Feb 25th 2015, UW

On Empathy and Data
_crowdsourced mental maps

Alexander Dunkel, UT Dresden,
Landscape Architecture and Environmental Planning

EU Landscape Convention:
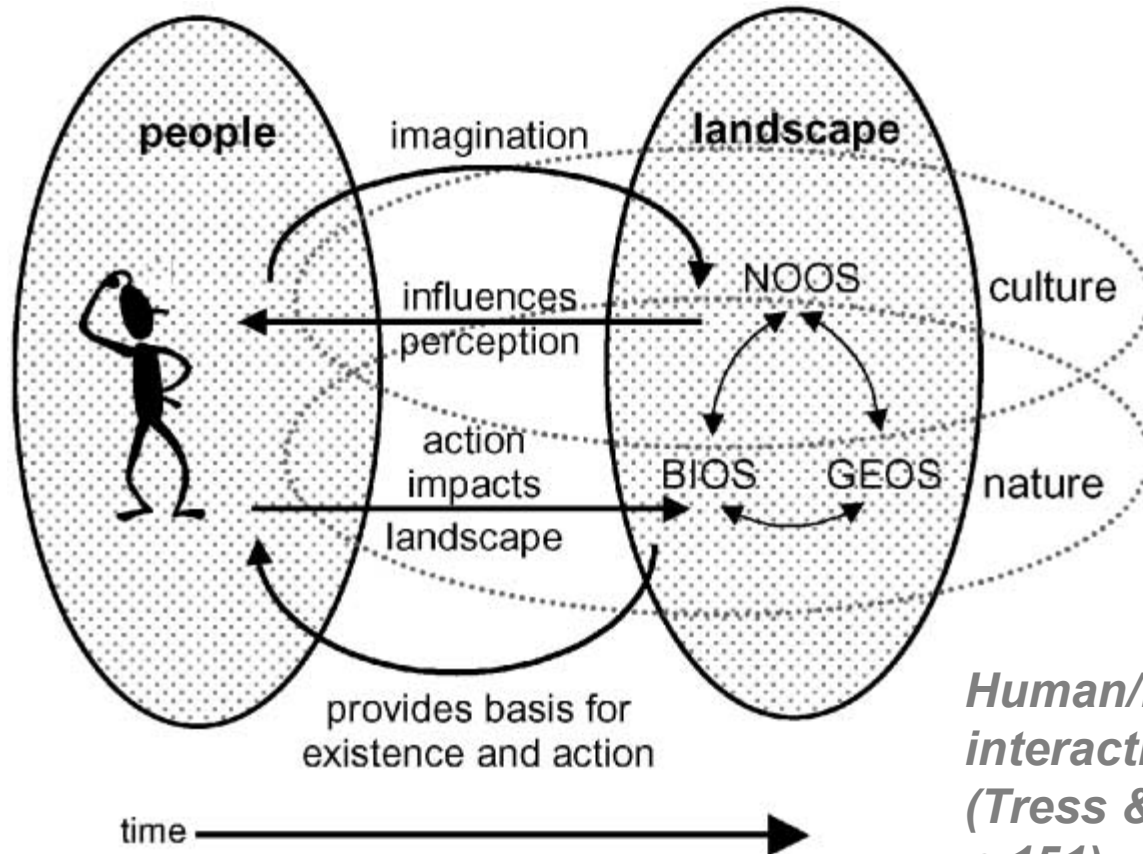landscape **"**as a zone or area **as perceived by local people or visitors"** (ELC art. 1, para. 38).

"*We use all our senses to analyse our surroundings, **particularly sight, which fulfils 87 per cent** of our sensory perception*." (Bell, 2012, p.16; p.40)

The challenge:

Seeing and cognitive processing of what was seen can not be separated

Human/landscape interaction model (Tress & Tress, 2001; p.151)

