



Assessing Environmental Perceptions

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ACTIVE LIVING RESEARCH ANNUAL CONFERENCE

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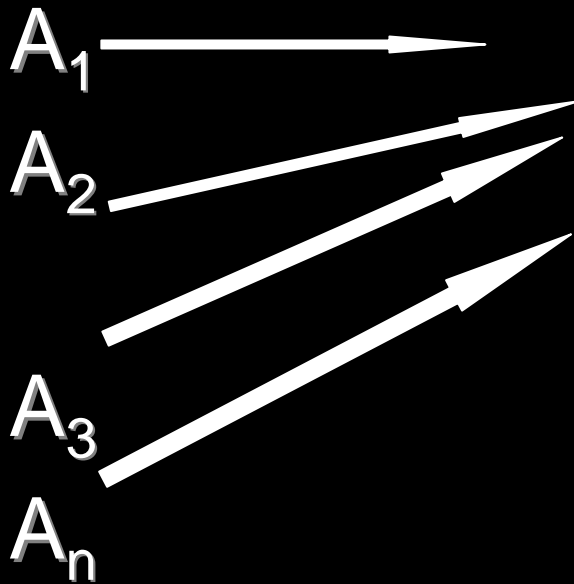
1. Relevance of environmental perception research

- Active Living
 - Physical activity
 - Exercise
 - Physical fitness
 - Health benefits

