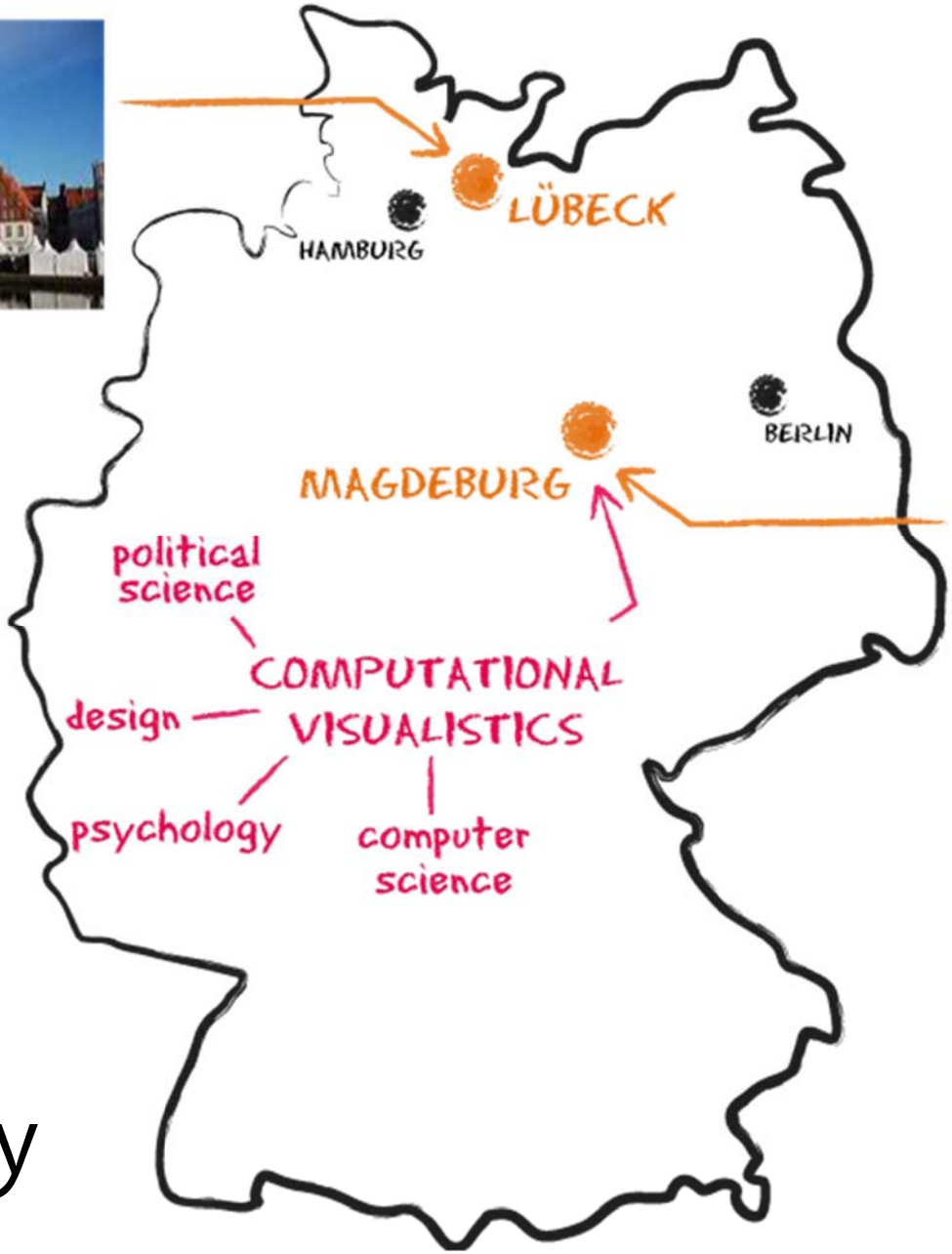
data visualization in the wild

enhancing public spaces using interactive visualizations

Uta Hinrichs

germany

germany

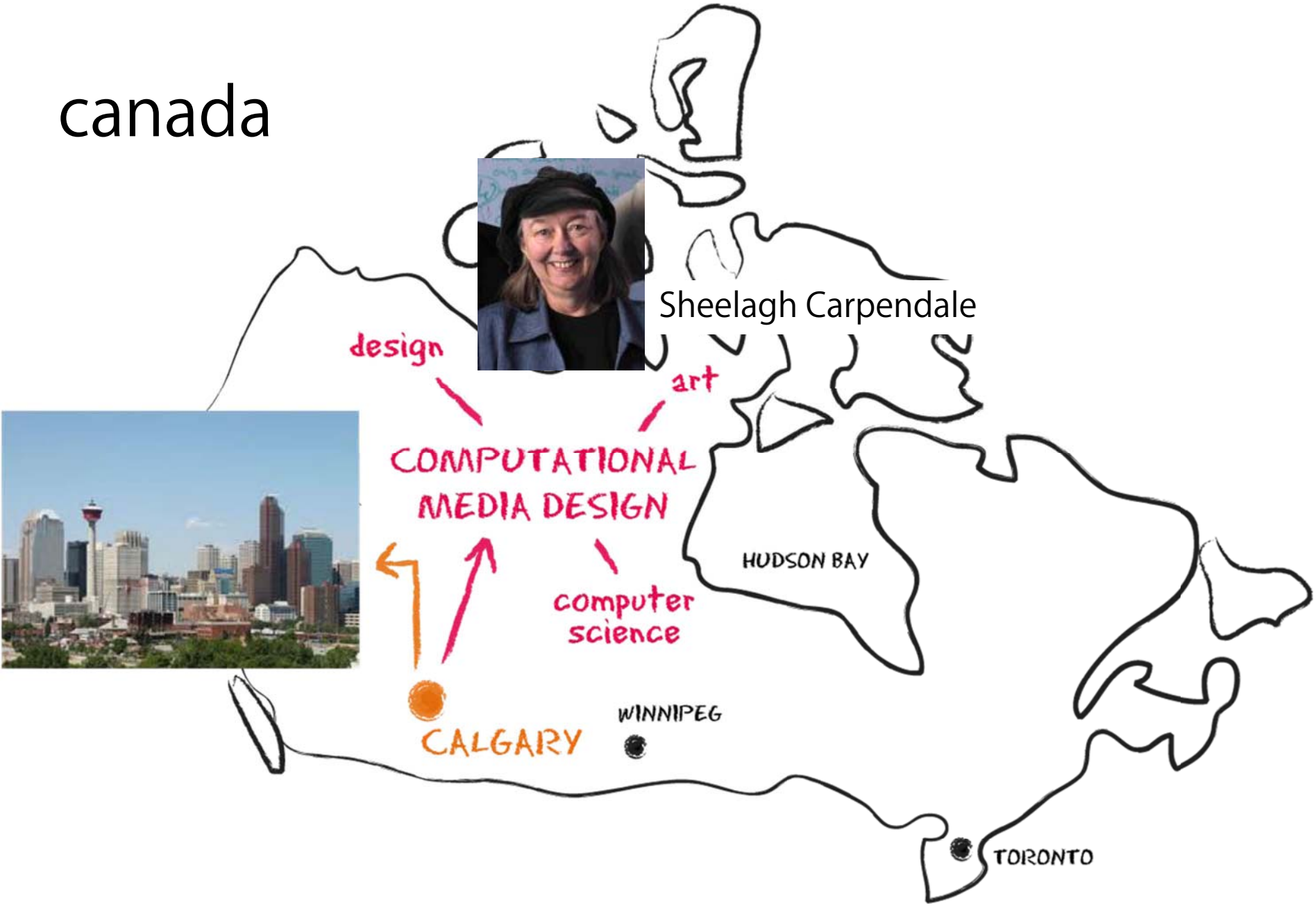

LÜBECK
HAMBURG
BERLIN
MAGDEBURG
political science
COMPUTATIONAL VISUALISTICS
design
psychology
computer science

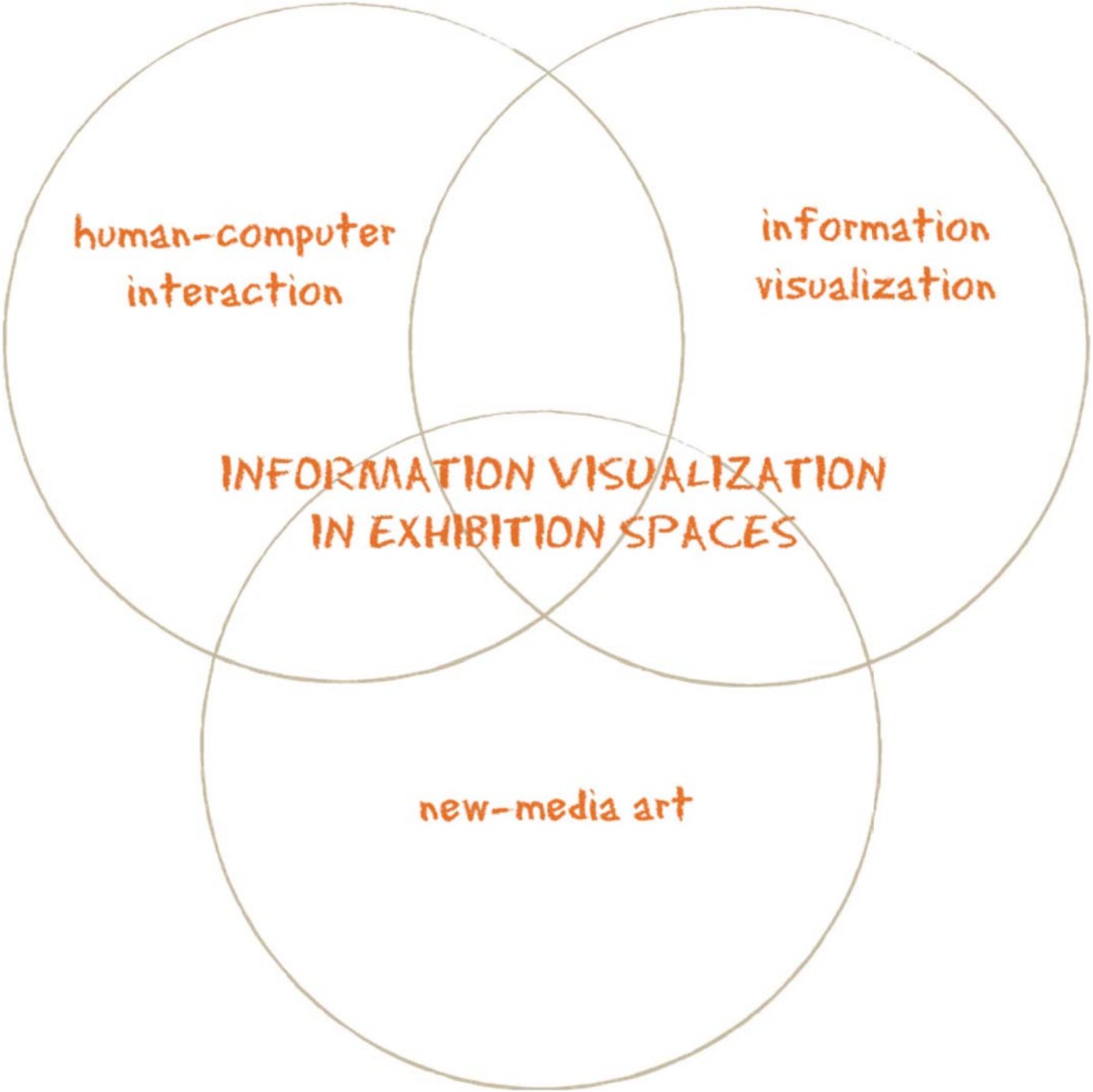
germany

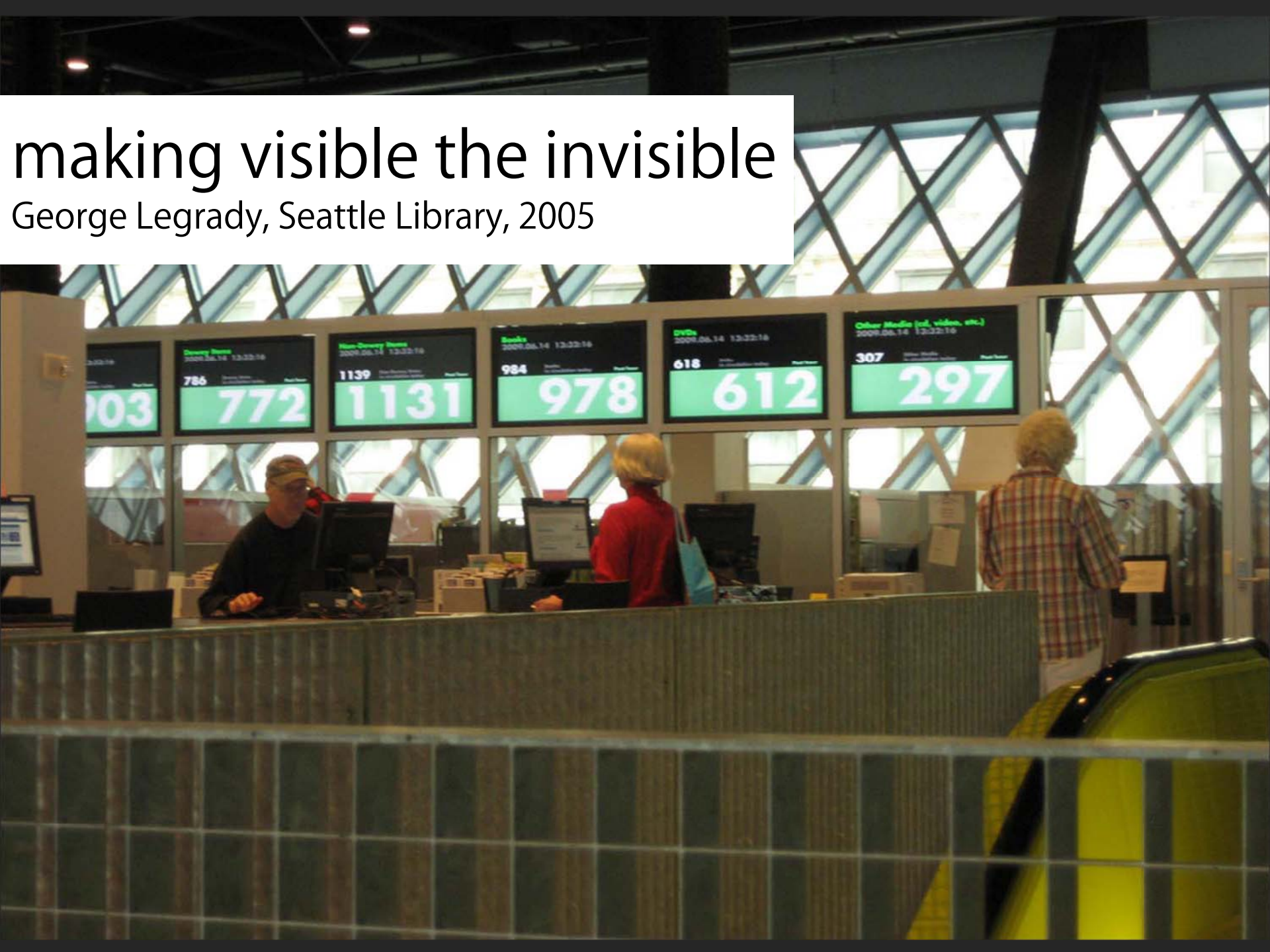
canada

canada

Sheelagh Carpendale




human-computer interaction
information visualization
INFORMATION VISUALIZATION IN EXHIBITION SPACES
new-media art

