



Faculty of Design

2014

## Self-organizing a strange attractor

Nelson, Harold

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RSD 3

# what is systemic design?

a shared inquiry

Harold G. Nelson  
October / 17 / 2014

There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "[What the hell is water?](#)"

David Foster Wallace

No one really understands water. It's embarrassing to admit it, but the stuff that covers two-thirds of our planet is still [a mystery](#).

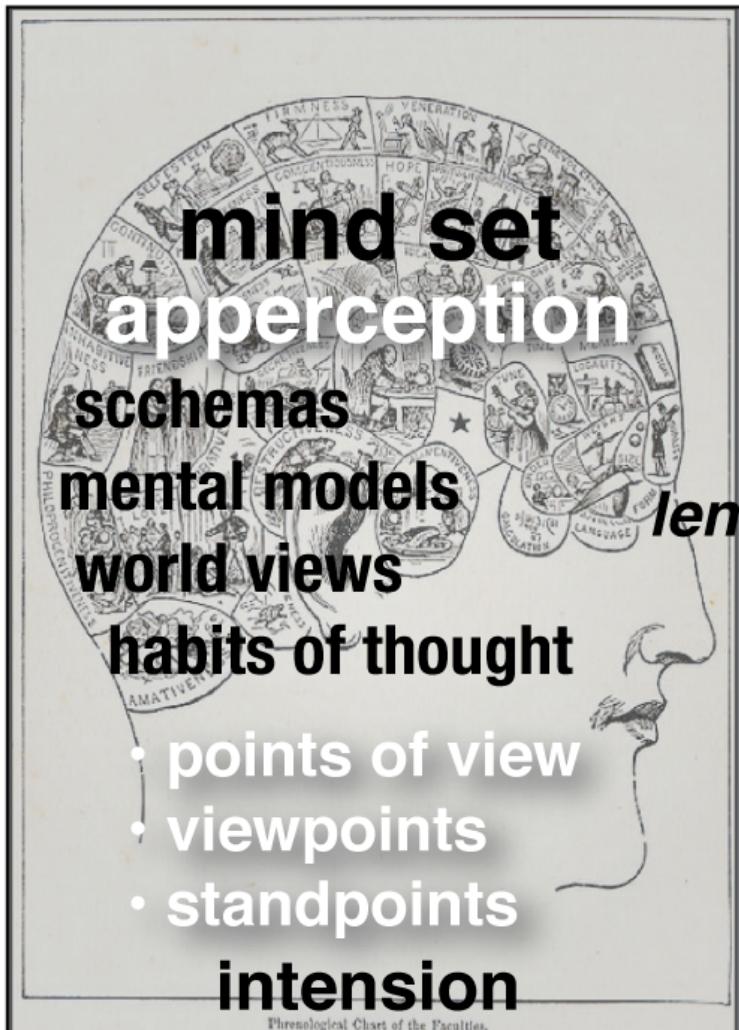
Philip Ball

# so what the hell is systemic design?

a shared inquiry

- rising tide of interest in ‘design’, ‘systems’
- new designers
- new forms of design
- anthropocene age

what is inquiry?