„… the image of a given reality may vary significantly between different observers.“
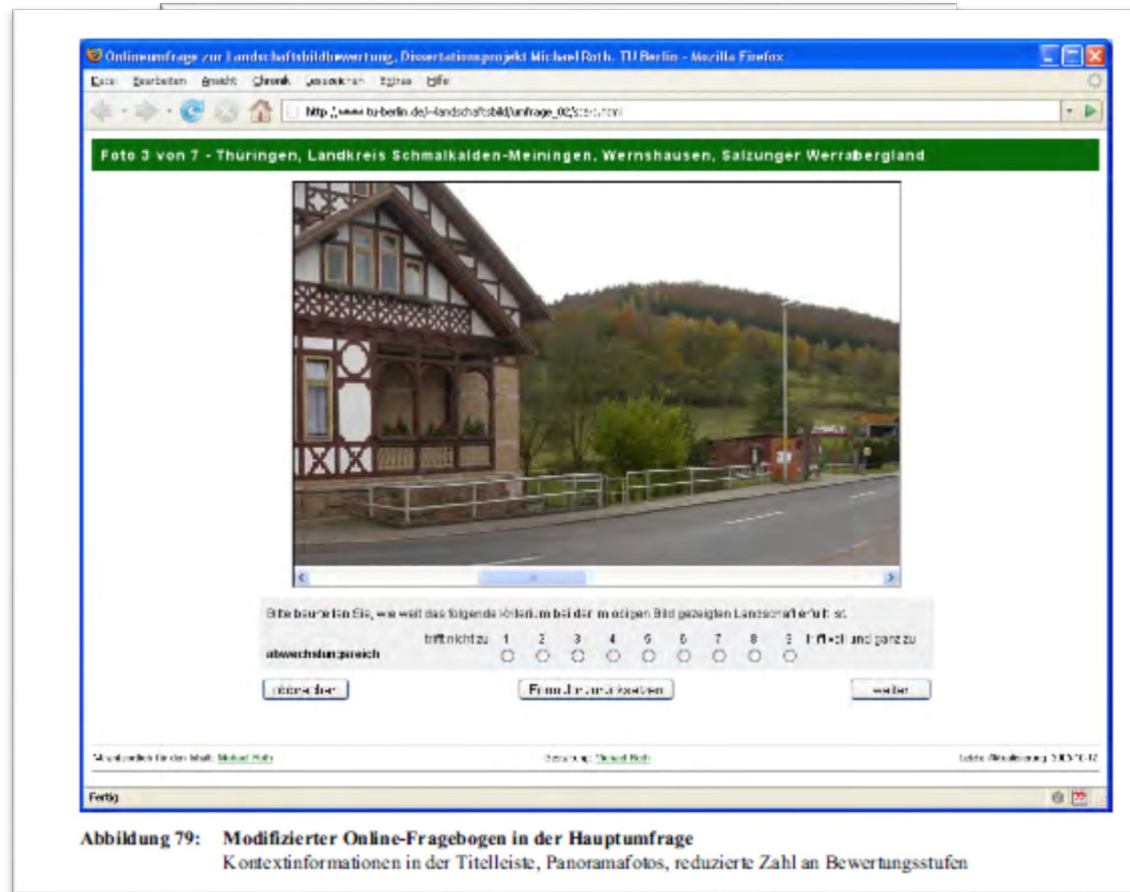
„Each individual creates and bears his own image,
but there seems to be substantial agreement among members of the same group.“

→ „Group Images“ →„the *Public Image*“

= „… common mental pictures carried by large numbers of a city's inhabitants.“

1960: Urban Planner Kevin Lynch (The Image of The City)

theory and practice

Abbildung 79: Modifizierter Online-Fragebogen in der Hauptumfrage
Kontextinformationen in der Titelleiste, Panoramafotos, reduzierte Zahl an Bewertungsstufen

Ratings acquired from (online) photographs (Roth, 2012)

Ratings acquired from photographs (Shafer & Richards, 1974)

Visualization of georeferenced Flickr (red) and Twitter (blue) data for Europe.

Eric Fischer, 2011.
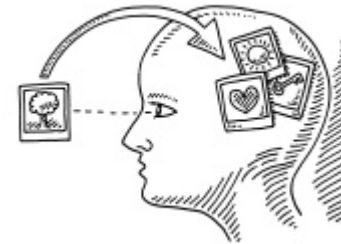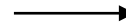
Taking photos and sharing them online:

**A sequence of cognitive abstraction
and filtering processes**
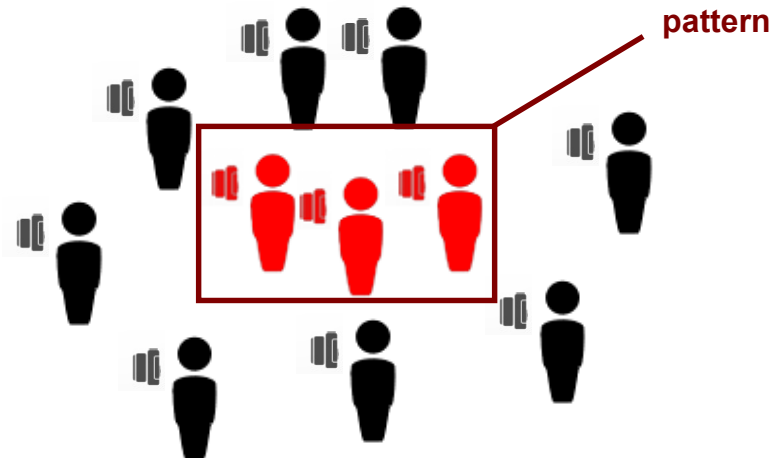
**1: Select interesting
subjects
[Visual interestingness]**