Model

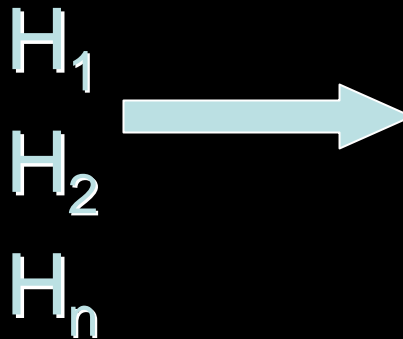
Place
attributes

A_1
 A_2
 A_3
 A_n



Human
attributes

H_1
 H_2
 H_n



Physical
activities



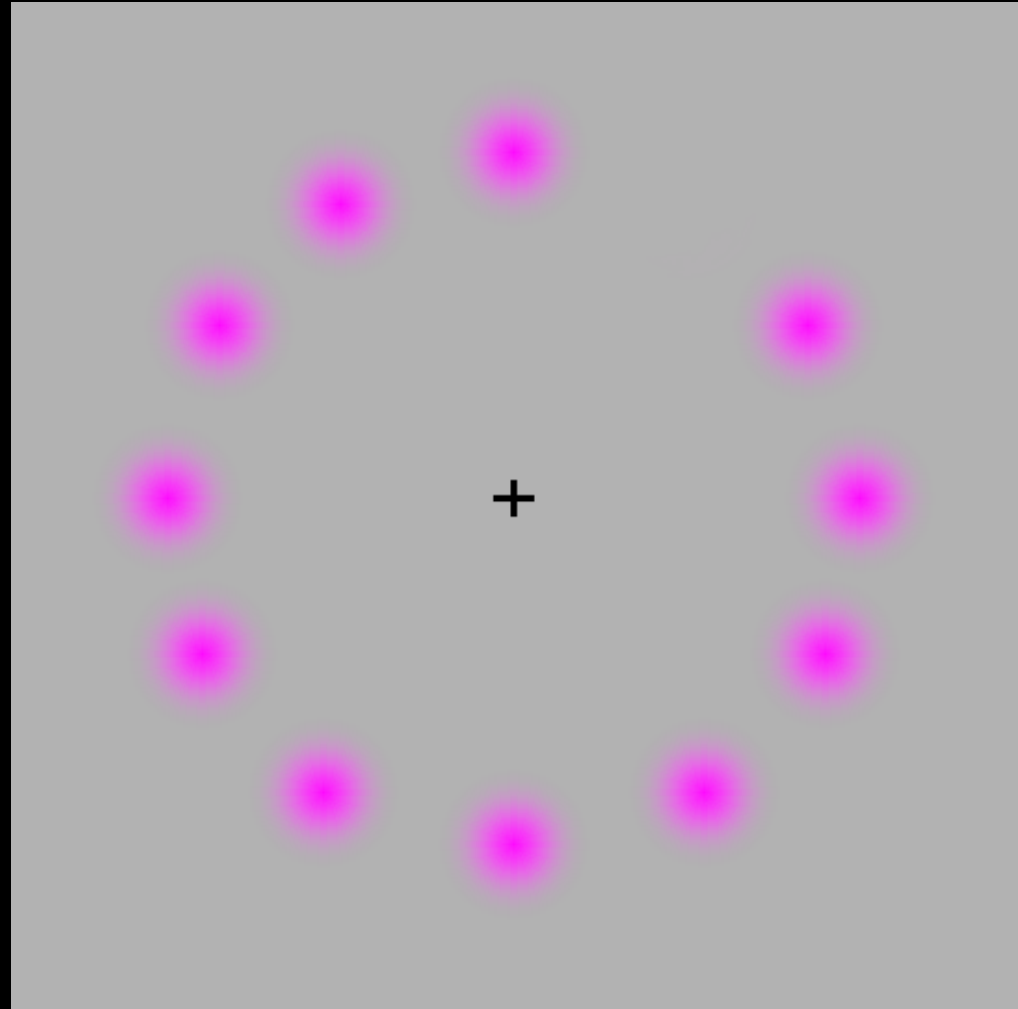
Health
Outcomes

II. Environmental perception



We are visual animals

**Follow the dot. What color?
Stare at the +. What color is
the moving dot?
Keep staring at +. What
happens to the moving dot?
dot.**



Environmental perception



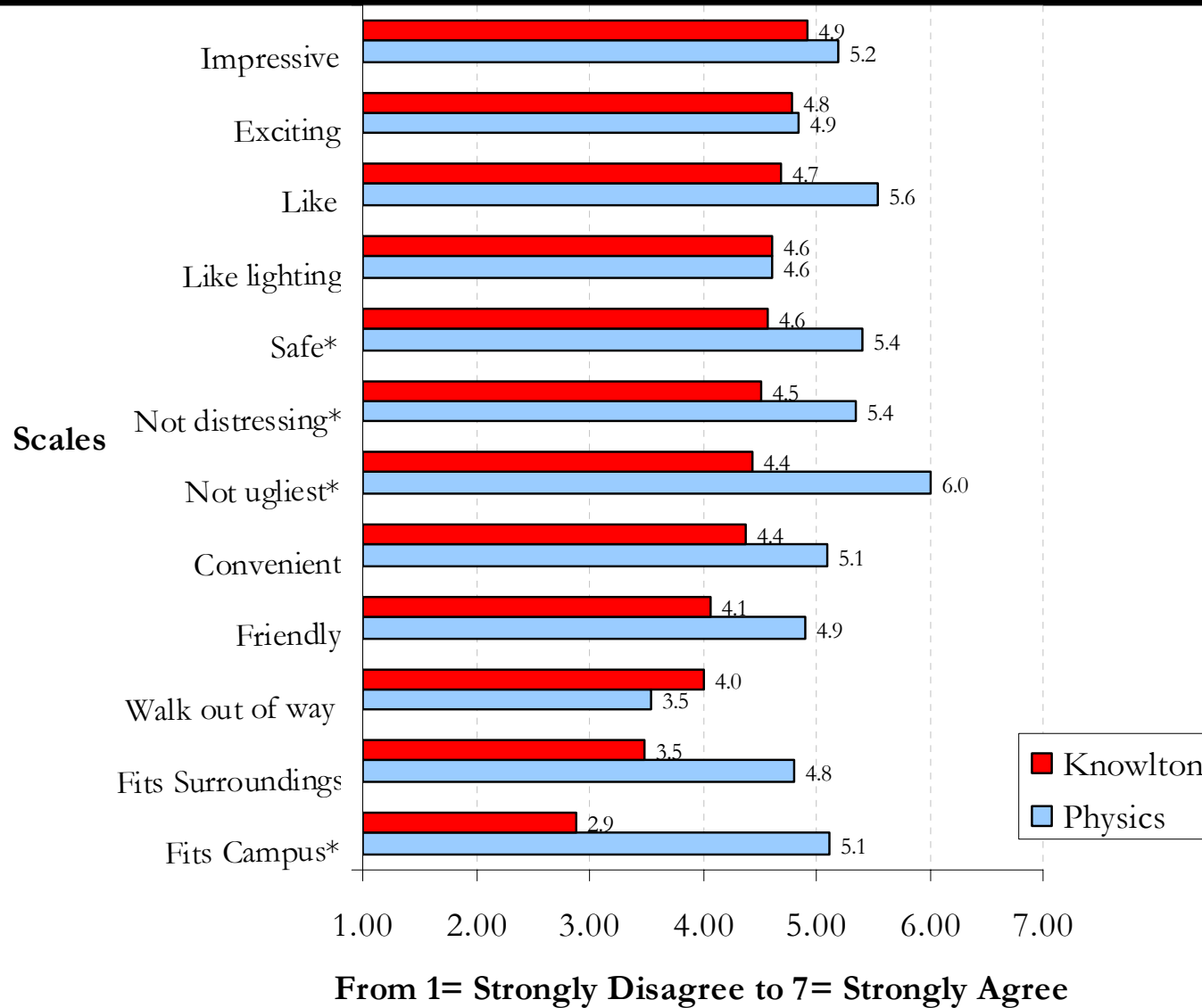
Three places with same denotative meaning. They serve food. But . . .