***lenses: multiple perspectives***

overview effect



wikimedia commons

Overview effect video

<https://www.youtube.com/watch?v=CHMIfOecrlo>

trailer

<http://vimeo.com/55073825>

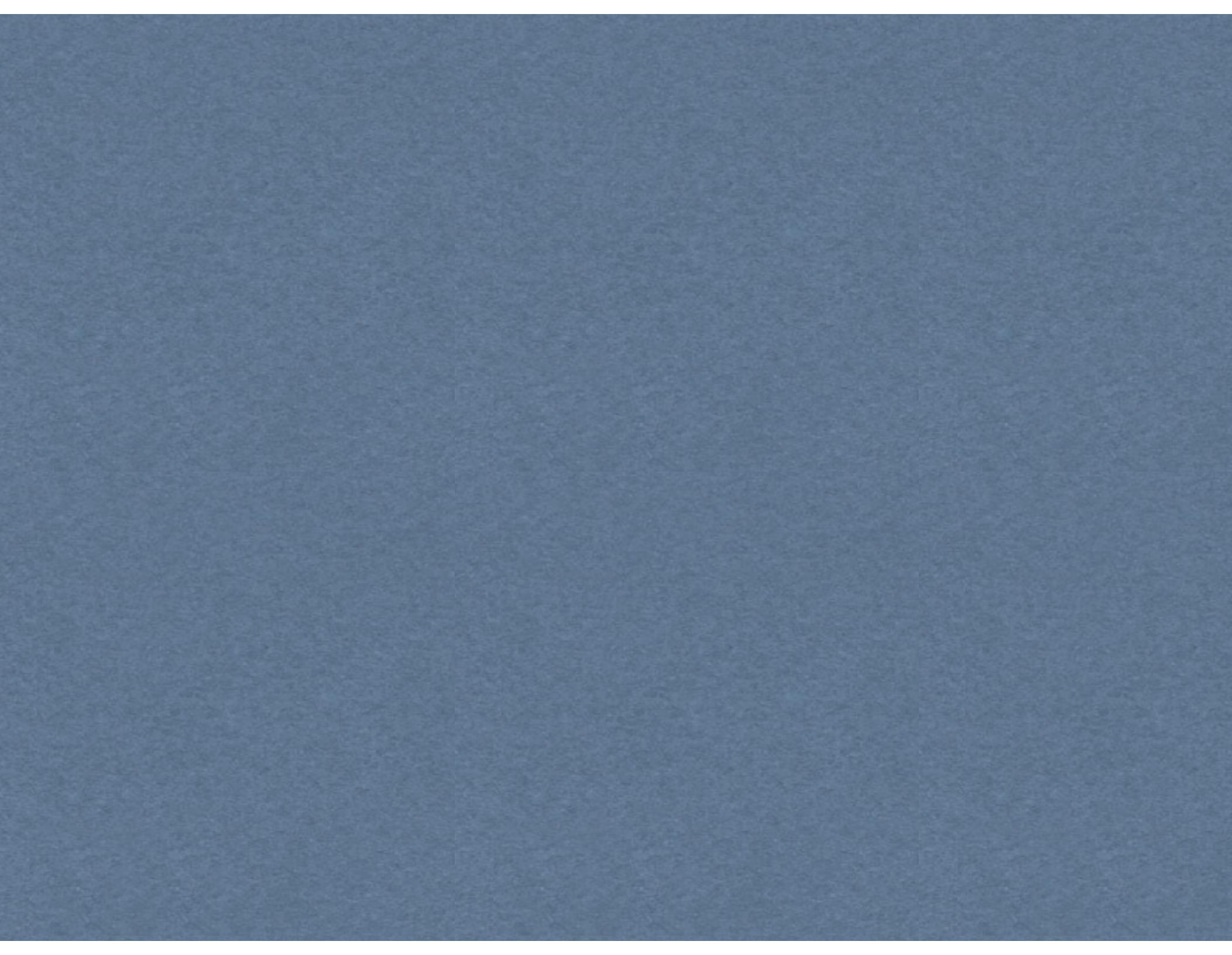
trailer planetary

<http://vimeo.com/60234866>

like water,  
design is  
ubiquitous yet  
a mystery

enigma

a person or thing that is mysterious, puzzling, or difficult to understand

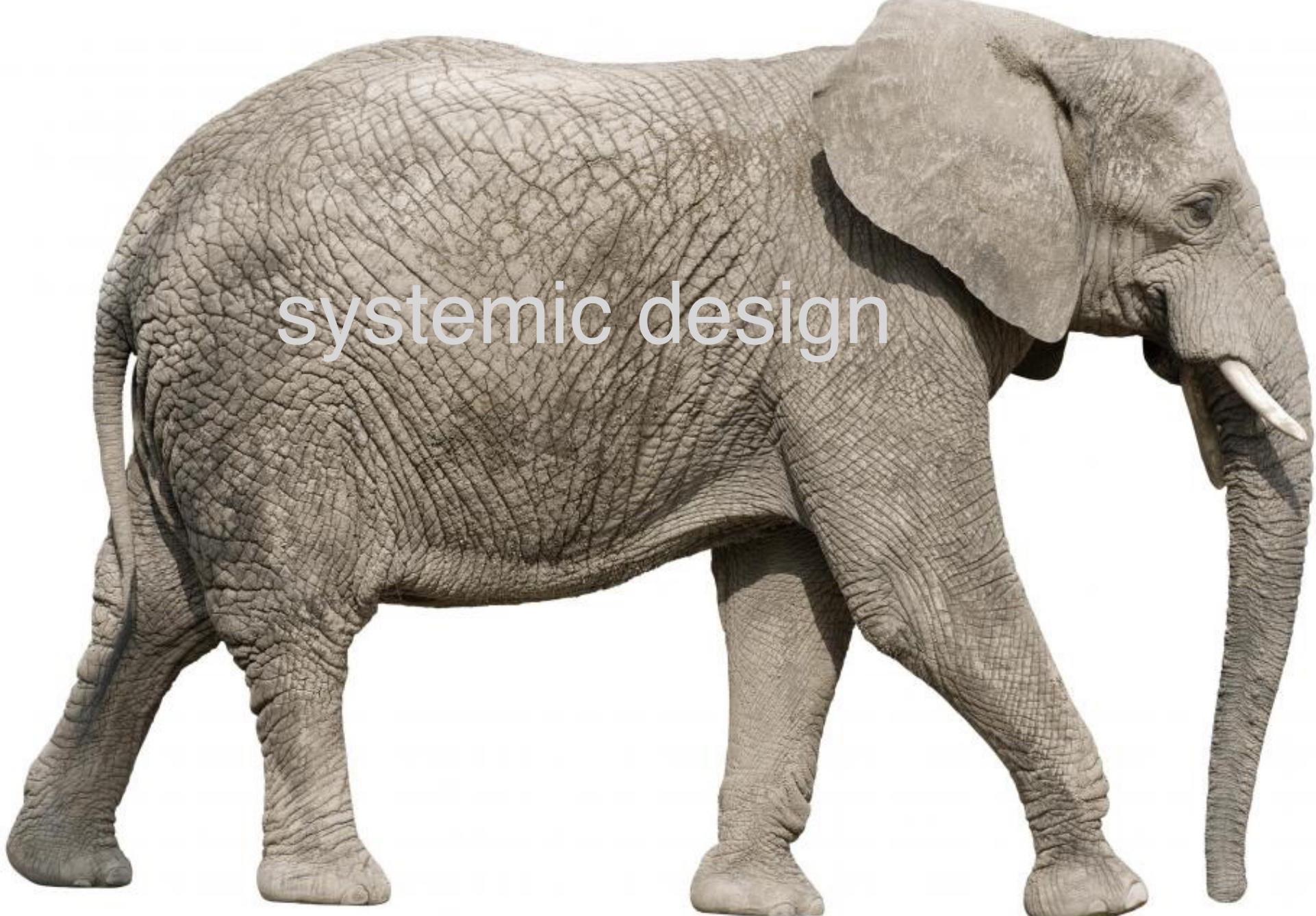


衆瞽

摸象之圖



"Blind monks examining an elephant", an [ukiyo-e](#) print by Hanabusa Itchō (1652–1724)



systemic design

how can we see the whole?

wiseGEEK

# designs of inquiry

means for describing, explaining, predicting

1. scientific inquiry
2. spiritual inquiry
3. metaphysical inquiry
4. design inquiry
5. systemic design inquiry
6. individual inquiry
7. collective inquiry
8. collaborative inquiry
9. shared inquiry
- 
- 
-