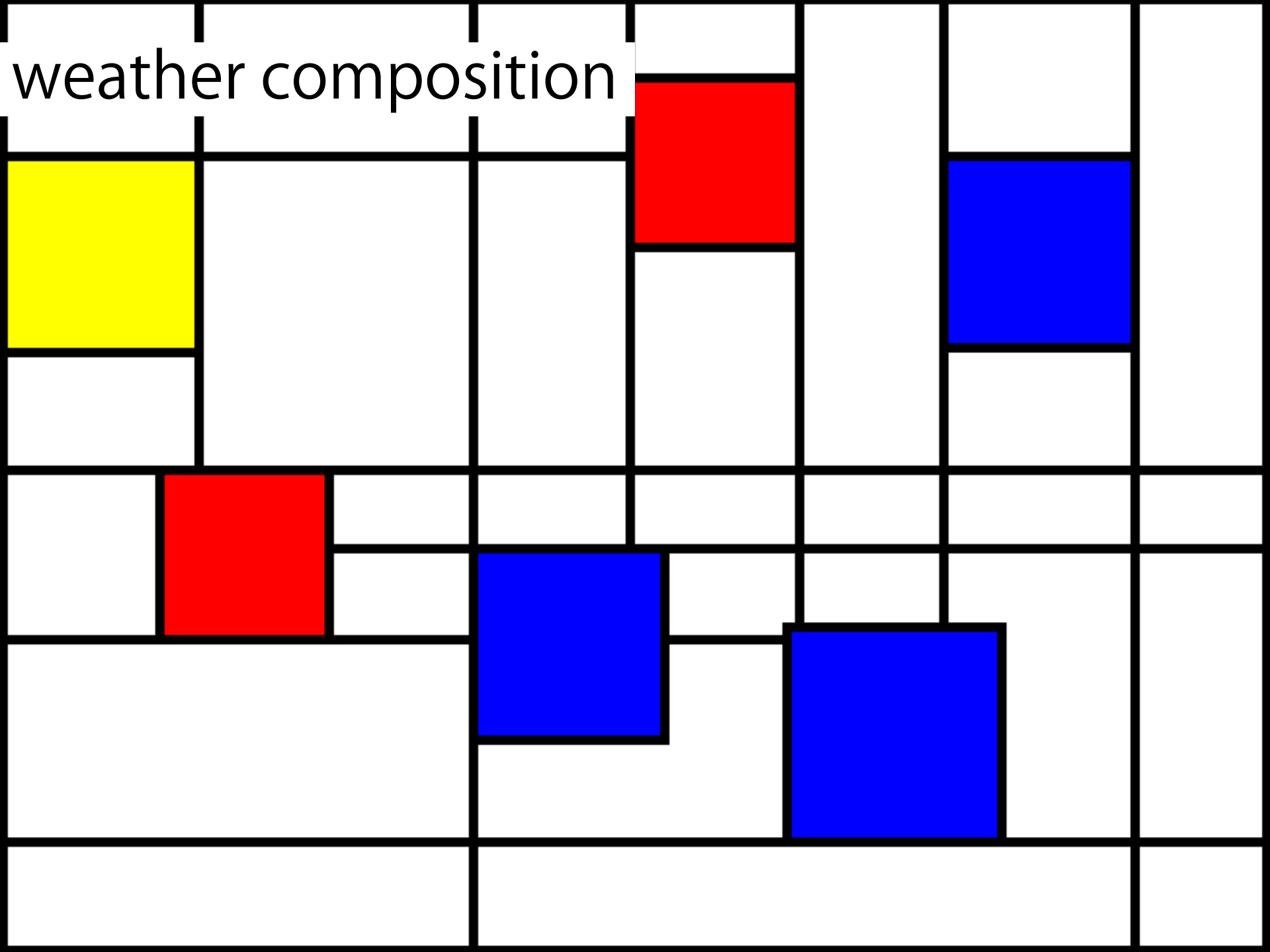

making visible the invisible
George Legrady, Seattle Library, 2005
786
772
1139
1131
984
978
618
612
307
297

12:15pm
Iron Man
12:16pm
636.39
12:17pm
12:16pm
great smelly slobbery small tooth
12:18pm
12:17pm
Up in Honeys room
Schweigens und der Dunkelheit aus dem Leben d
12:17pm
12:19pm
sisters antipodes
813.54 Fiction
FRIENDSHOP
TELECIRC

encyclopedias
jerusalem
saving
feelings
truth
potential
dinners
happy
deaf
whole
windows
yourself
nutrition
experiments
identification
effect
lady
present
causes
week
taste
planet
dictionary
roman
weight
cycling
measures
sunny
featuring
multiple
group
books
1971
thinking
god
faith
users