**2: Sharing some
photos online
[Relevance]**

**3: Tag and describe some
good ones; tag only what
is remembered/important
[Memory/Generalization]**

across groups or subgroups of people

pattern

Flickr photo data:

Time (of photo taking/Upload time) ➔ **Temporal patterns**

Location (Geotag) ➔ **Spatial patterns**

Attributes (Tags) ➔ **Attribute patterns**

User information (origin etc.) ➔ **User Group patterns**
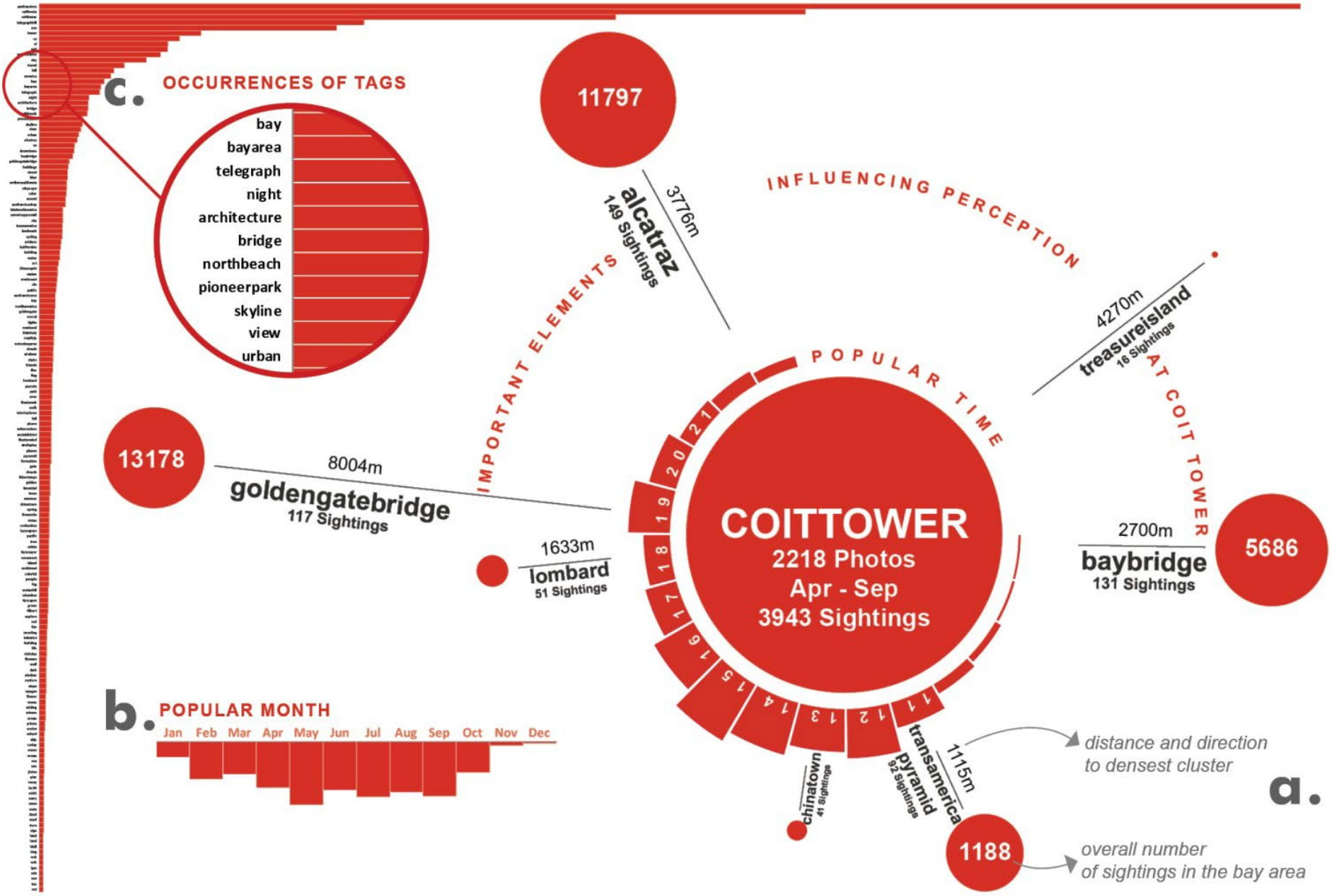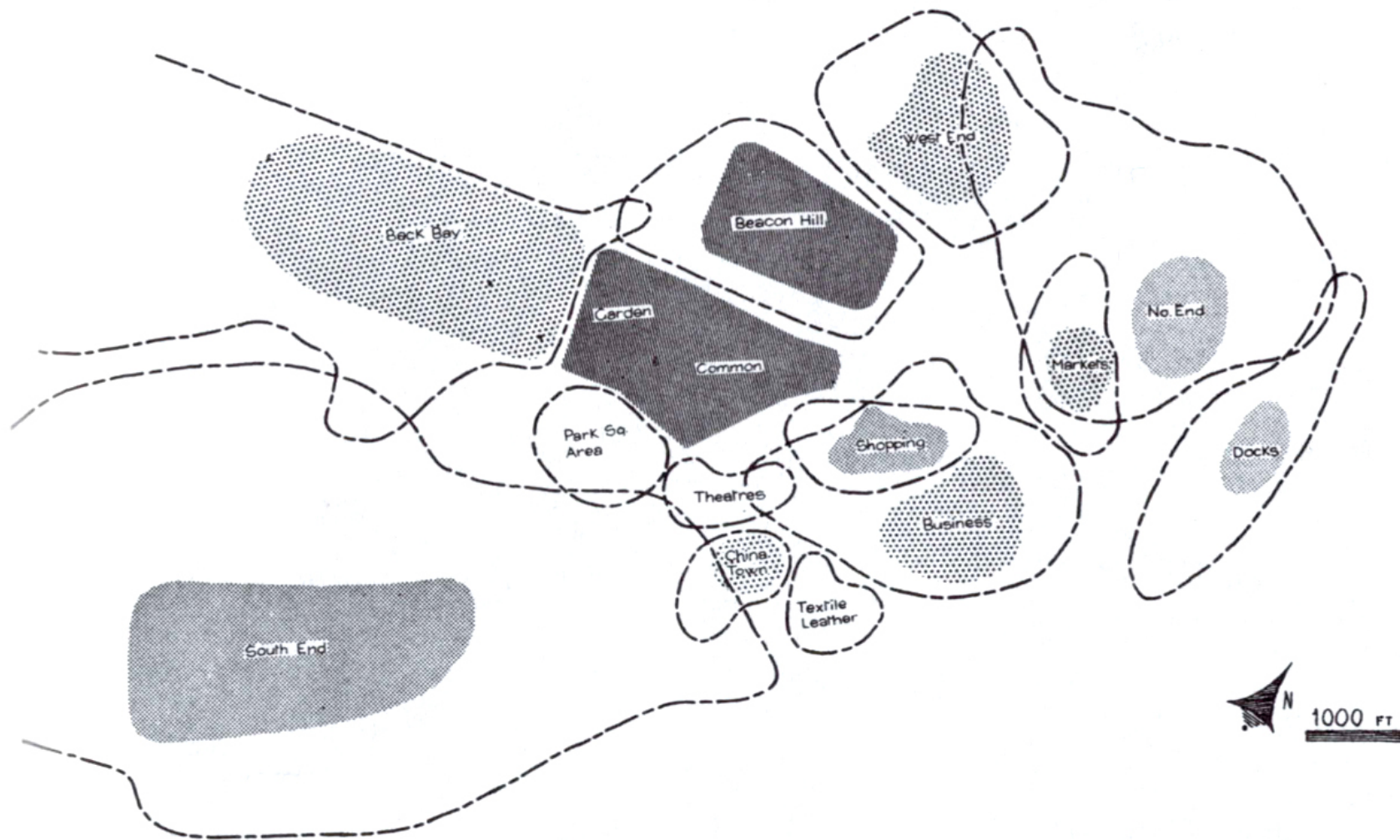
Views (Interestingness for others)