*the usual first step – end the inquiry*

## define ‘it’

- one fit sizes all
- one size fits all

define |di'fīn|

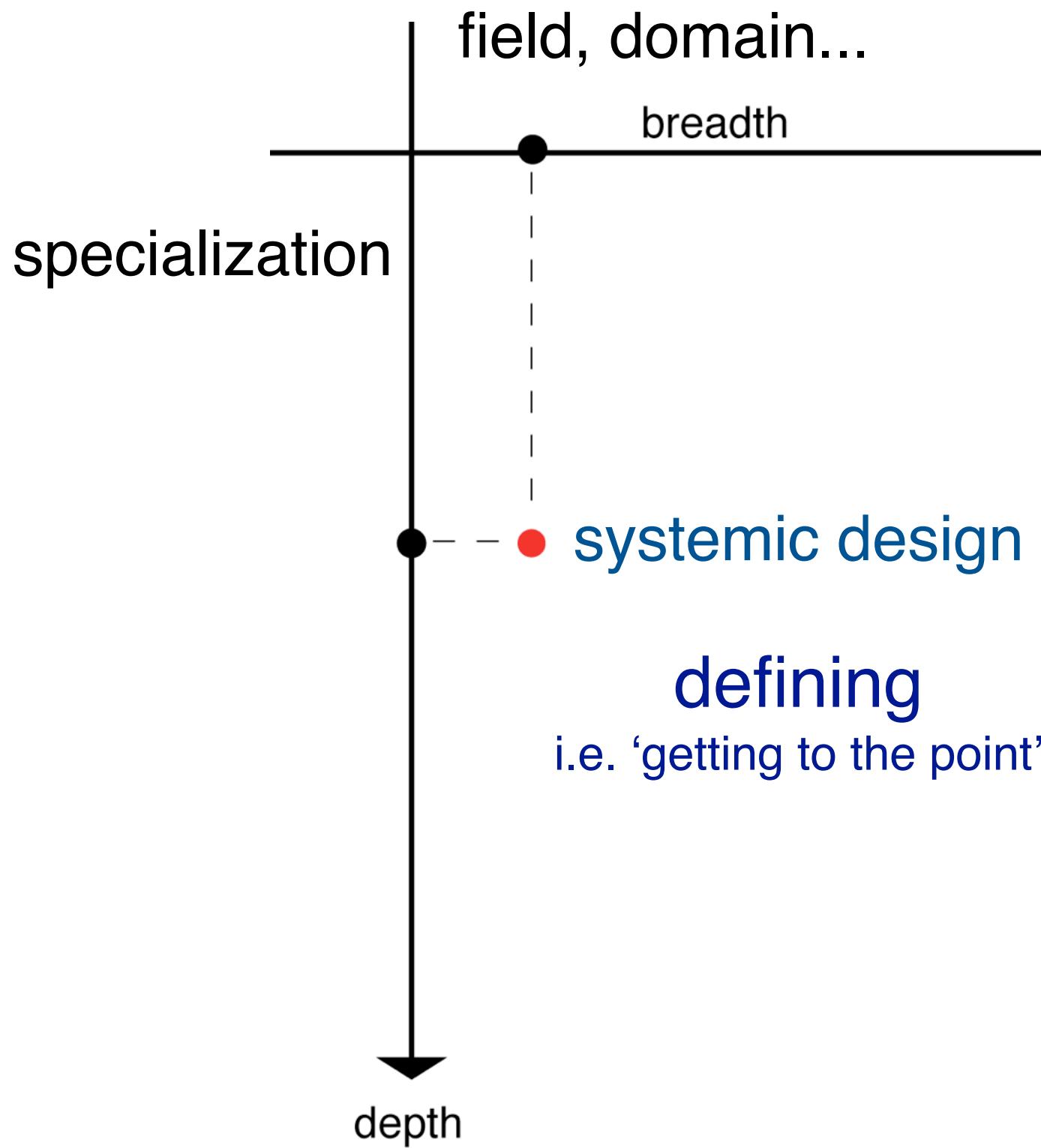
verb [ with obj. ]

1 state or describe exactly the nature, scope, or meaning of  
give the meaning of (a word or phrase), esp. in a dictionary.

DERIVATIVES

definer noun

ORIGIN late Middle English (also in the sense *'bring to an end'*): from Old French *definer*, from a variant of Latin *definire*, from *de-* (expressing completion) + *finire* 'finish' (from *finis* 'end').