informative art

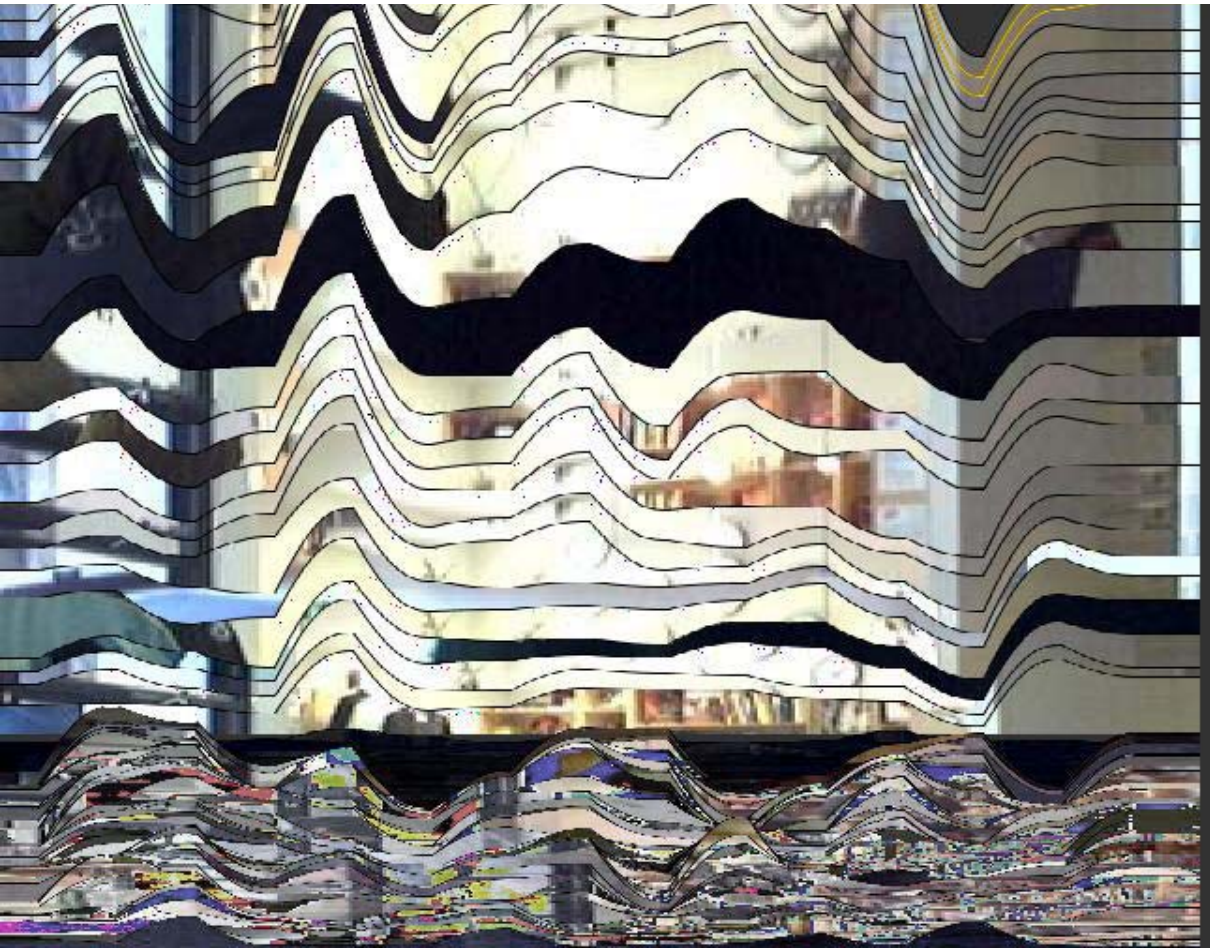
Holmquist & Skog, 2003

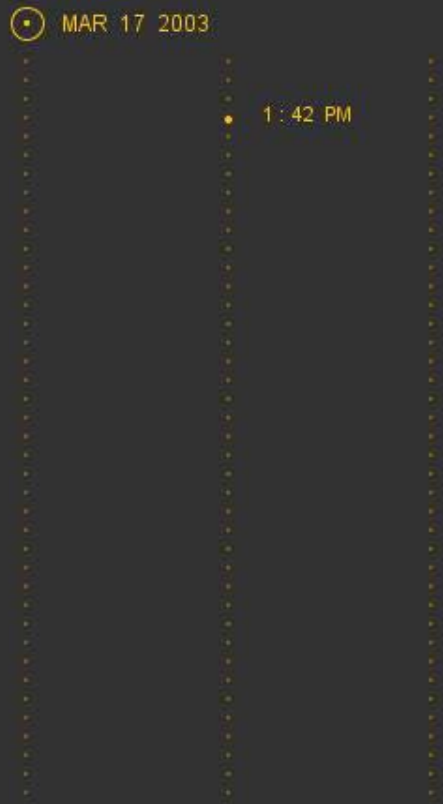

weather composition

soup clock
Campbell's
CLASSICS
TOMATSOPPA
SPARRISSOPPA

artifacts of the presence era

F. Viégas, E. Perry, E. Howe & J. Donath, 2004



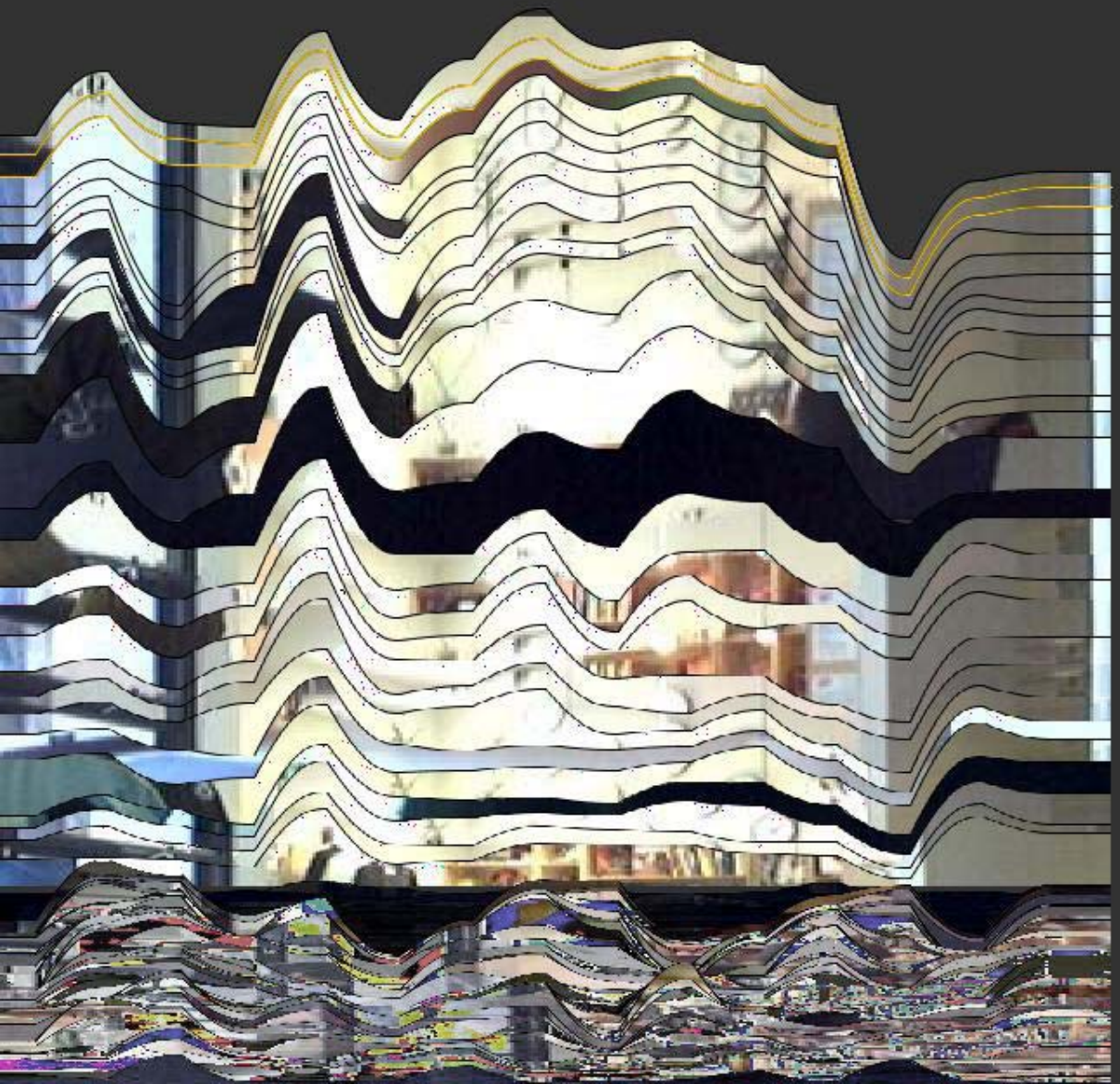


international center of art, Boston

11 : 58 : 09

present display

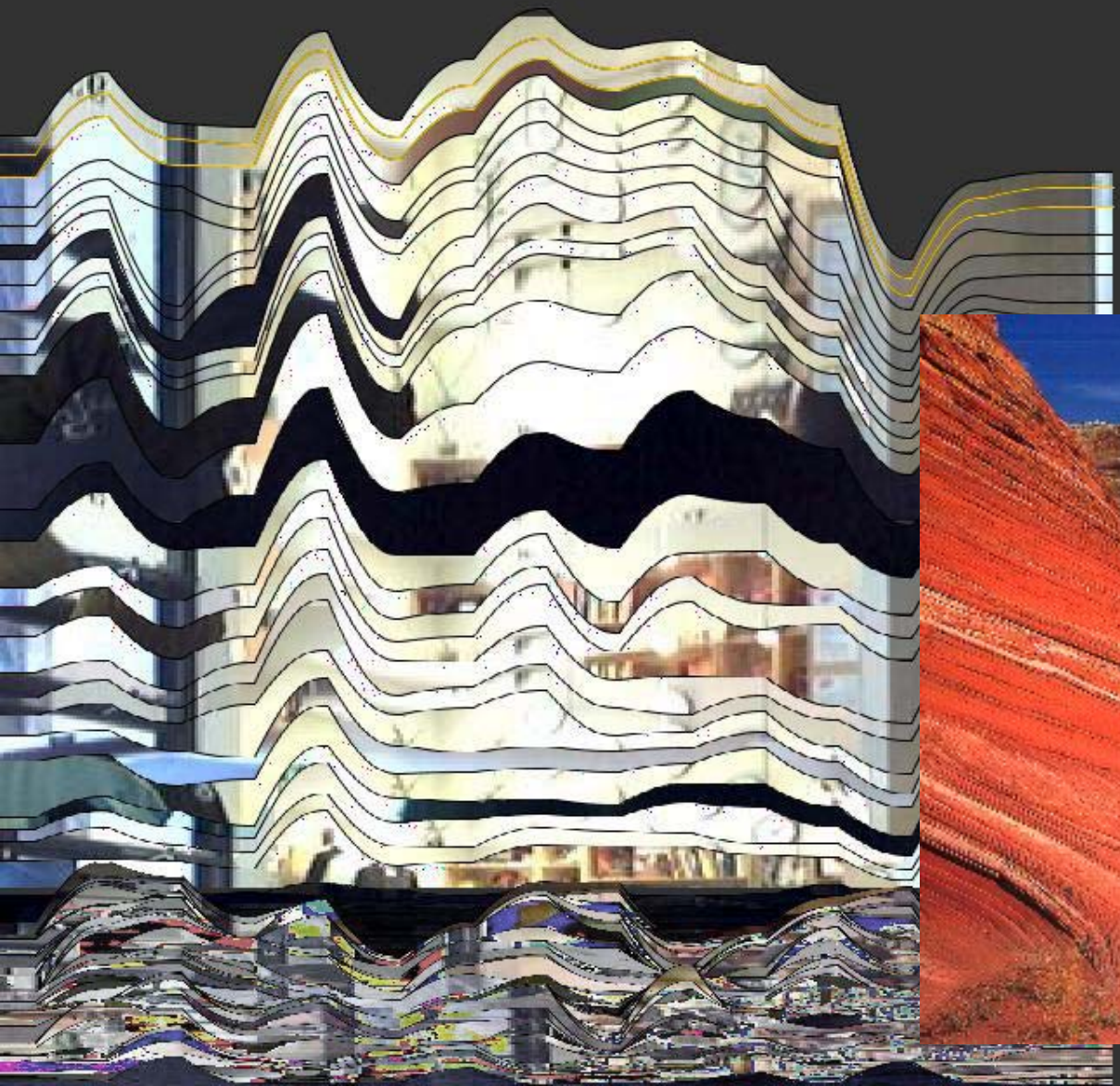
history display

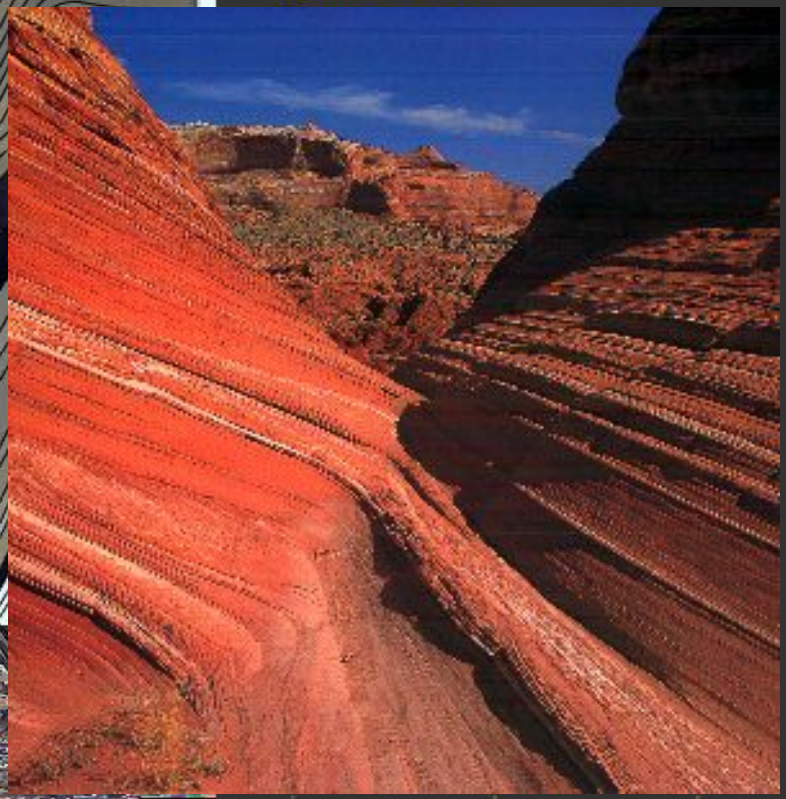


MAR 17 2003

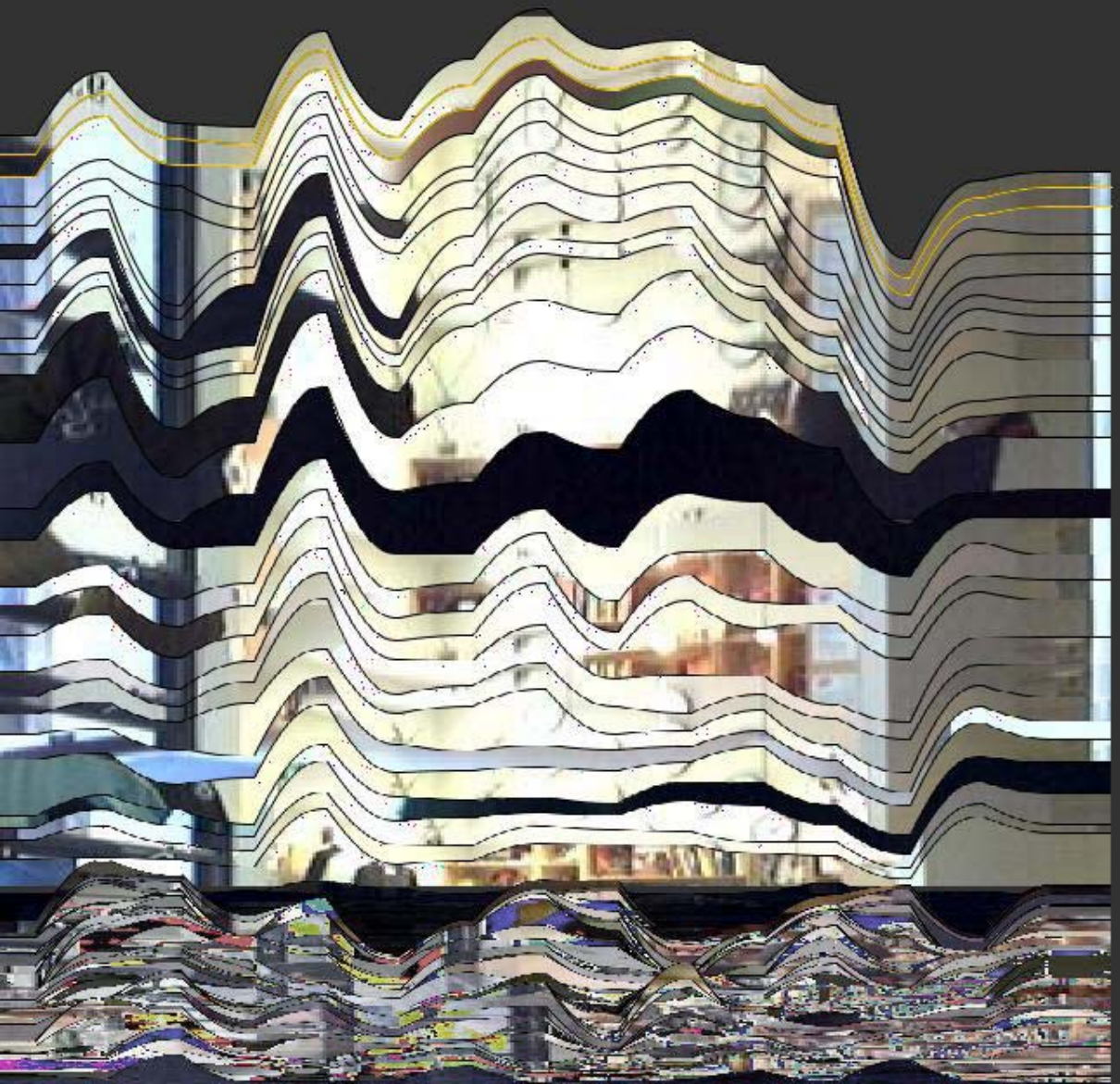
1 : 42 PM

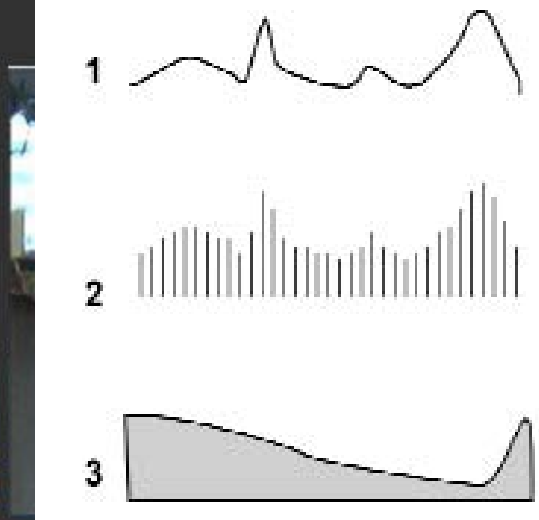
history display



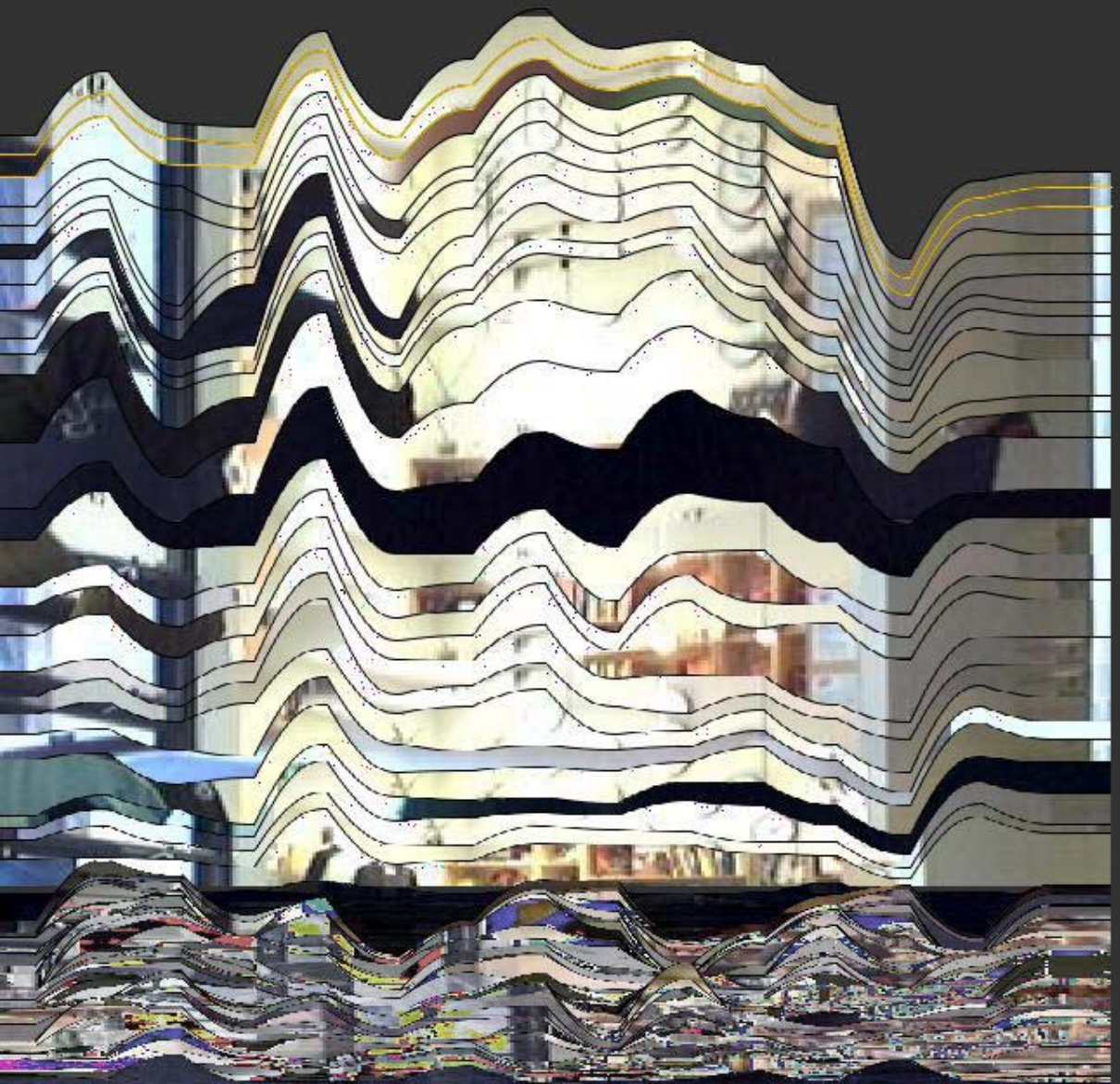


history display





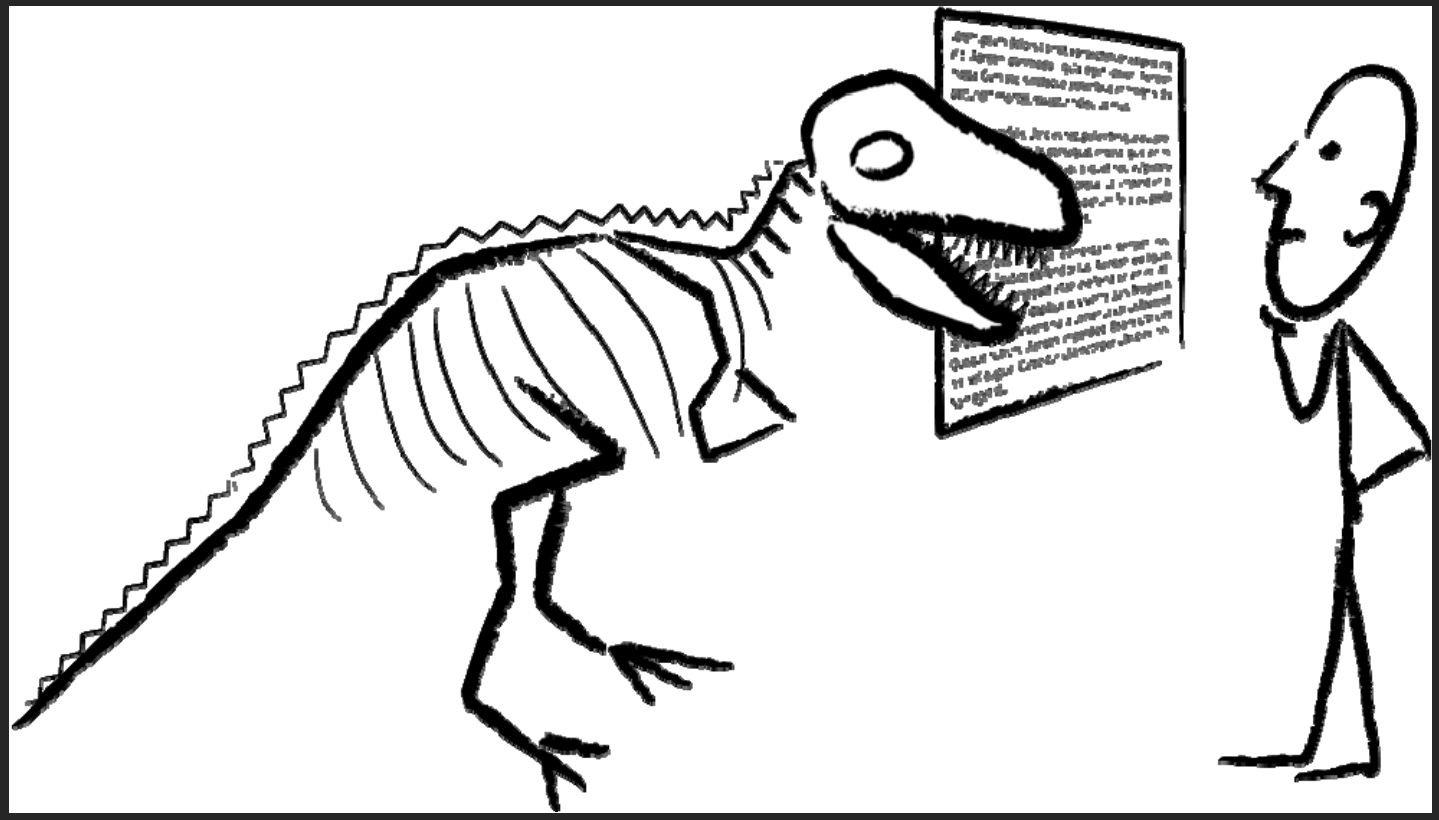
history display