Unmeasurable?



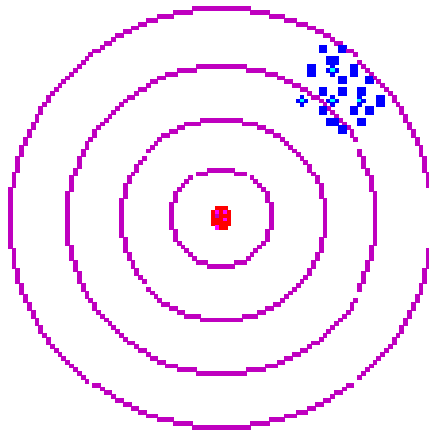




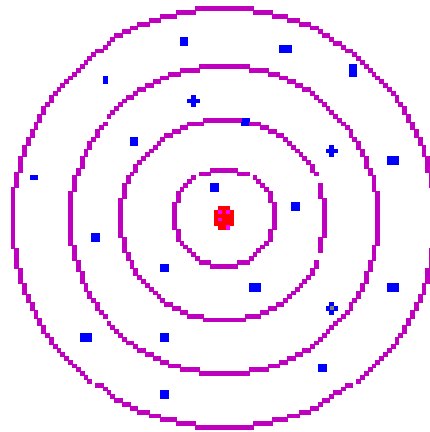
The Architecture vs. Physics (Walk out of my way: ARCH 3.5, PHYS. 4.0; composite: ARCH= 4.23, PHYS=5.28).