# scientific inquiry

the norm

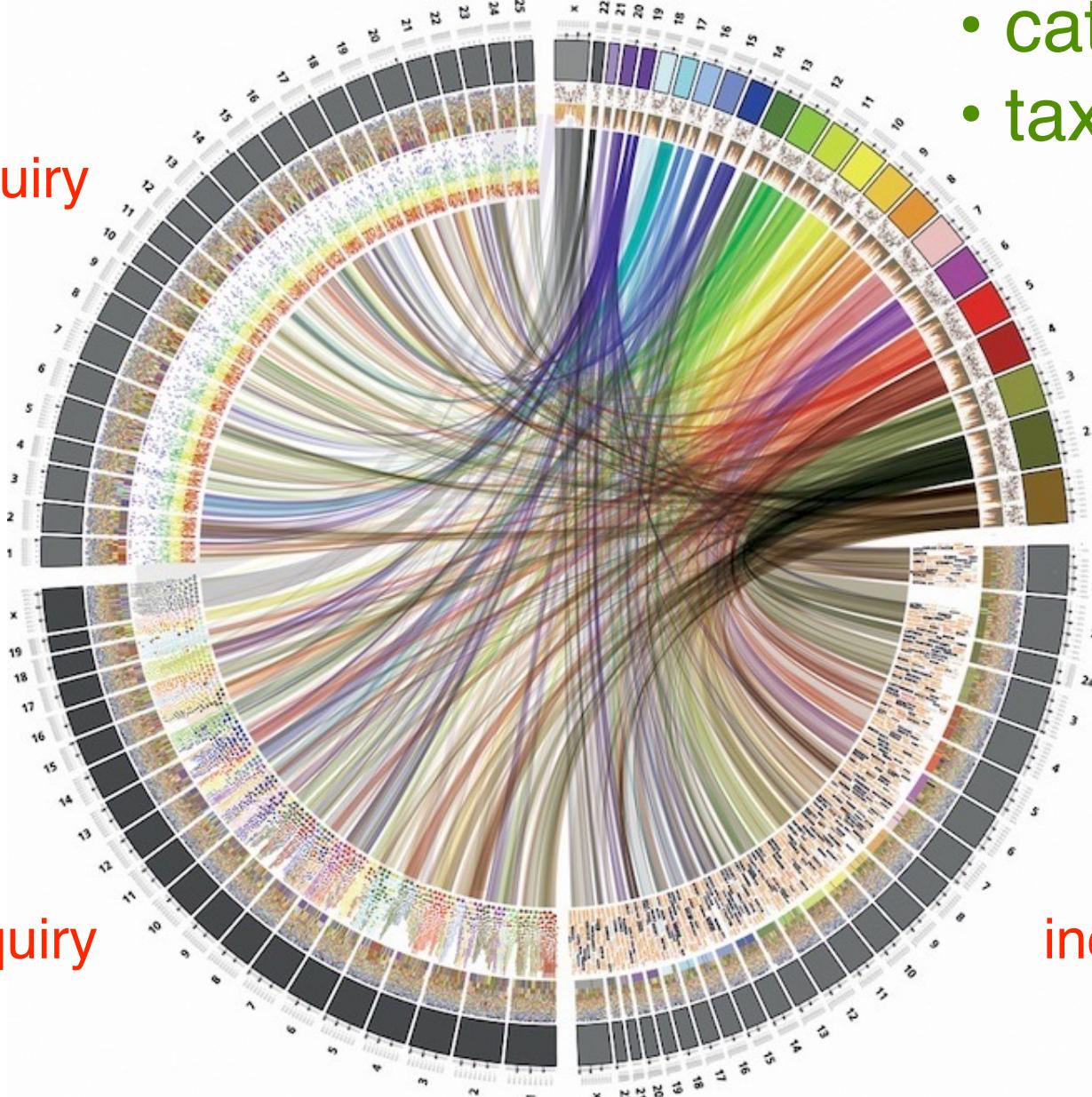
- collecting evidence
- collecting data
- categorizing
- theorizing
- 
- 
-