MAR 17 2003

1 : 42 PM

infovis in exhibition spaces

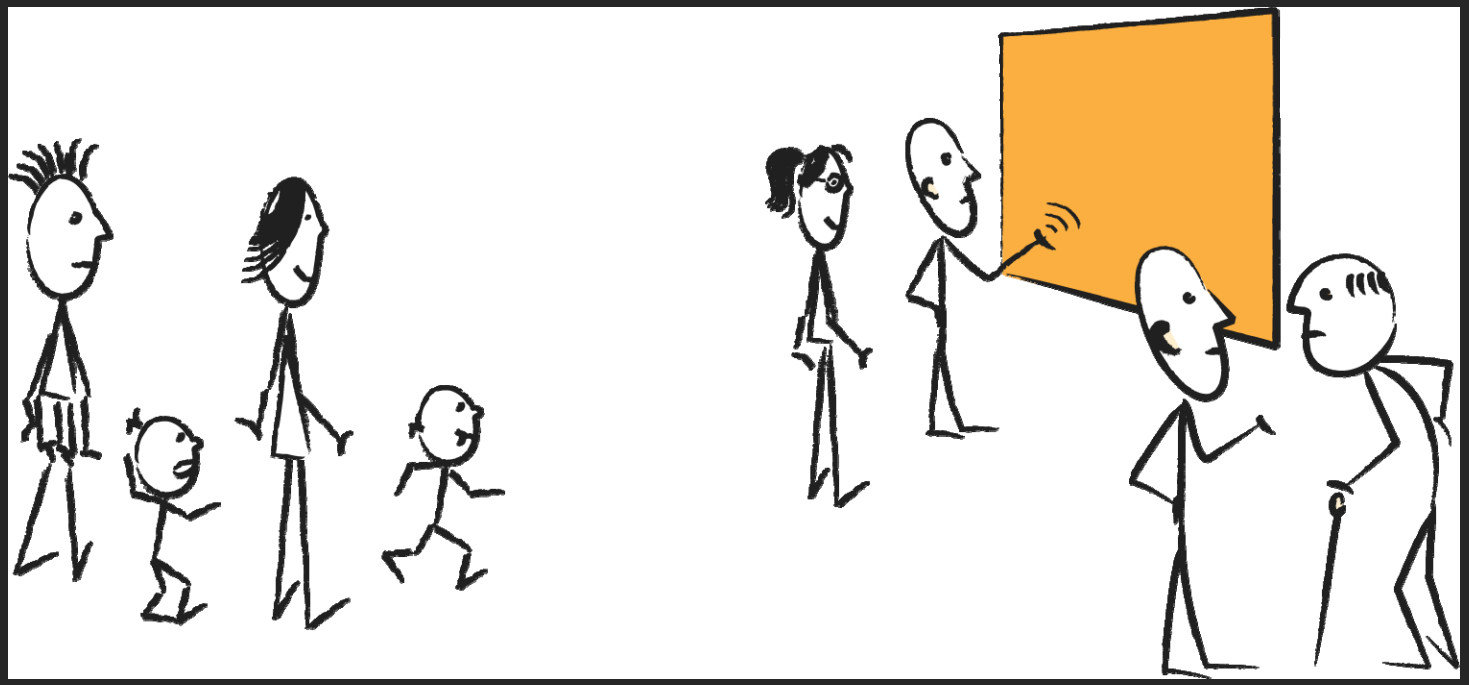


infovis in exhibition spaces

indoor spaces open to anybody

serendipituous & social information exploration

education, entertainment & inspiration

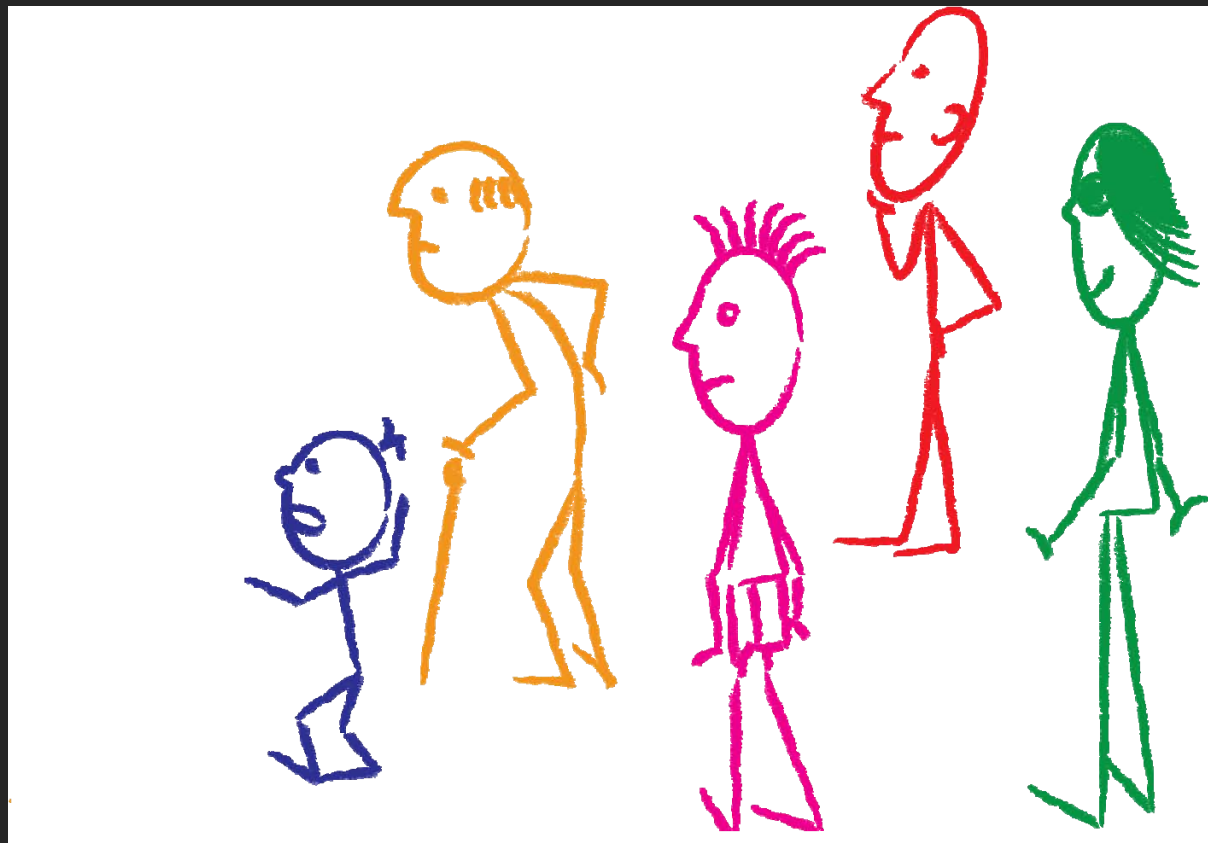


challenges

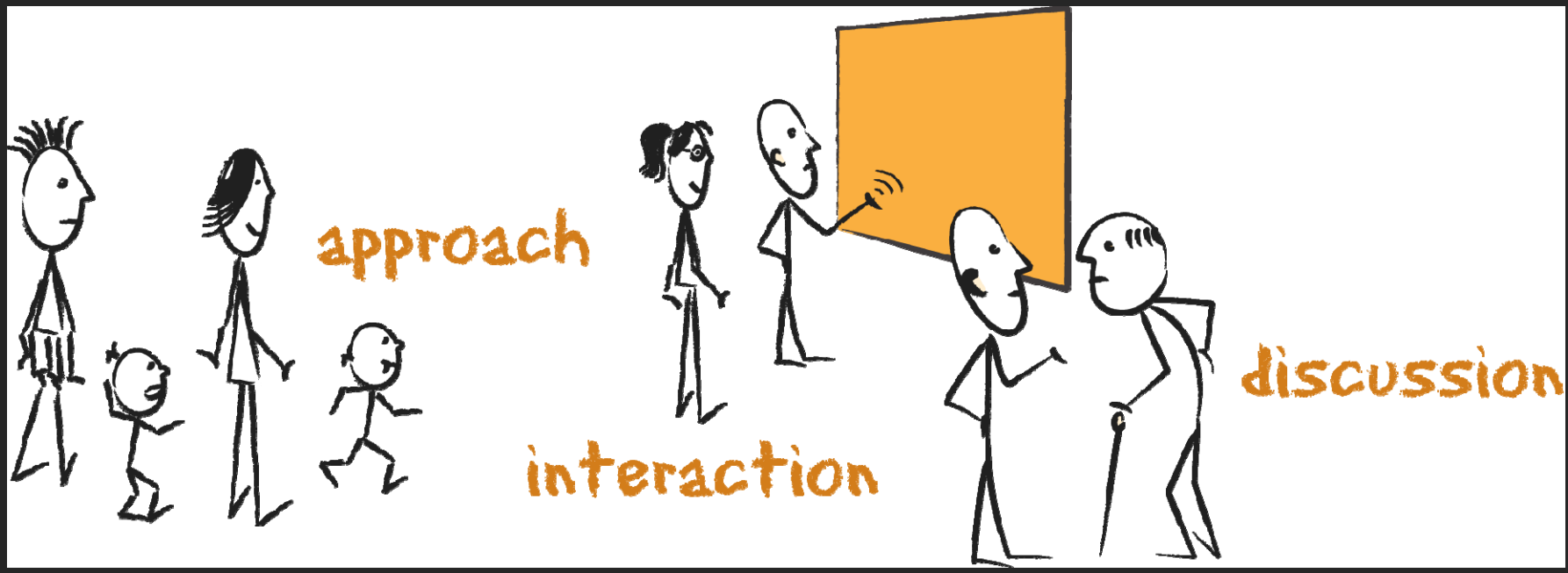
diverse audience

loosely defined motivation & goals

short interaction times



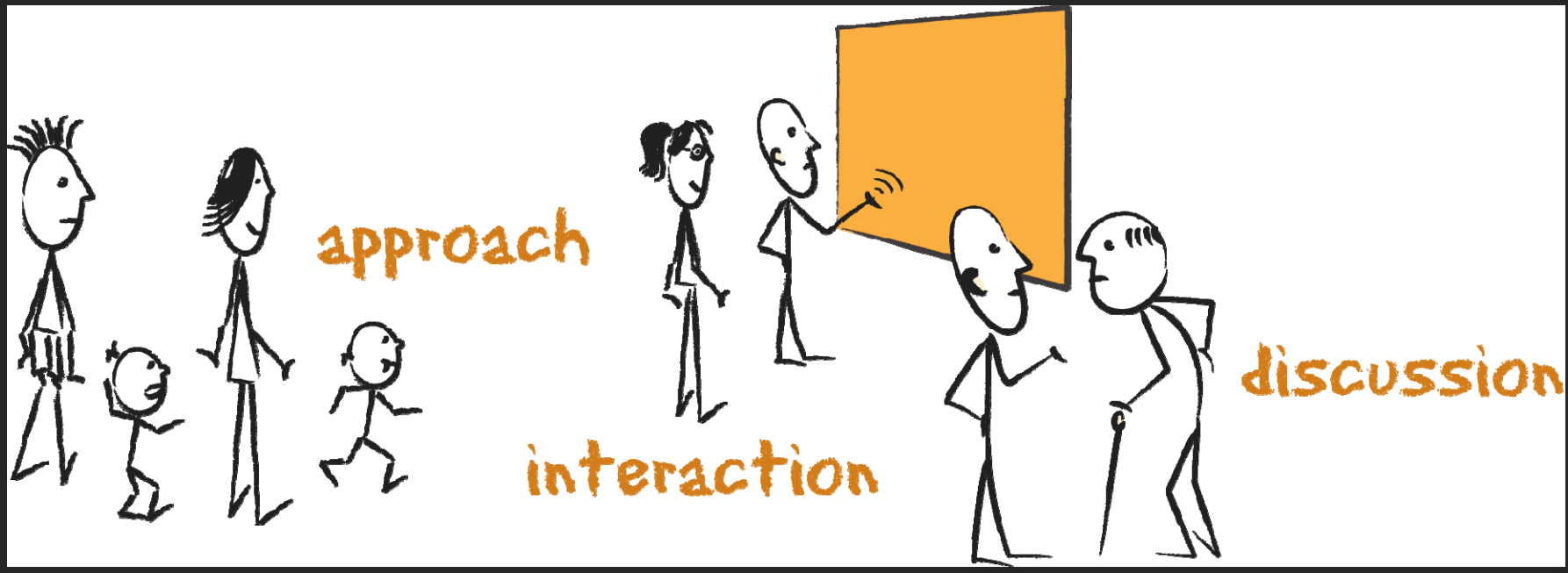
my research interests

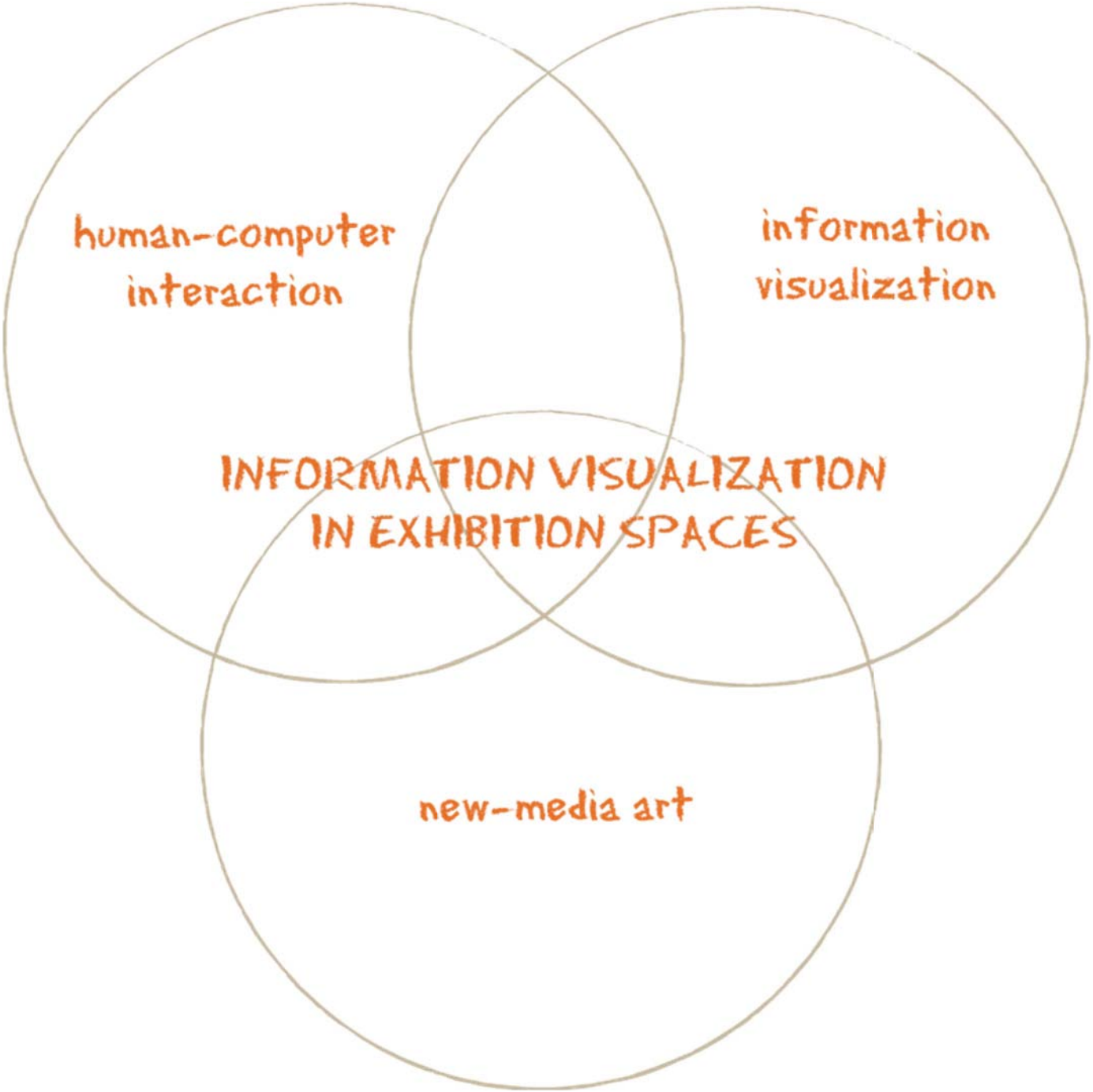


my approach

design & observe (study)

observe (study) & design



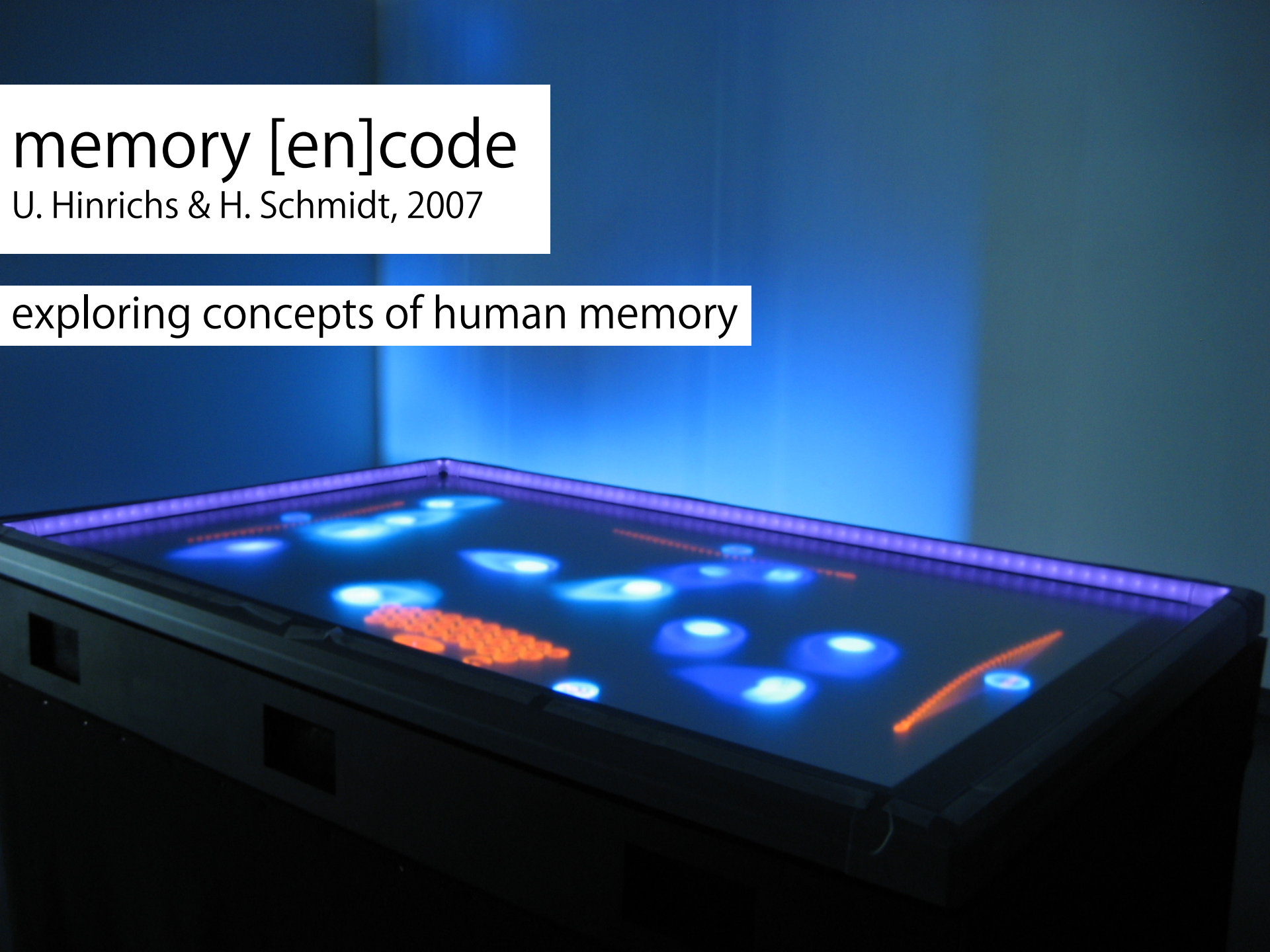

human-computer interaction
information visualization
INFORMATION VISUALIZATION IN EXHIBITION SPACES
new-media art