2. How to measure environmental perception

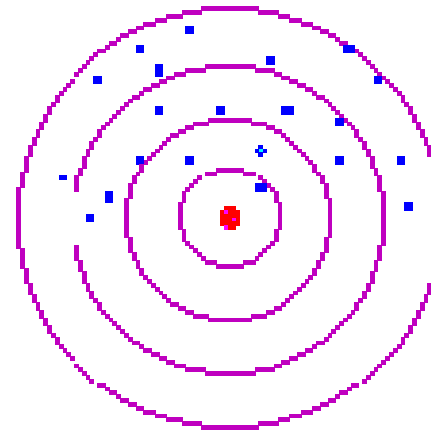
- **Methodological choices**
 - A. The measurement of environmental variables
 - B. The selection and presentation of environmental stimuli
 - C. The selection of response measures (scaling issues)
 - D. The selection of respondents



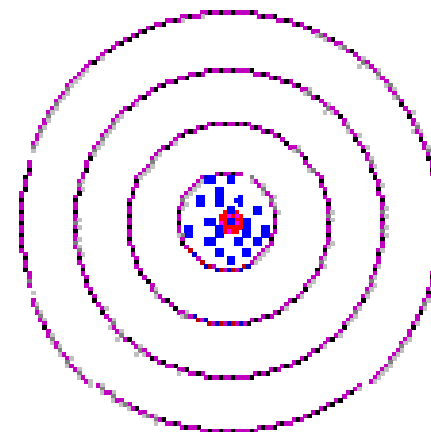
**Reliable
Not Valid**



**Valid
Not Reliable**



**Neither Reliable
Nor Valid**



**Both Reliable
And Valid**

A. Measurement of the Environmental Variables

- **Physical measures**

- +Reliable (after training)

- +Accurate

- May not account for evaluation or behavior

- Don't know link between perception and physical measure

- May miss perception and integration of features into perception that affects evaluation and action