- categories
- taxonomies

deductive inquiry

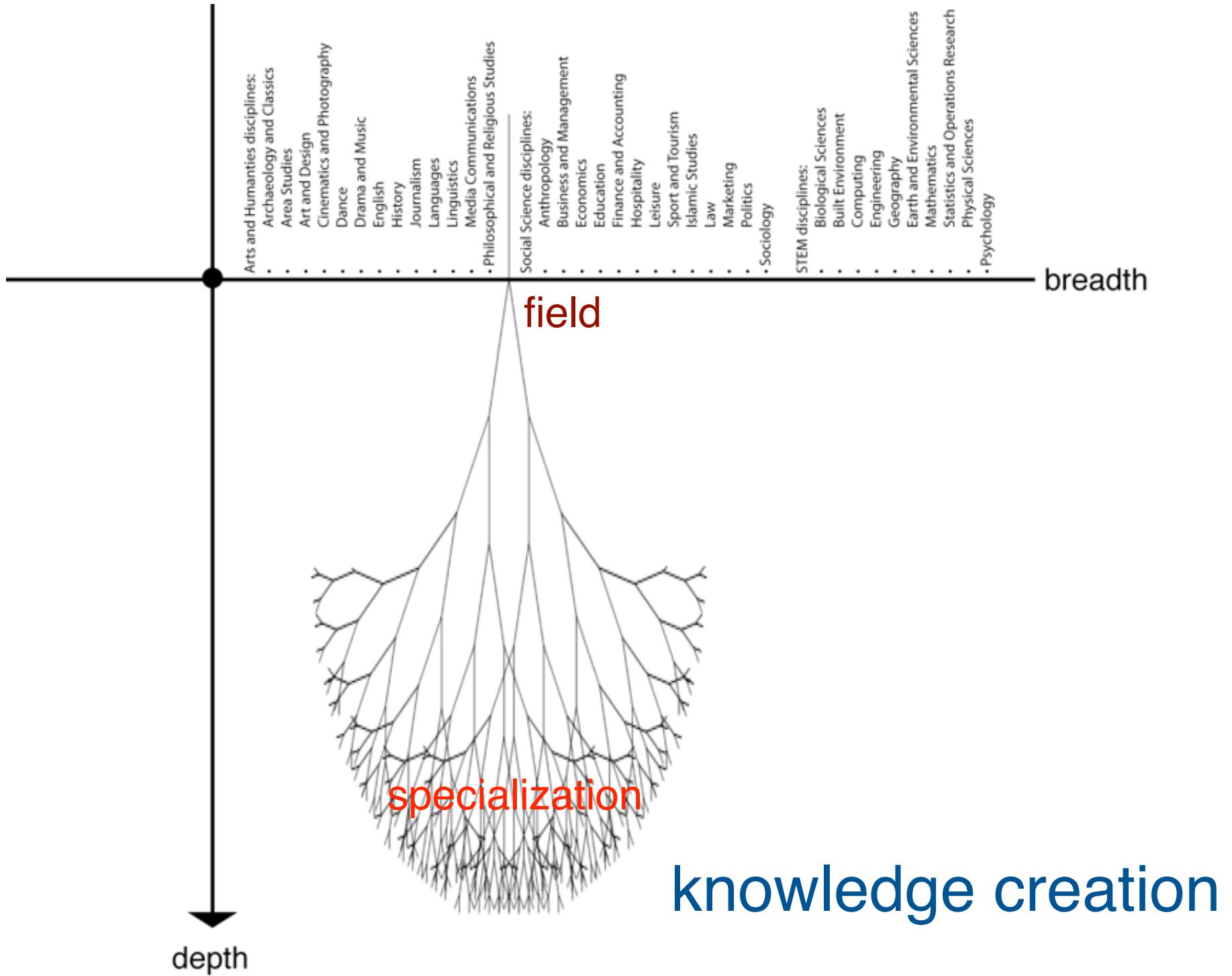
analytic inquiry

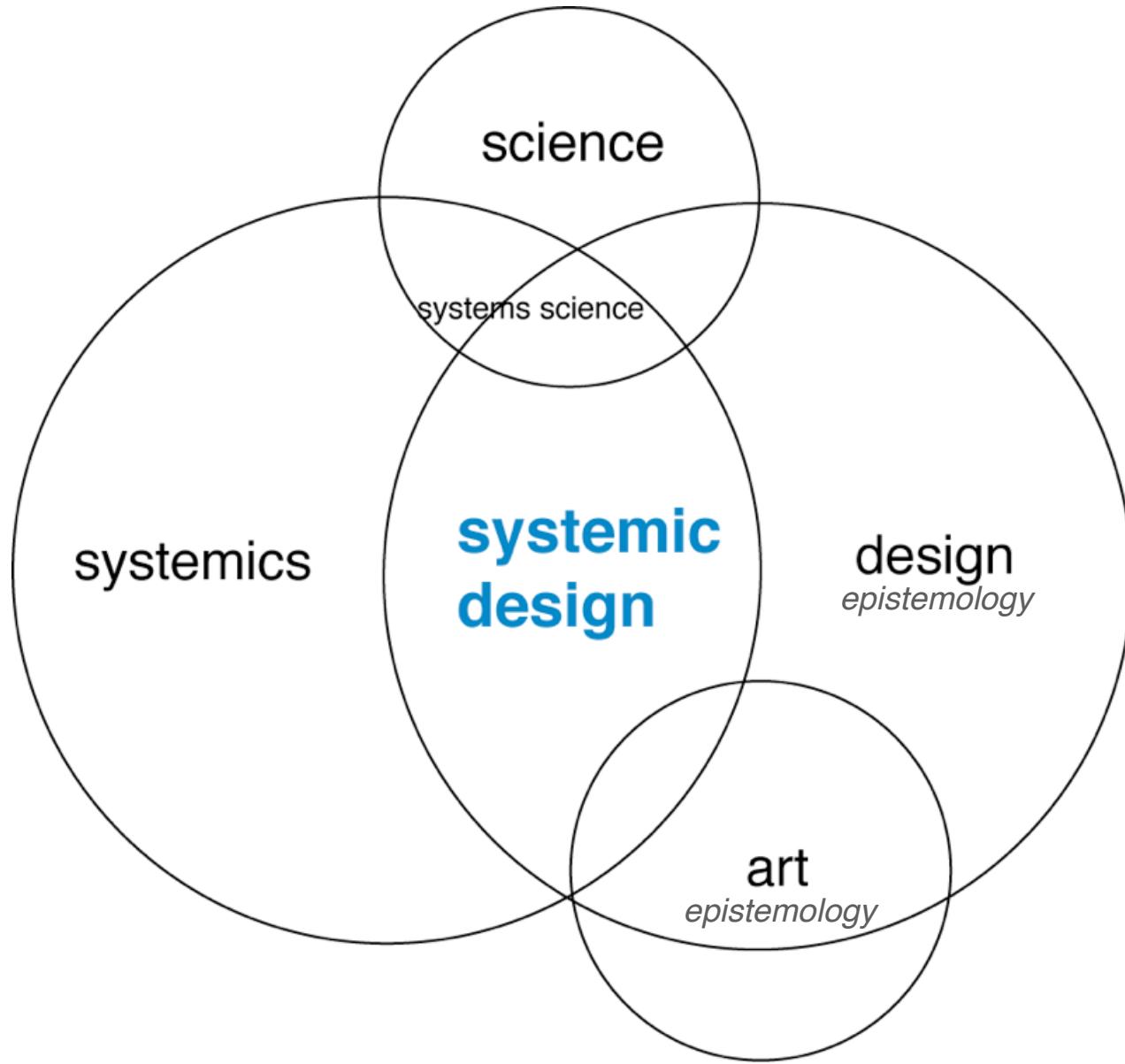
inquiry



<http://www.circos.ca/images/published/>

induction: data to categories

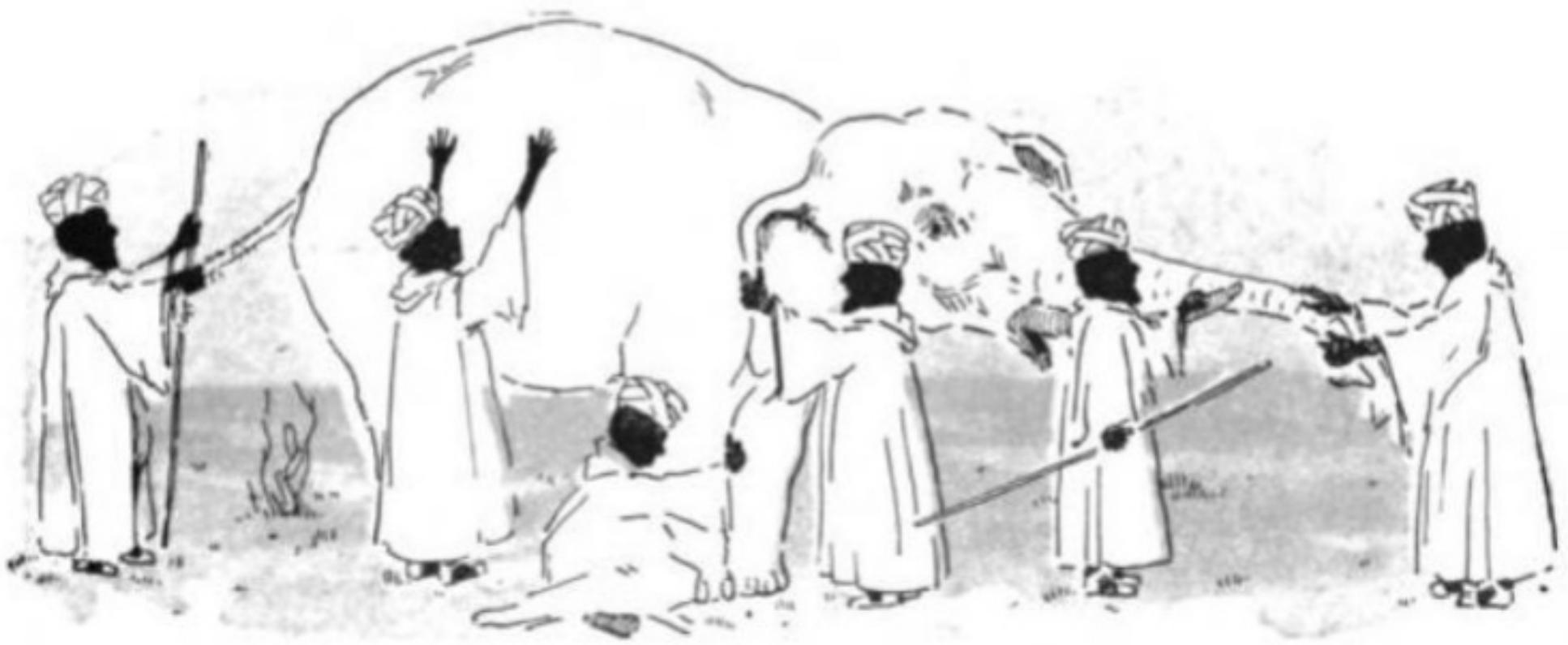




categories of inquiry

*another first step*

**systemic design inquiry**



From Charles Maurice Stebbins & Mary