memory [en]code

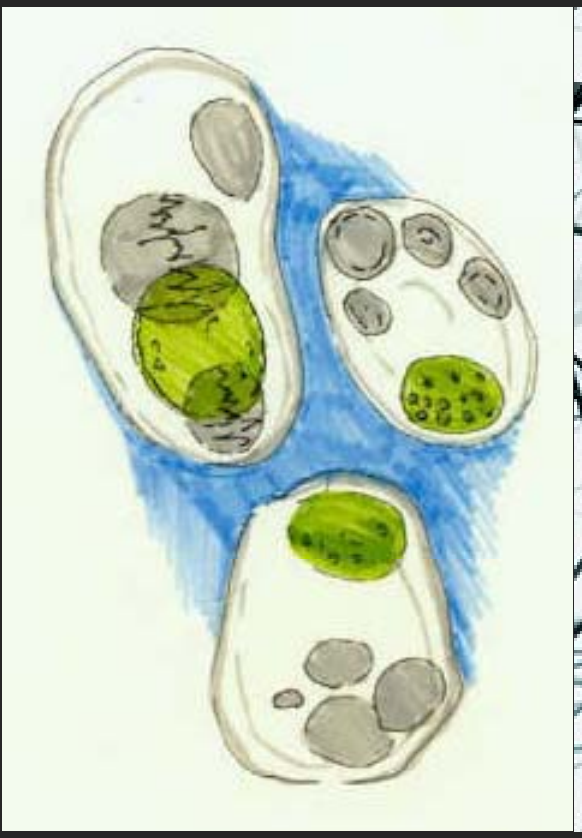
EMDialog

Holly Schmidt

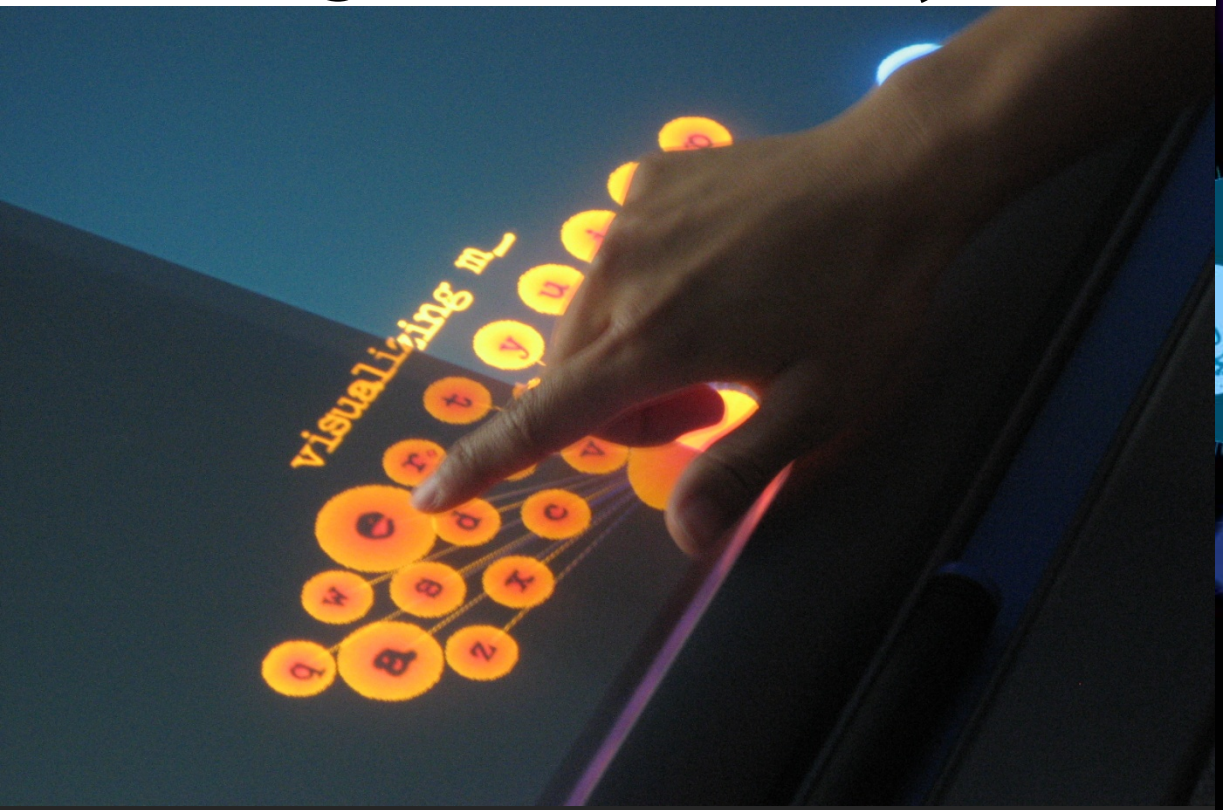
http://www.hollyschmidt.ca/


memory [en]code
U. Hinrichs & H. Schmidt, 2007
exploring concepts of human memory