linked

c. OCCURRENCES OF TAGS

- bay
- bayarea
- telegraph
- night
- architecture
- bridge
- northbeach
- pioneerpark
- skyline
- view
- urban

11797

alcatraz
149 Sightings
3776m

INFLUENCING PERCEPTION

treasureisland
16 Sightings
4270m

AT COIT TOWER

POPULAR TIME

13178

goldengatebridge
117 Sightings
8004m

1633m
lombard
51 Sightings

21 20 19 18 17 16 15 14 13 12 11

COITTOWER
2218 Photos
Apr - Sep
3943 Sightings

IMPORTANT ELEMENTS

2700m
baybridge
131 Sightings

5686

b. POPULAR MONTH

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

chinatown
41 Sightings

transamerica
pyramid
92 Sightings

1115m

distance and direction to densest cluster

a.

1188

overall number of sightings in the bay area

FIG. 25. *Variable boundaries of Boston districts*

Back Bay

West End

Beacon Hill

No. End

Garden

Markets

Common

Park Sq. Area

Shopping

Docks

Theatres

Business

China Town

Textile Leather

South End

N

1000 FT

Select Flickr place type

Update map

Mark 2 points to make a box then click 'Update Map'
Searching Shapefiles...# found: 8
... finished drawing polygon: 28288770
2393490

Thank You.