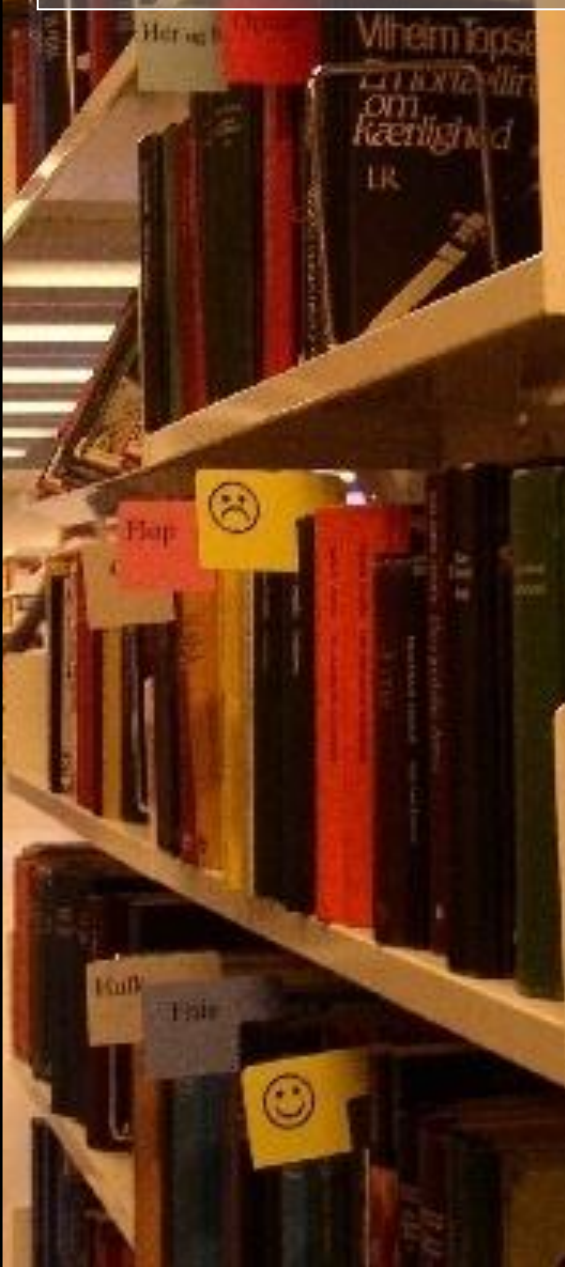


Nacka, Stockholm



pointers signage, tags, maps, references, etc., may trigger users' interests

serendipity dimension 5



Copenhagen Main Library

pointers signage, tags, maps, references, etc., may trigger users' interests

serendipity dimension 6



Copenhagen Main Library

imperfection allowing 'cracks' and users' behavioural traces in interface

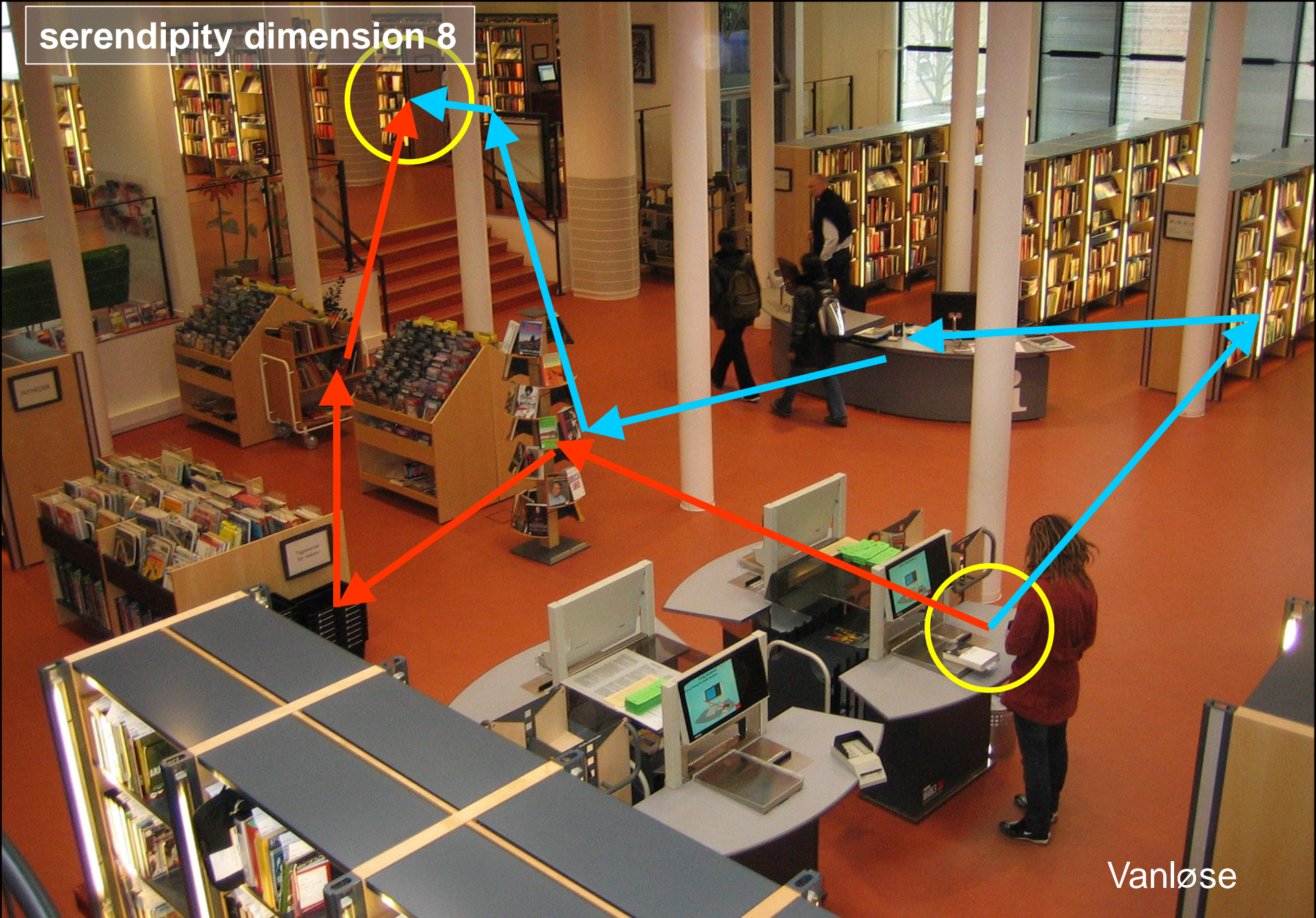
serendipity dimension 7



cross-contacts

across different topics, classifications, genres, media, etc.