- **Subjective**

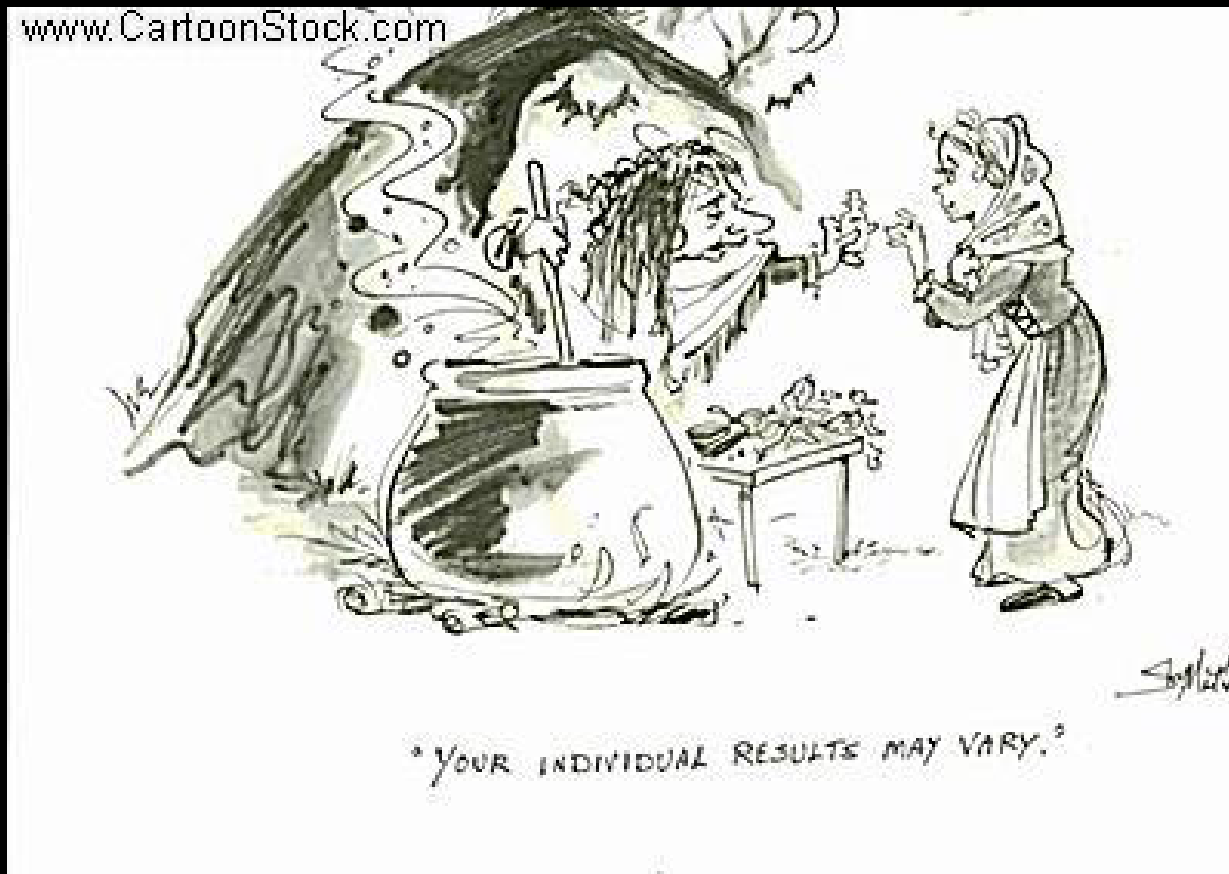
- Reliable

- Accurate

- + Can capture the relevant perception of features

If subjective, who

- Resident
- Independent staff judges



B. Selection and Presentation of Environmental Stimuli

- Relevant environment
 - Street—view from door?
 - Surrounding blocks?
 - ¼ mile walk?
 - Cognitive boundaries—edges
 - Destinations?
- Mode of Presentation
 - On-site
 - Drawings, color slides/photos
 - Video/desk-top virtual reality
 - Recall
- Sampling the environment.
 - Systematic manipulation
 - Select real environments with desired attributes
 - Get broad variety of scenes

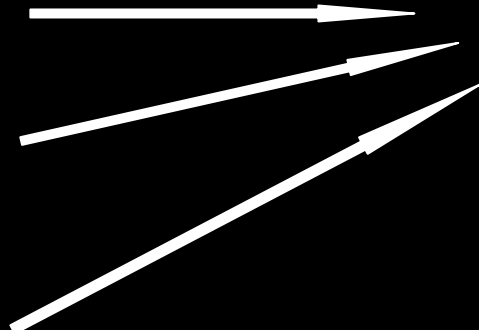
C. Response Measures

Two kinds of variables: Formal & Symbolic

Place

Attributes

A₁
A₂
A₃
A_n



Observer

(personality, affective state, intentions, & Cultural experiences)

Perception

Cognition

Affect

**Affective
appraisals &
meanings**

Spatial behavior

What to
measure?