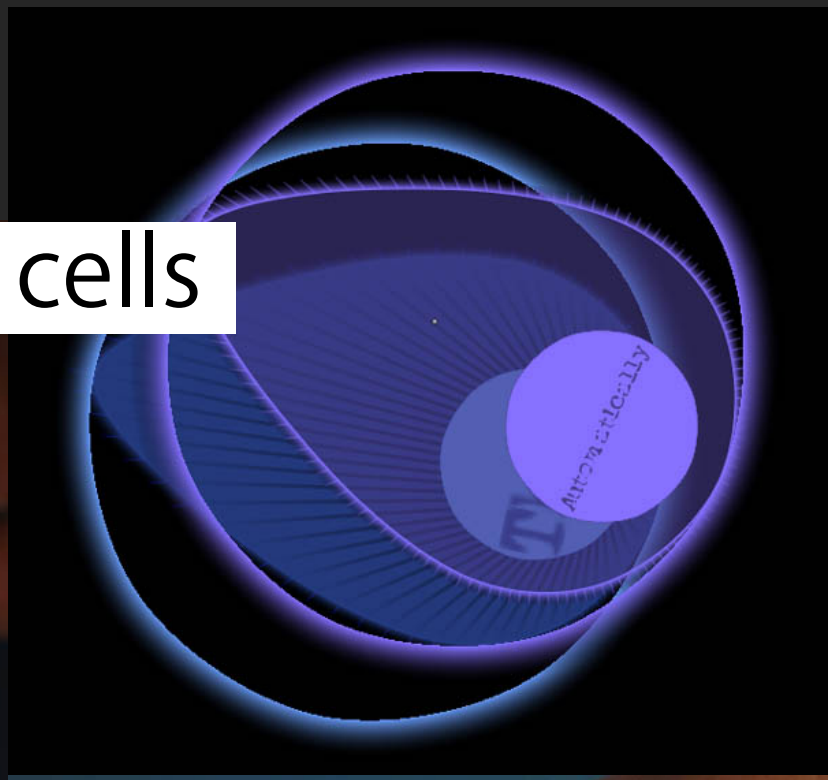
memory [en]code – process



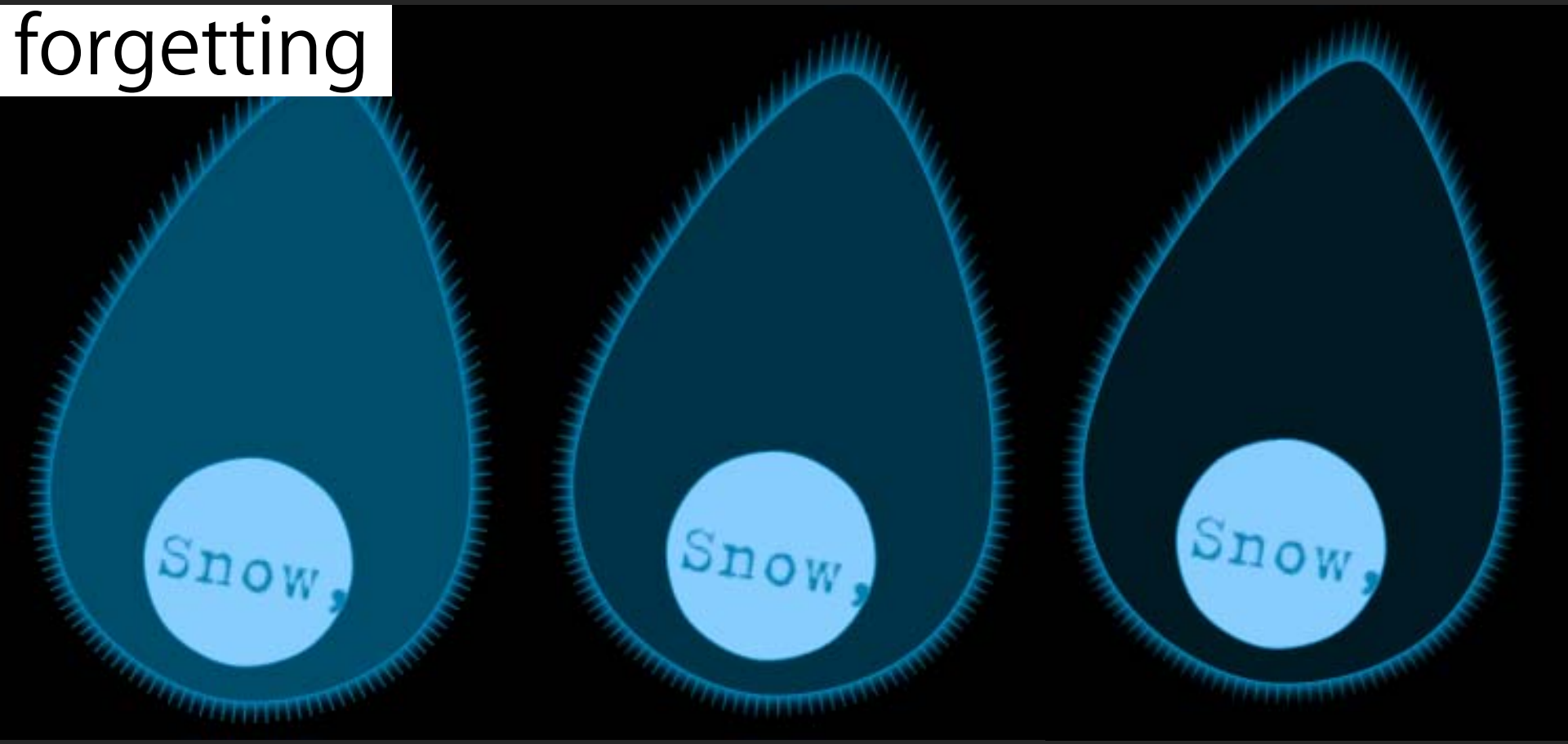
creating new memory cells

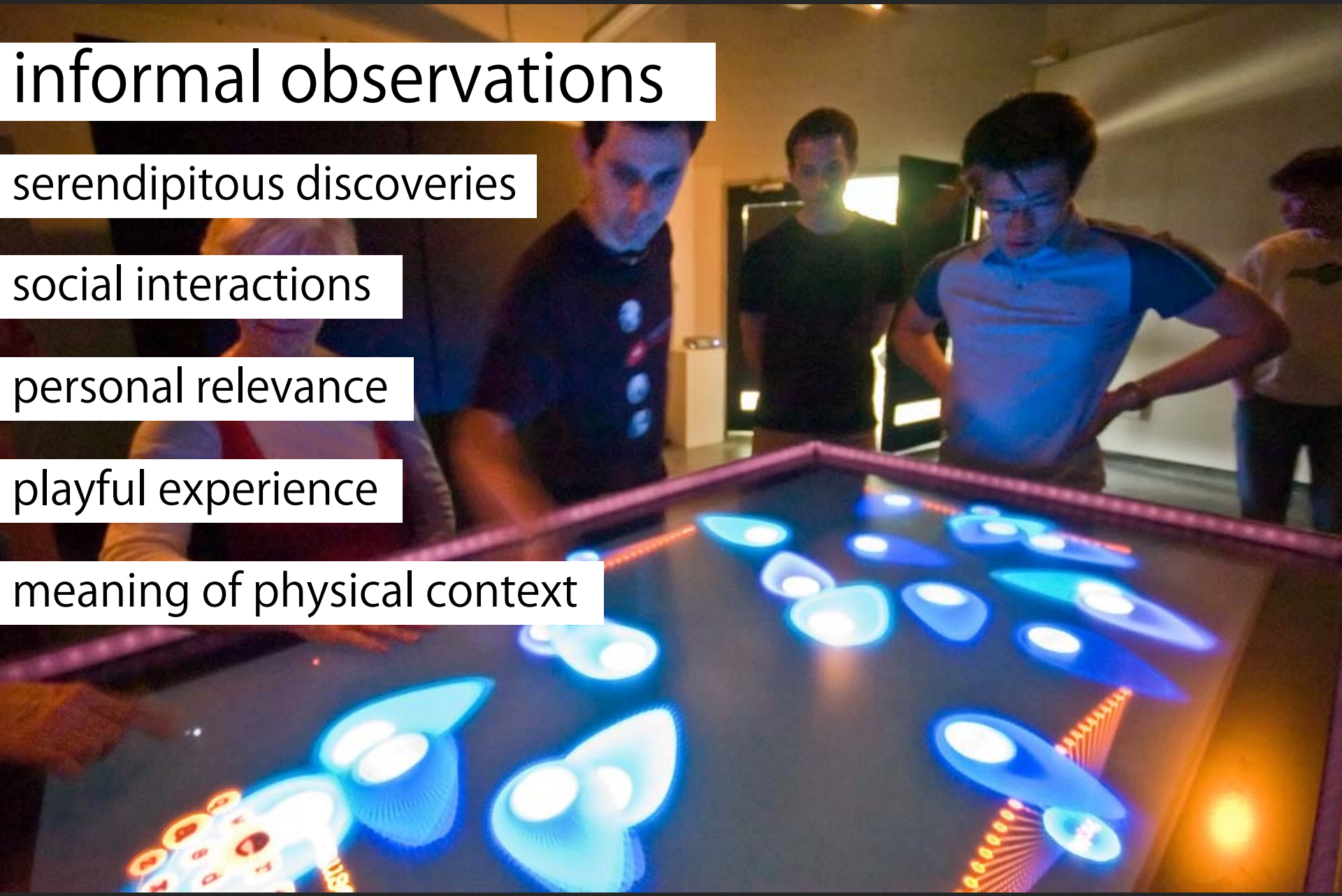


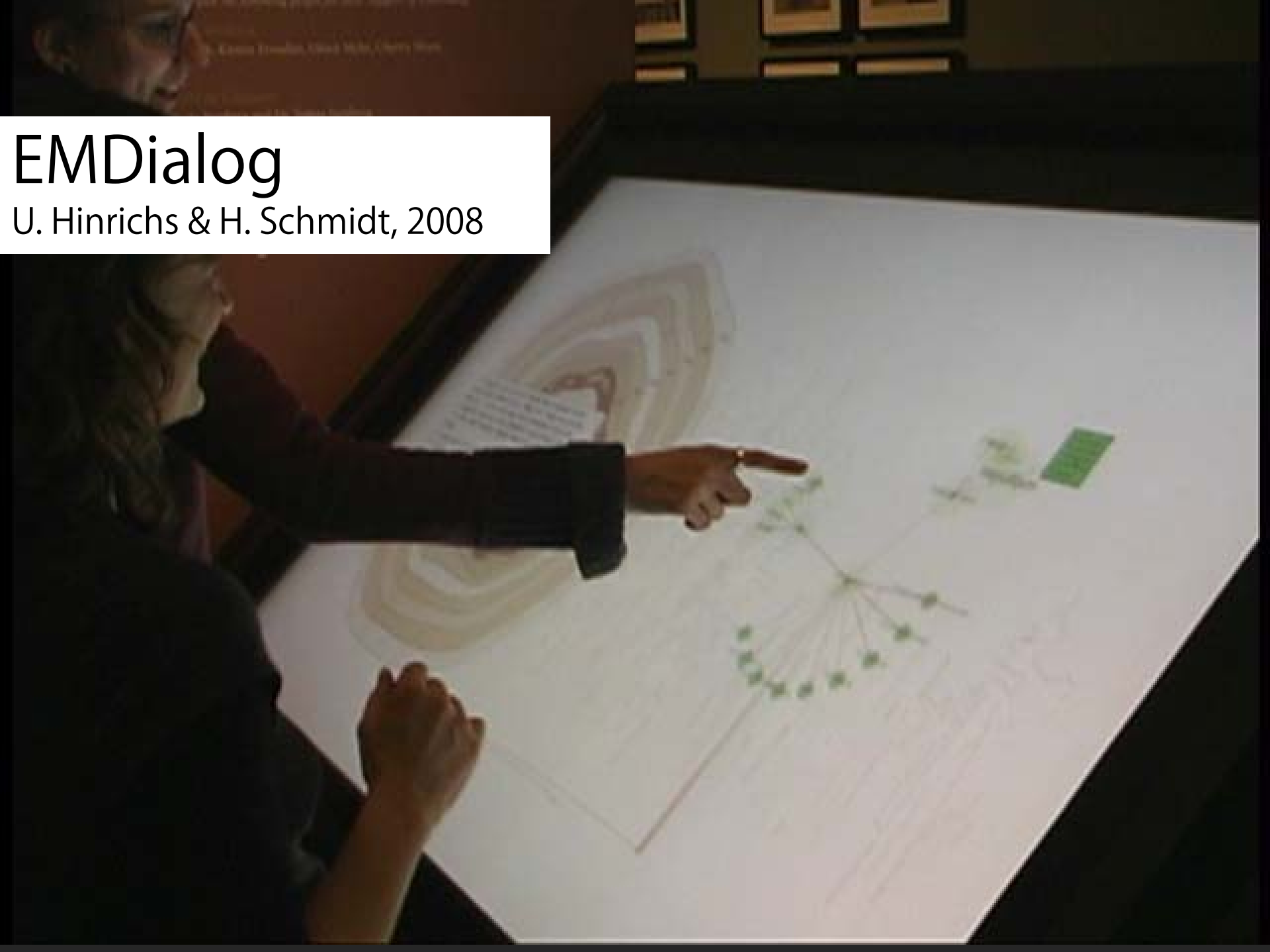
interacting with memory cells



forgetting



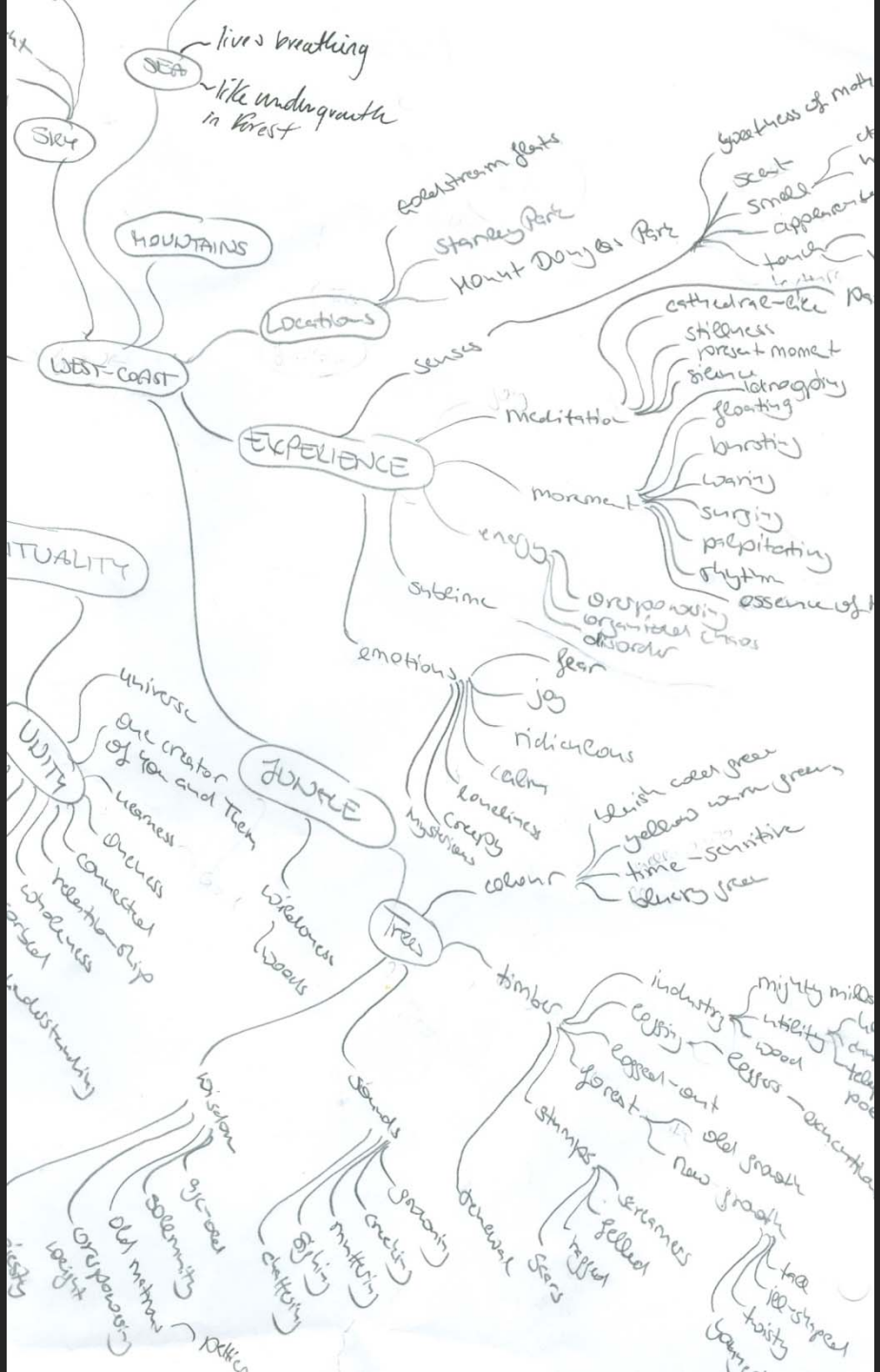

informal observations
serendipitous discoveries
social interactions
personal relevance
playful experience
meaning of physical context



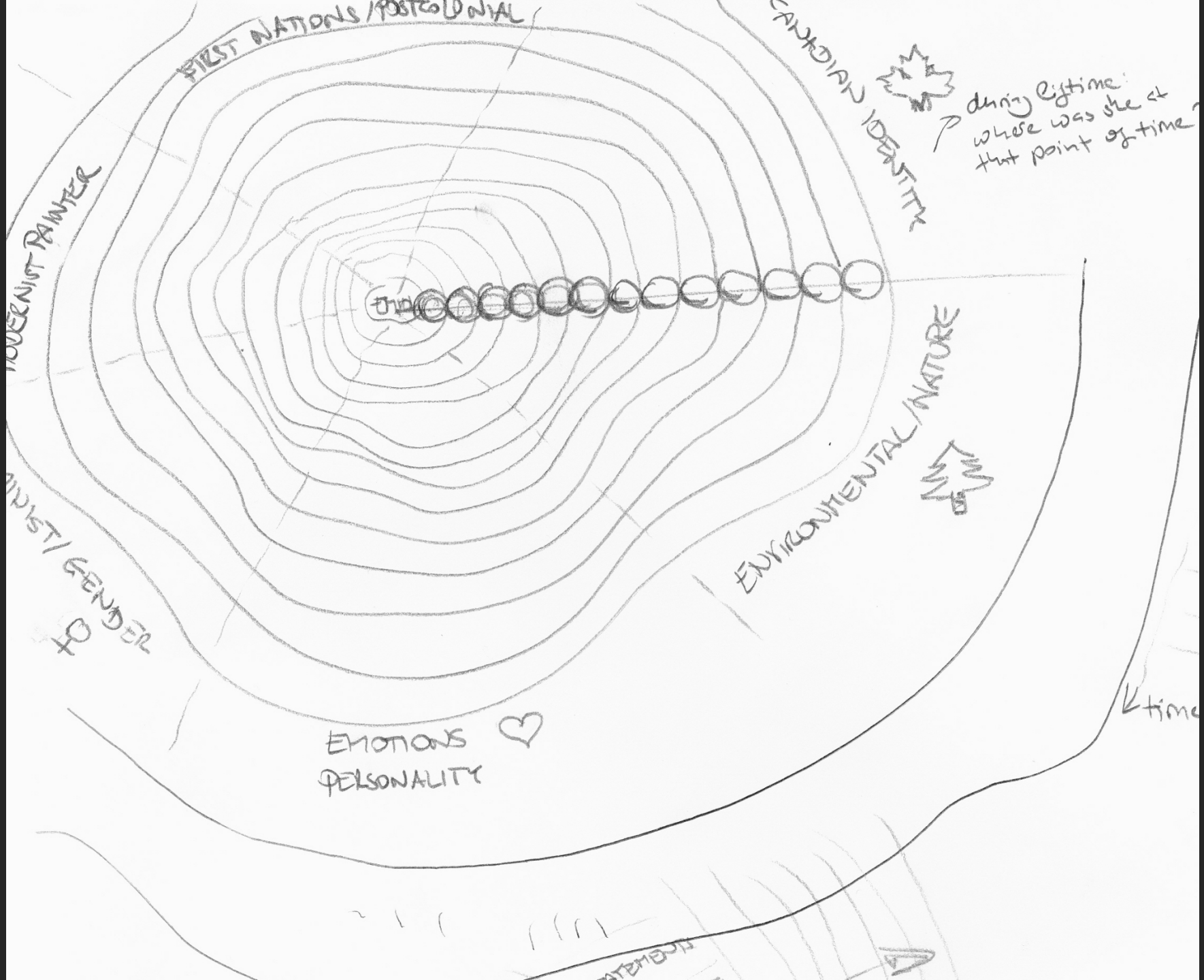
EMDialog

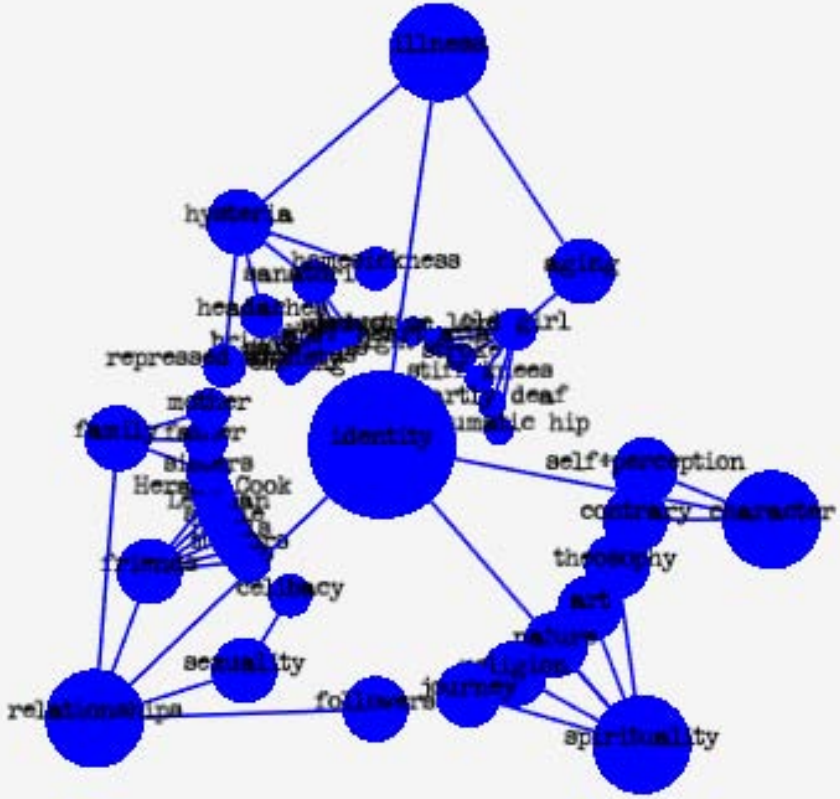
U. Hinrichs & H. Schmidt, 2008

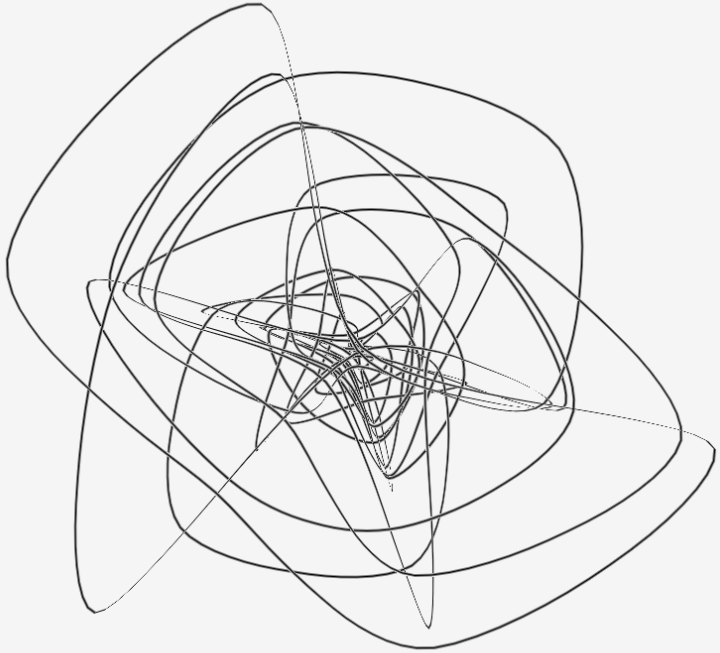
context


SEA
lives breathing
like underground in forest
SKY
MOUNTAINS
WEST-COAST
Locations
Goldstream flats
Stanley Park
Mount Douglas Park
sensors
cathedral-like
stillness
present moment
silence
meditation
EXPERIENCE
moment
floating
bursting
waring
surging
palpitating
rhythm
energy
overpowering
organized chaos
disorder
sublime
emotions
fear
joy
ridiculous
calm
loneliness
creepy
mysterious
UNITY
universe
One creator of you and Them
nearness
oneness
connected
relationship
wholeness
JUNGLE
wilderness
woods
Trees
colour
time-sensitive
blurry green
timber
industry
mighty mills
utility
wood
logging
logged-out
forest
old growth
new growth
stumps
screamers
felled
ragged
scars
renewal
sounds
growing
creeking
muttering
sighing
chattering
wisdom
age-old
solemnity
old matrons
overpowering
weight
tall
ill-shaped
twisty