serendipity dimension 8



Vanløse

multi-reachability many different access routes across interface



explorability

interface invites users to move, look around and explore



explorability interface invites users to move, look around and explore

serendipity dimension 9



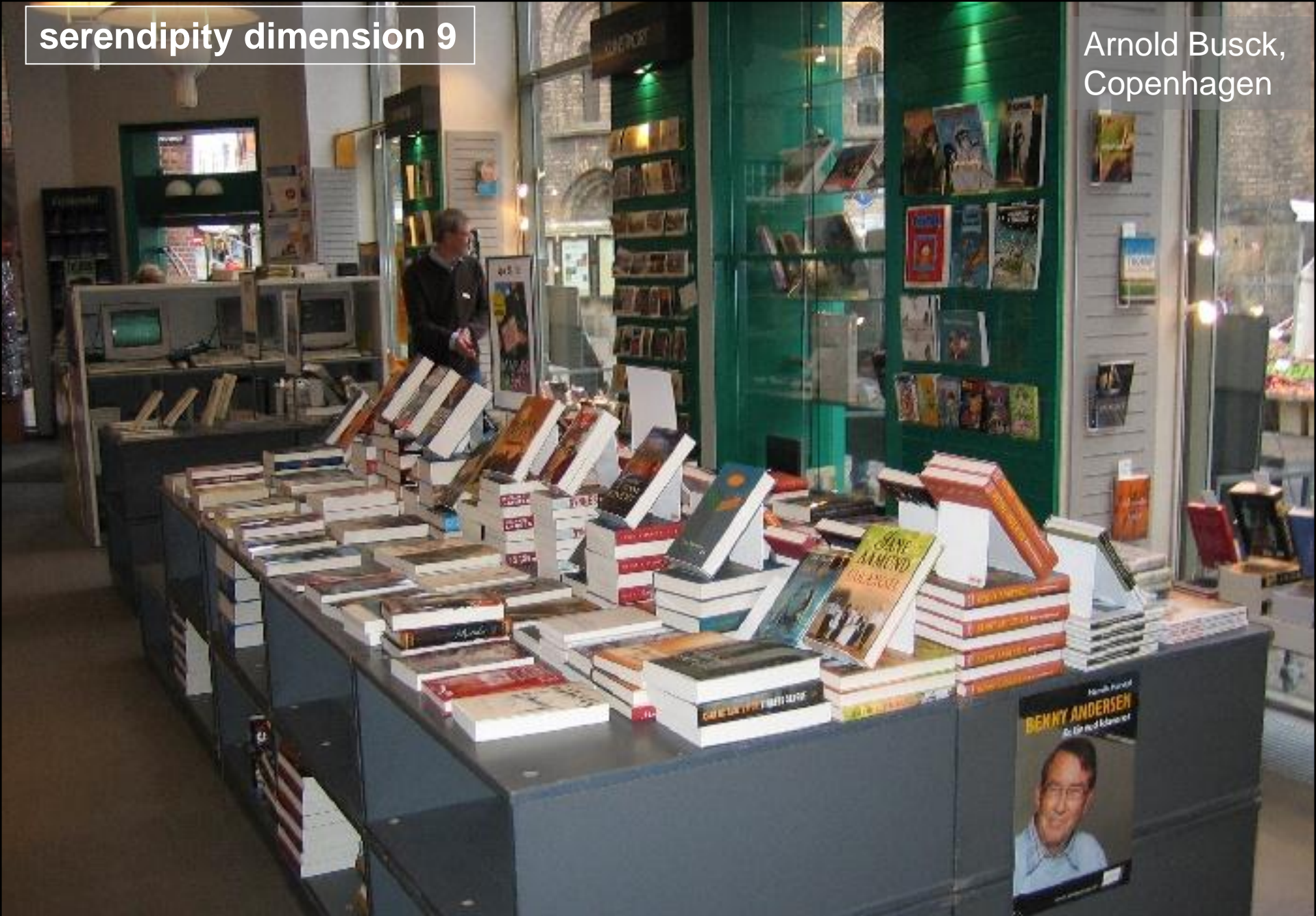
Rentemestervej, Copenhagen

explorability