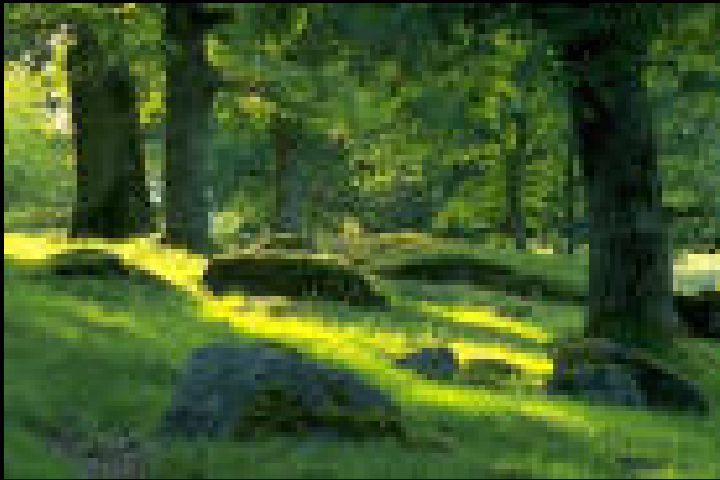
Jack L. Nasar

THE EVALUATIVE
IMAGE
OF THE CITY

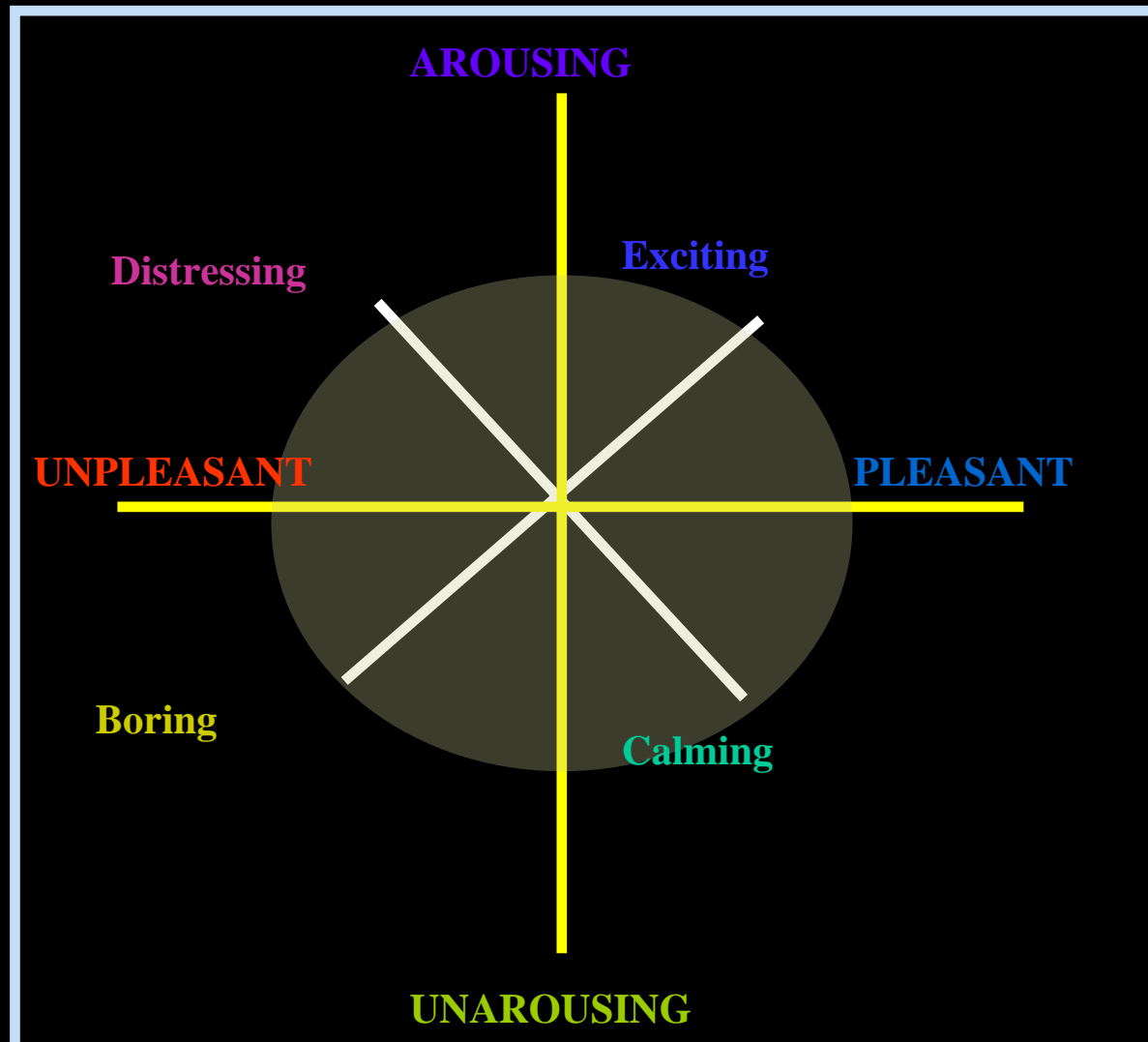


Naturalness (actual and perceived)