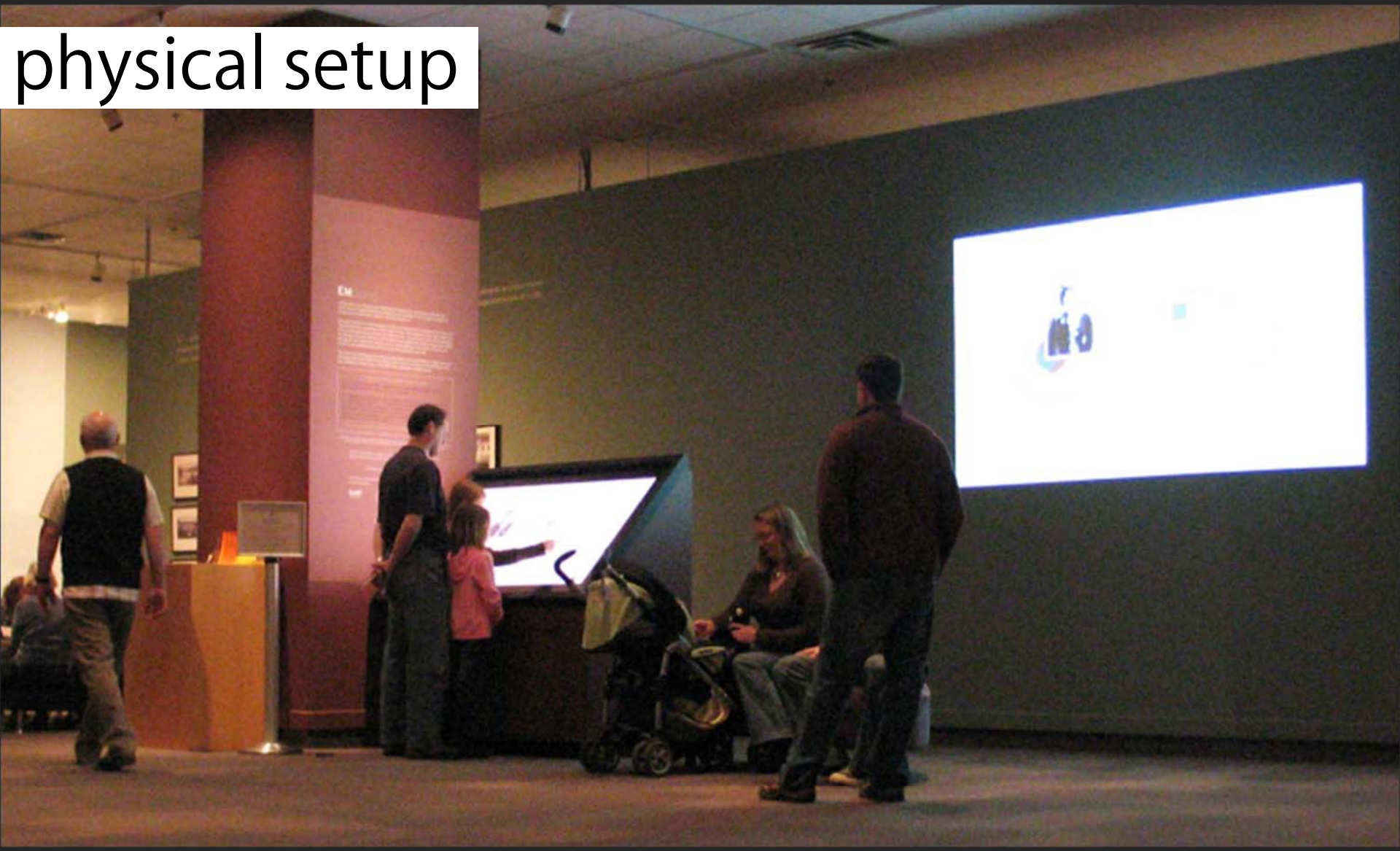
process


FIRST NATIONS / POSTCOLONIAL
CANADIAN IDENTITY
during lifetime
where was she at
that point of time?
MODERNIST PAINTER
ENVIRONMENTAL/NATURE
EMOTIONS
PERSONALITY
time

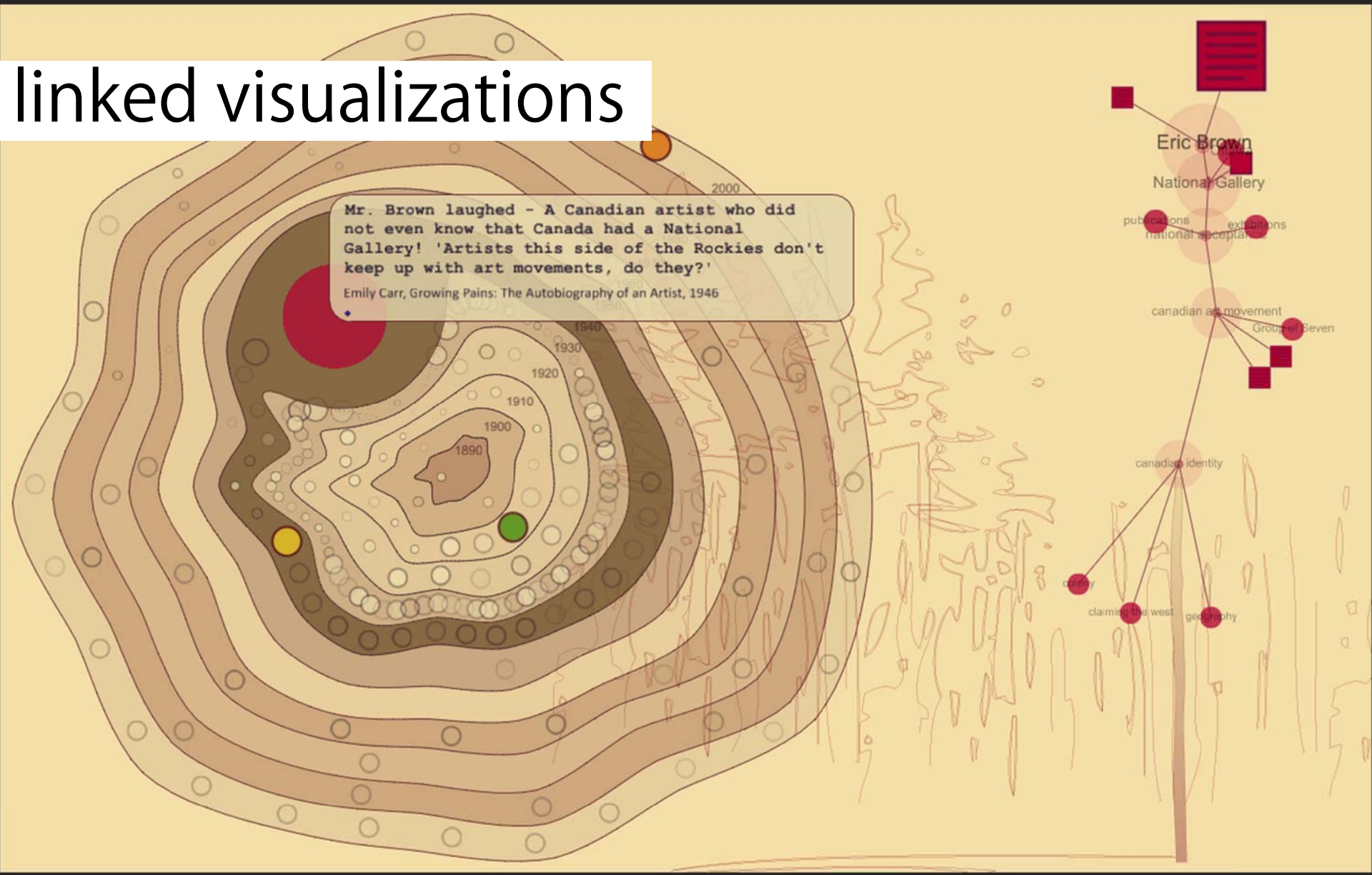

illness
hysteria
aging
identity
self+perception
contrary character
theosophy
art
nature
religion
journey
spirituality
celibacy
sexuality
friends
relationships
Cook
deaf
hip



physical setup



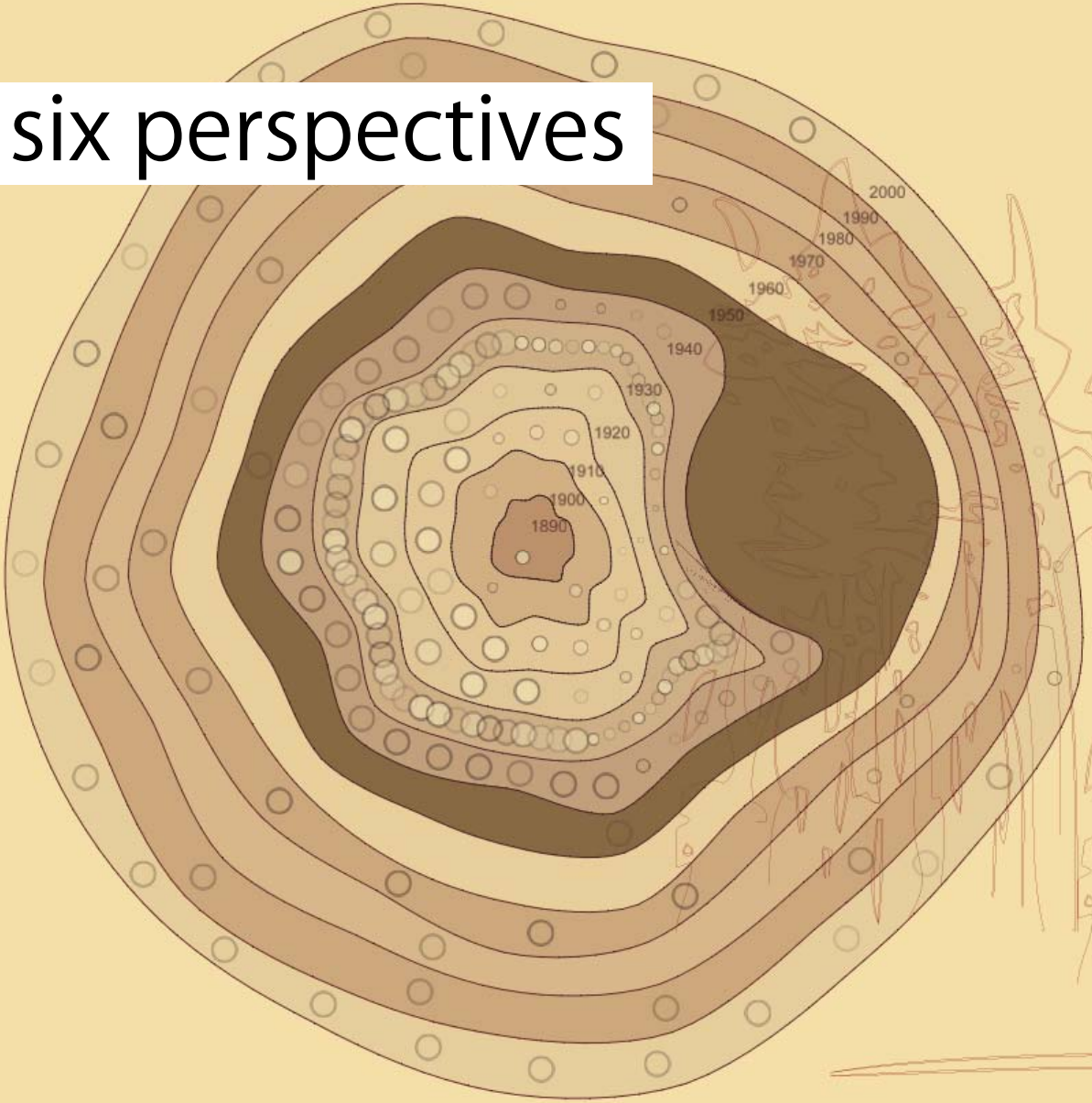
linked visualizations

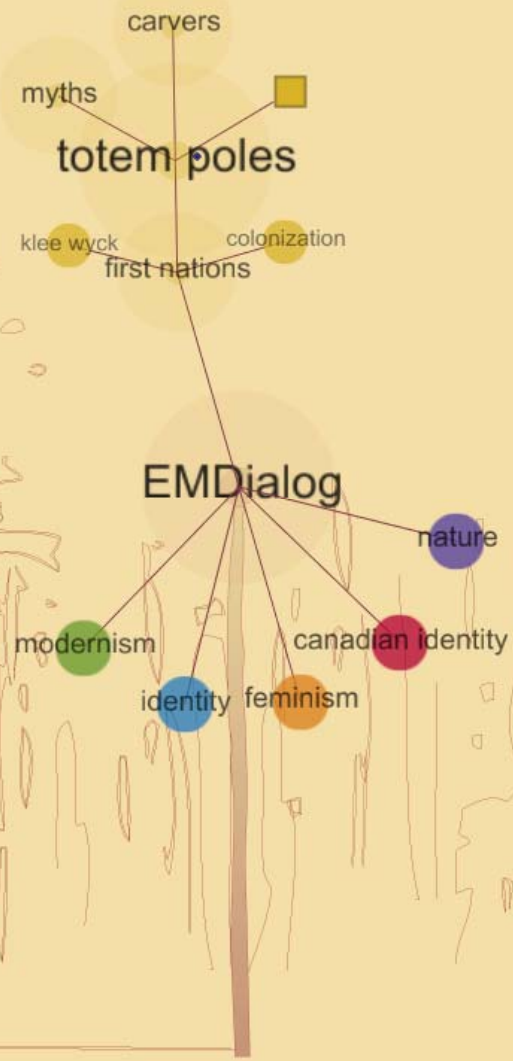


2000
1990
1980
Above the Gravel Pit [1937]

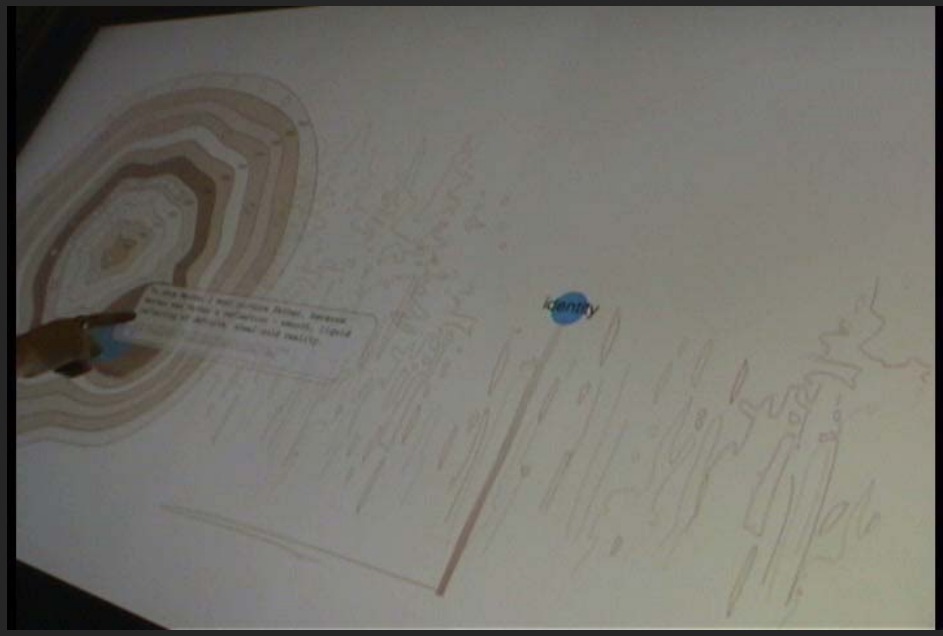
old growth
new growth
forest
renewal
logging
timber
industry
jungle
nature