interface invites users to move, look around and explore

serendipity dimension 9

Arnold Busck,
Copenhagen



explorability

interface invites users to move, look around and explore

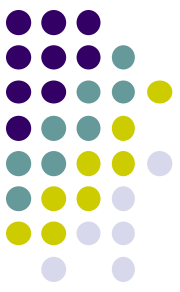
serendipity dimension 10



stopability

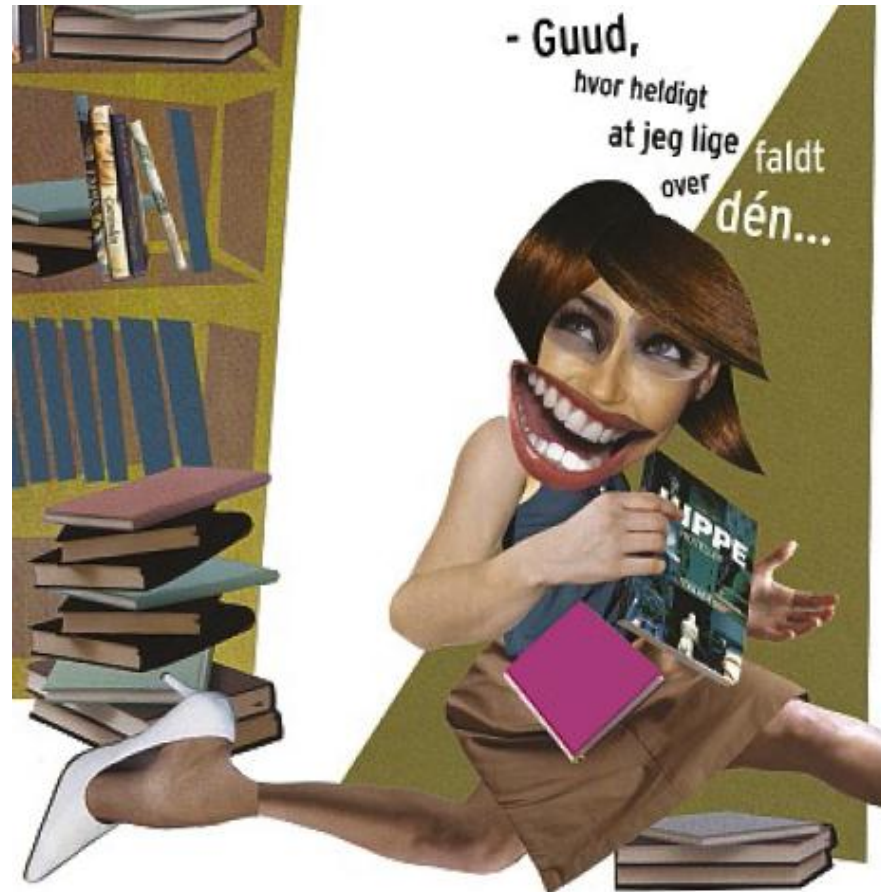
interface invites users to stop, look closer and examine