Affective Appraisals and Emotional Reactions



May not need to be pleasant to draw you to it. Other attributes to consider



Selecting items

- Pleasantness:
 - appealing-unappealing, attractive-unattractive, beautiful-ugly, pleasant-unpleasant, and inviting-repelling
- Excitement
 - unexciting-exciting, lively-dull, unstimulating-stimulating, interesting-uninteresting
- Relaxation
 - uncomfortable-comfortable, upsetting-calming, refreshing-wearying, restful-disturbing, threatening-safe, distracting-soothing

Response format, scaling

Open-ended, fixed

Checklists

Ranking methods

Semantic differential scales

Likert, Thurstone, or Guttman scales

Choices on the scale (5, 7, rank order etc.)

Define the scale and points along it, perhaps with visual images.

Pre-test for inter-observer reliability, but generally is high



Distance perception

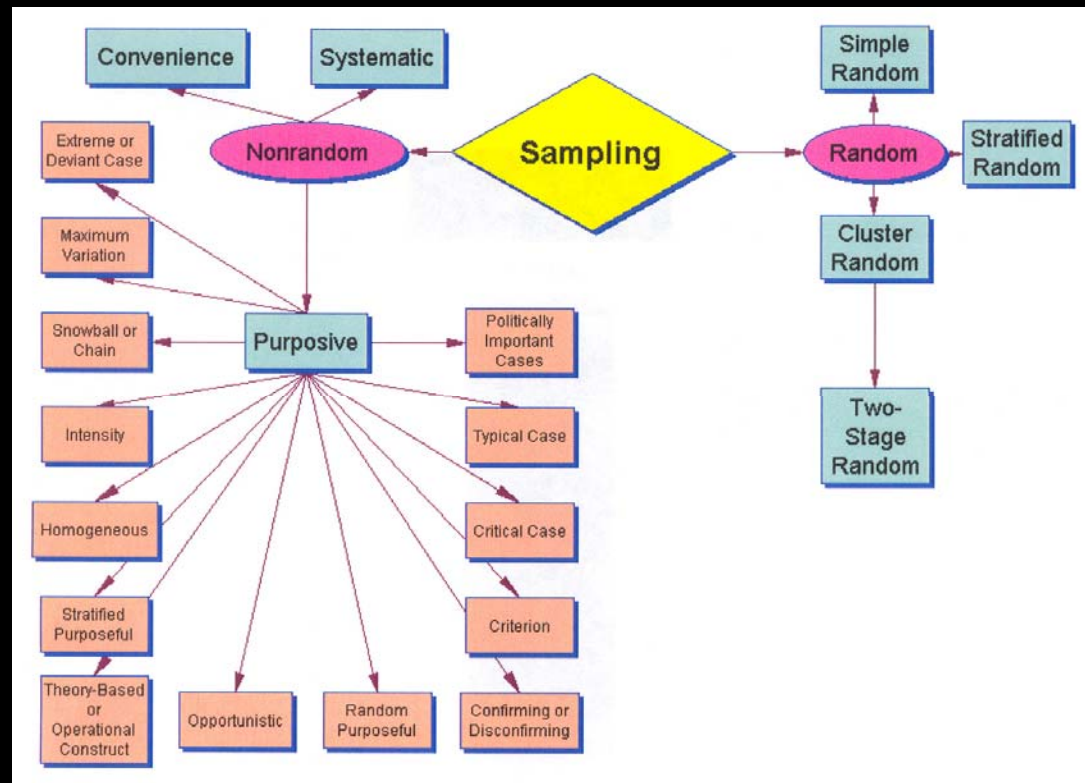


- Segmentation
- Visibility of destination
- Differentiation
- Wayfinding cues



D. Selection of Respondents

- Relevant population
 - residents, passersby, and occasional visitors
- Random or non-random



What next

- The relevance of environmental perception research
- How to measure environmental perception
- -What to measure in the environment and human appraisals

- Study linkages
- On-site technologies
- Continuous rating
- Dials and digital voters
- On line surveys



Questions?