six perspectives



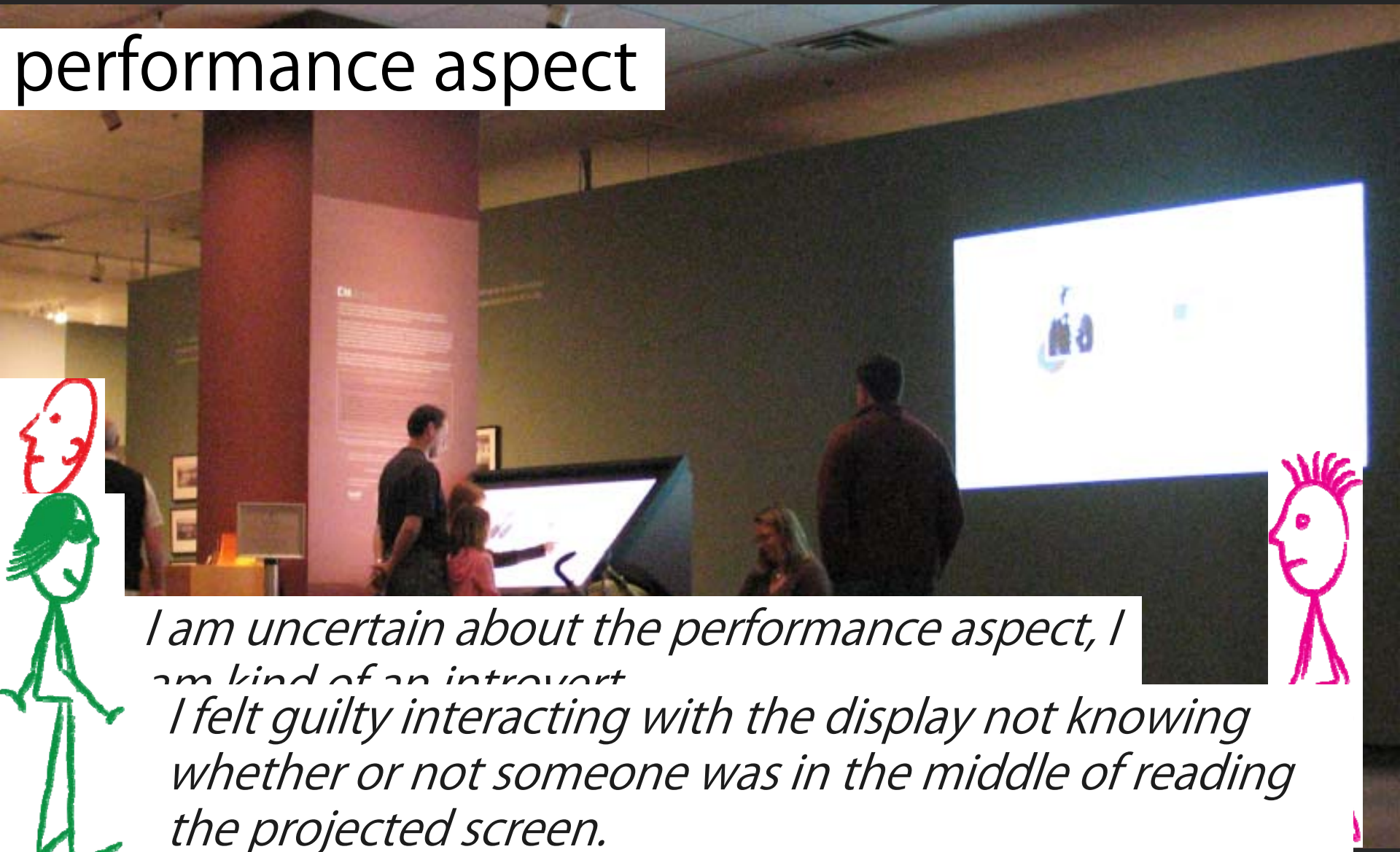


Self Portrait (1938)


identity

motivations for approach

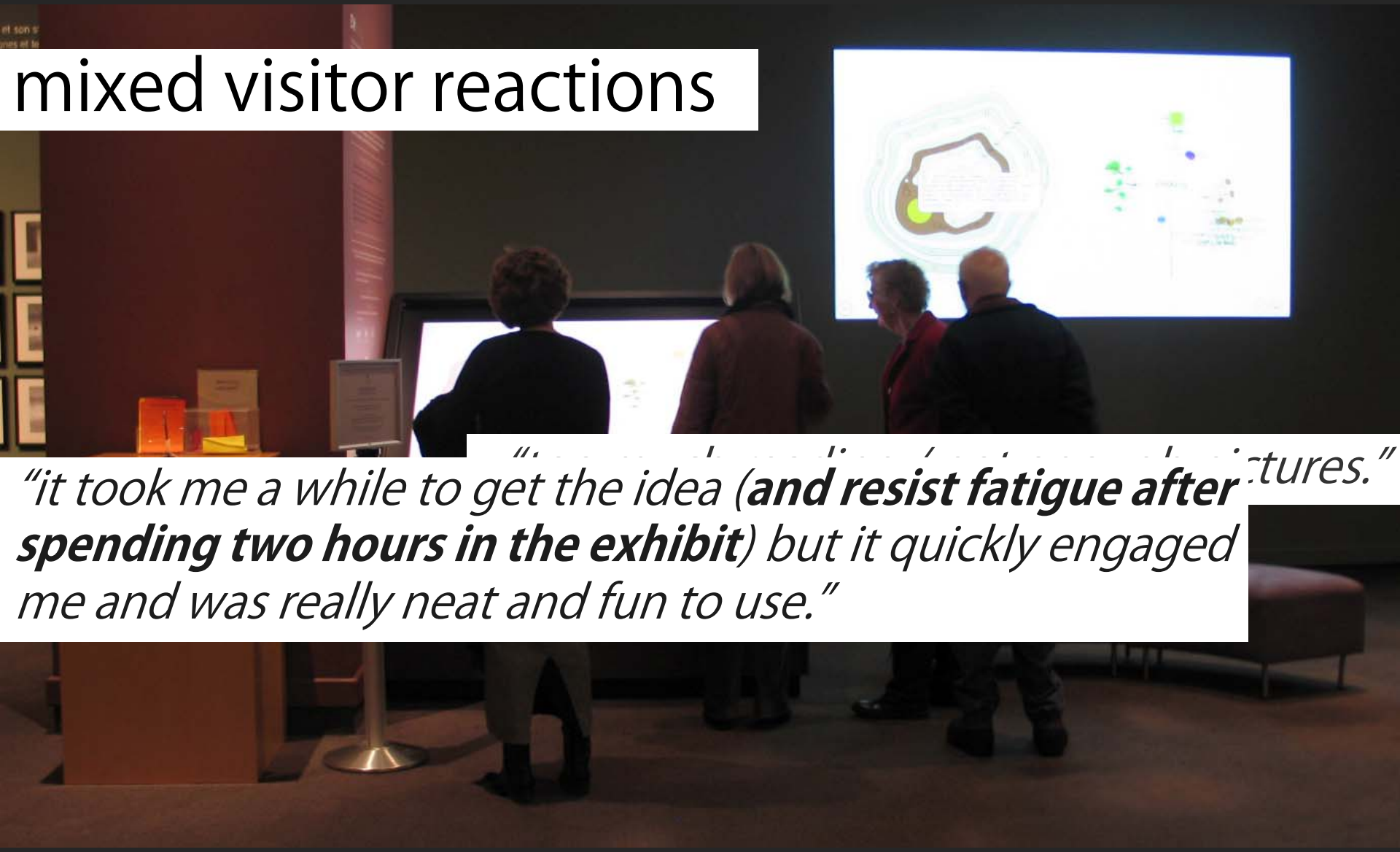
performance aspect



I am uncertain about the performance aspect, I am kind of an introvert

I felt guilty interacting with the display not knowing whether or not someone was in the middle of reading the projected screen.

mixed visitor reactions



*"it took me a while to get the idea (**and resist fatigue after spending two hours in the exhibit**) but it quickly engaged me and was really neat and fun to use."*

lessons learned

aesthetics matter

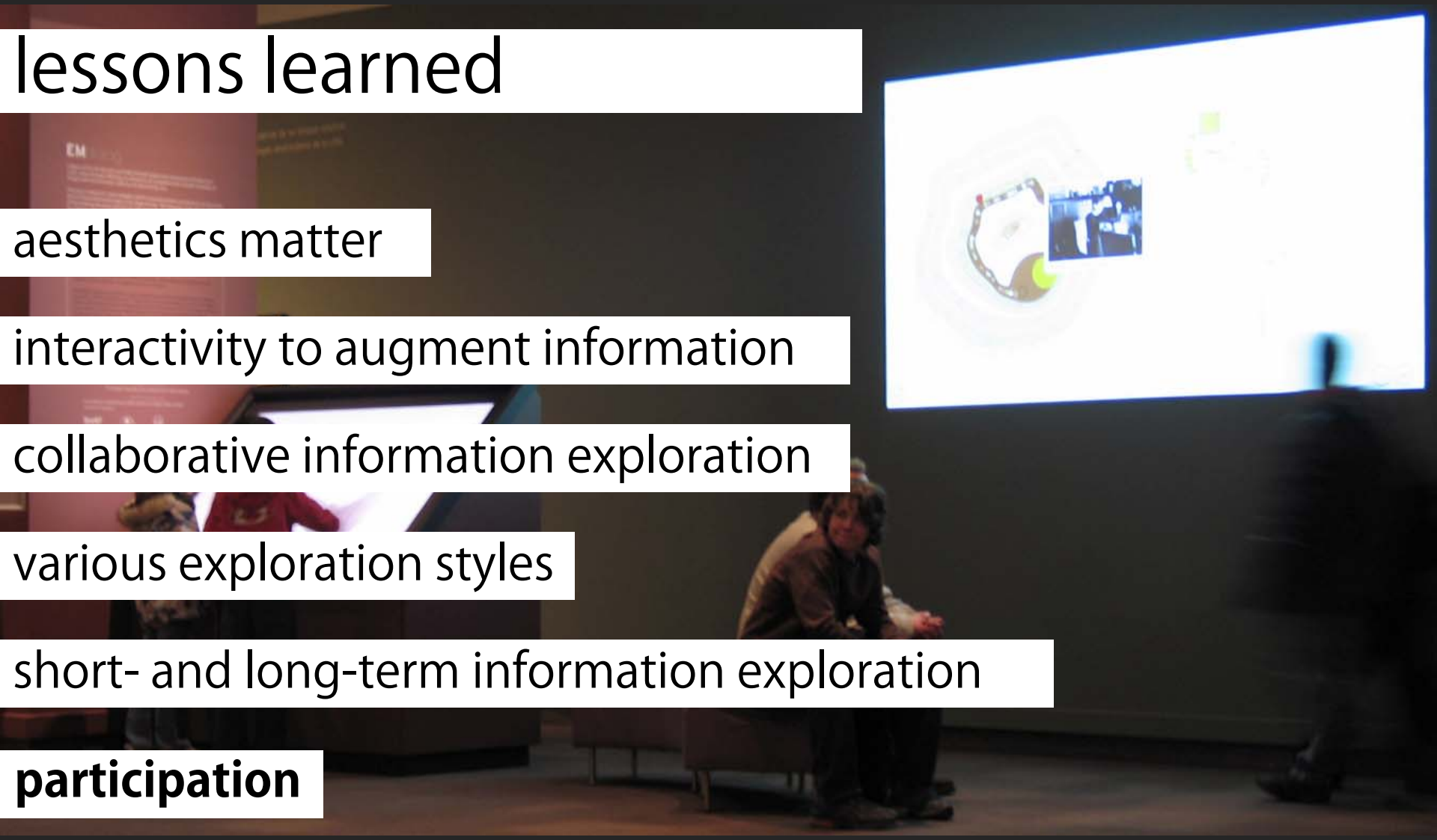
interactivity to augment information

collaborative information exploration

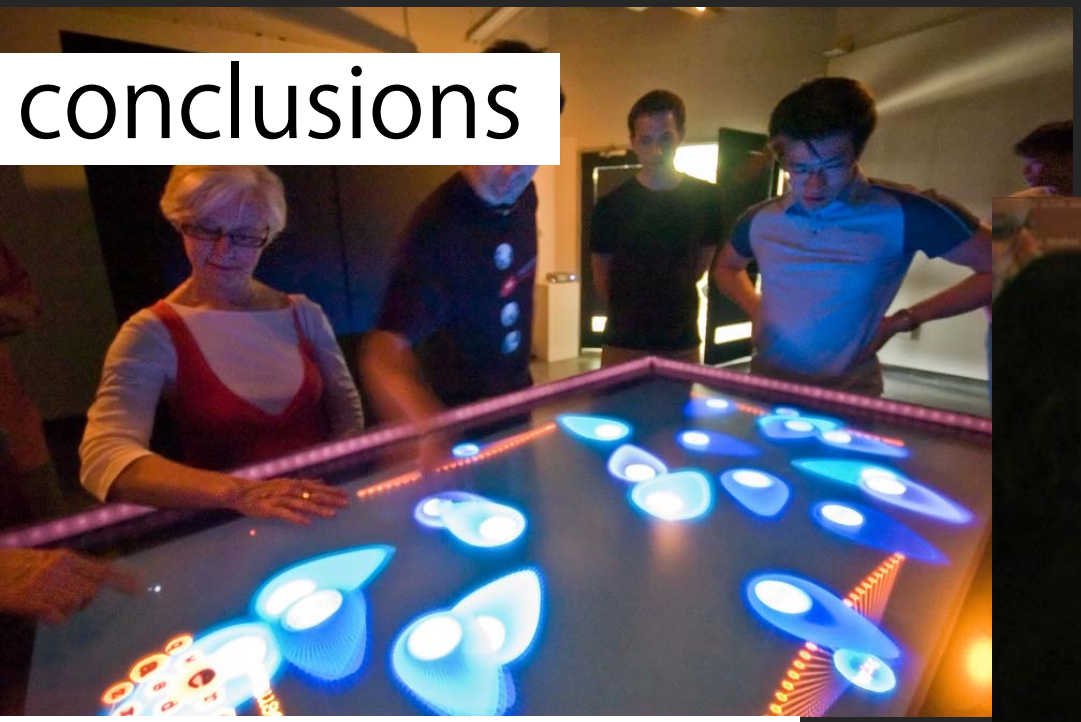
various exploration styles

short- and long-term information exploration

participation



conclusions



social context of space

dynamic vs. static data visualization

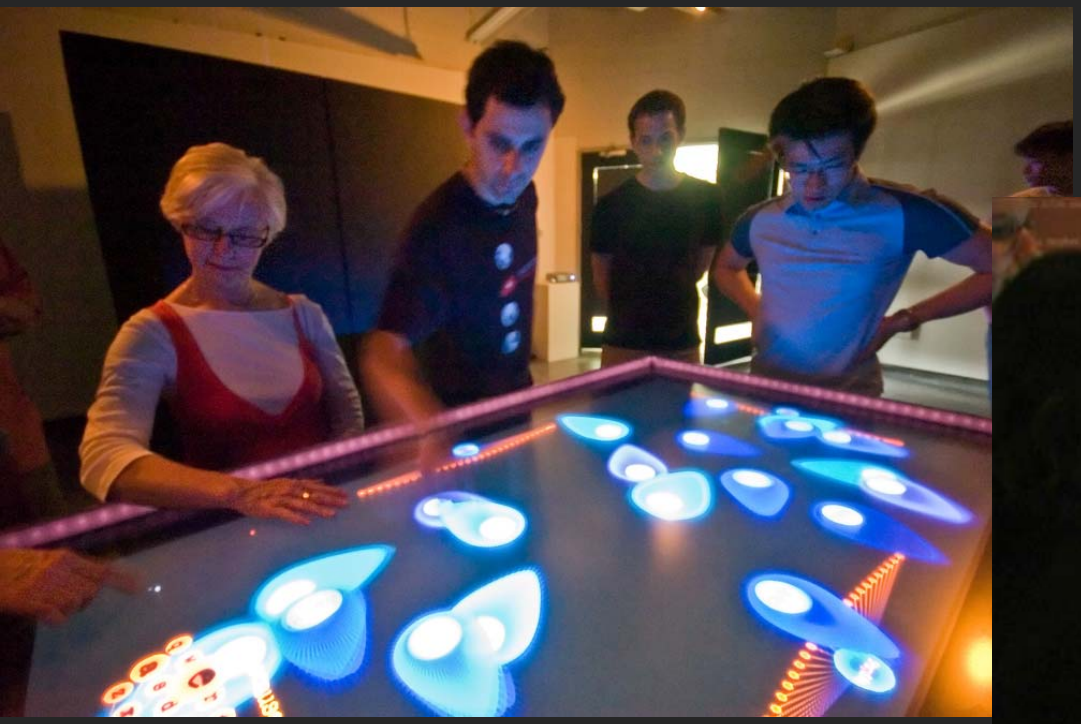
participation

outlook

participation & public large-display infovis

interdisciplinary research & collaboration

creative process



questions?

comments?

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http://www.utahinrichs.de

uhinrich@ucalgary.ca

references

U. Hinrichs, H. Schmidt, and S. Carpendale. EMDialog: Bringing Information Visualization into the Museum. TVCG: Transactions on Visualization and Computer Graphics, 14(6), pp. 1181 – 1188, 2008.

L. E. Holmquist & T. Skog. Informative Art: Information Visualization in Everyday Environments. In Proc. of Graphite 2003.

G. Legrady. Making visible the invisible. http://www.archimuse.com/publishing/ichim05/Legrady.pdf

H. Schmidt, U. Hinrichs, A. Dunning and S. Carpendale. memory [en]code - Building a Collective Memory within a Tabletop Installation. In Proceedings of Computational Aesthetics in Graphics, Visualization, and Imaging 2007 (CAe'07). Eurographics Association, pages 135 - 142, June, 2007.

F. Viégas, E. Perry, E. Howe and J. Donath. Artifacts of the Presence Era: Using Information Visualization to Create an Evocative Souvenir. In Proc. of the IEEE Symposium on Information Visualization, pp. 105 – 111, 2004.

http://www.artcom.com