balanced dimensions: 'overkill' = counter-productive



affordances for serendipity in physical library interface

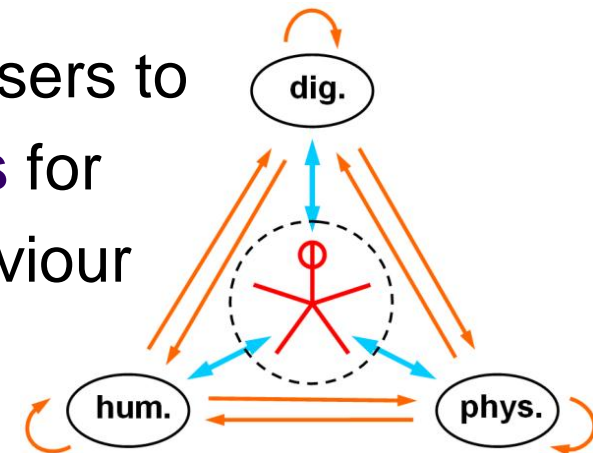
- accessibility
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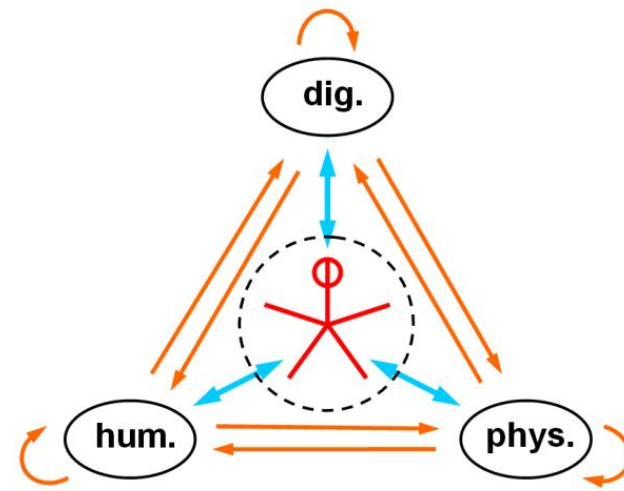
- How lucky I was to find this :-)

library future: 'open-minded' spaces = affordance spaces

- for **overview** and **navigation**
 - facilitating information 'recovery' = convergent information behaviour
 - helping users find what they have planned to find
- for **serendipity** and **creativity**
 - facilitating information 'discovery' = divergent information behaviour
 - helping users discover what they have not planned to find
- designing library interfaces that support users to **explore + exploit + expand affordances** for both convergent and divergent user behaviour
 - Björneborn (2010)



mediation policy



- how do you want to mediate the human, physical and digital resources of the library?
 - how to vitalize and circulate library resources?
 - how to create affordances for both convergent and divergent behaviour?
- and how to continuously evaluate this mediation policy?
 - user studies incl. observations, interviews, workshops
 - what worked well? what can be improved?

read more



- Björneborn, L. (2008). **Serendipity dimensions and users' information behaviour in the physical library interface.** *Information Research*, 13(4): paper 370.
<http://InformationR.net/ir/13-4/paper370.html>
- Björneborn, L. (2010). **Design dimensions enabling divergent behaviour across physical, digital, and social library interfaces.** pp. 143-149. In: *Lecture Notes in Computer Science*, vol. 6137 / *Proceedings of 5th International Conference, PERSUASIVE 2010, Copenhagen, Denmark, June 7-10, 2010*. Springer. Preprint:
http://vip.iva.dk/lb/papers/bjorneborn_2010_persuasive_final.pdf
- Björneborn, L. (2011). **Behavioural traces and indirect user-to-user mediation in the participatory library.** *Proceedings of ISSOME 2011, International Conference on Information Science and Social Media, August 24-26, Åbo/Turku, Finland*. Preprint:
http://vip.iva.dk/lb/papers/bjorneborn_2011_issome_preprint.pdf