H. Coolidge, *Golden Treasury Readers: Primer*, American Book Co. (New York). p. 89.

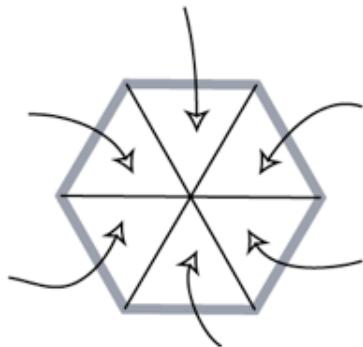
# collaborative inquiry points-of-view

diversification  
breadth

- 
- data
  - information
  - knowledge
  - wisdom
  - measurements
  - relationships
  - connections, links
  - emergence:  
patterns, compositions, transmutations

knowledge integration  
connecting the dots

depth  
specialization



**assembly**

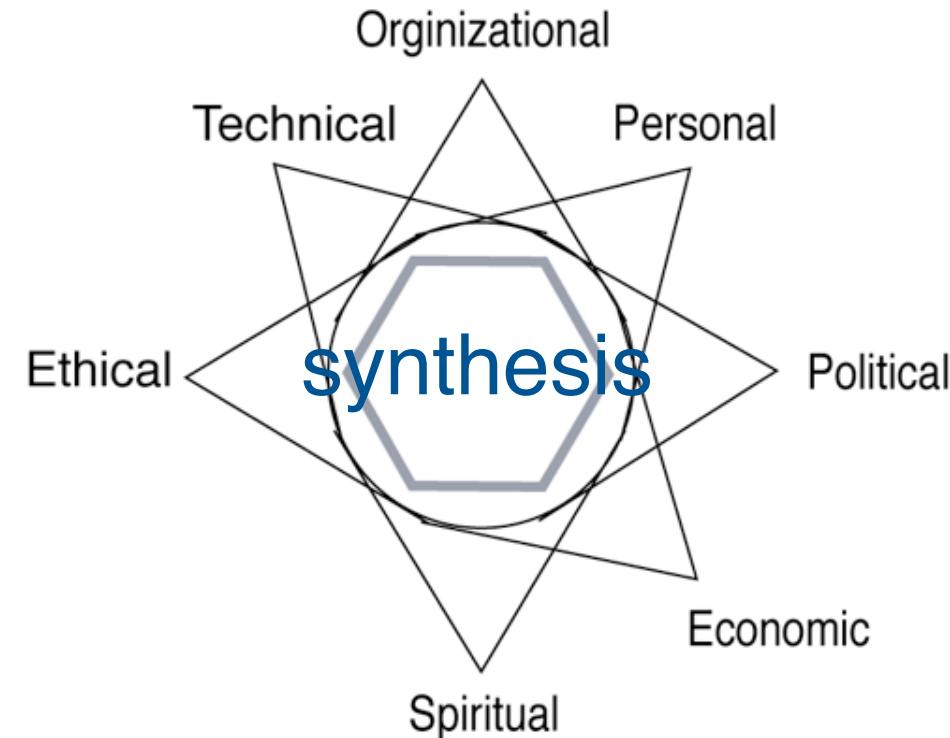
**seeing the divisions**

- disciplinary
- interdisciplinary
- multidisciplinary

challenge:

- relationship of parts
- synthesis of parts

**collaborative inquiry**



**seeing the whole**

- multiple perspectives

challenge:

- integration of perspectives
- recognition of emergence

**shared inquiry**

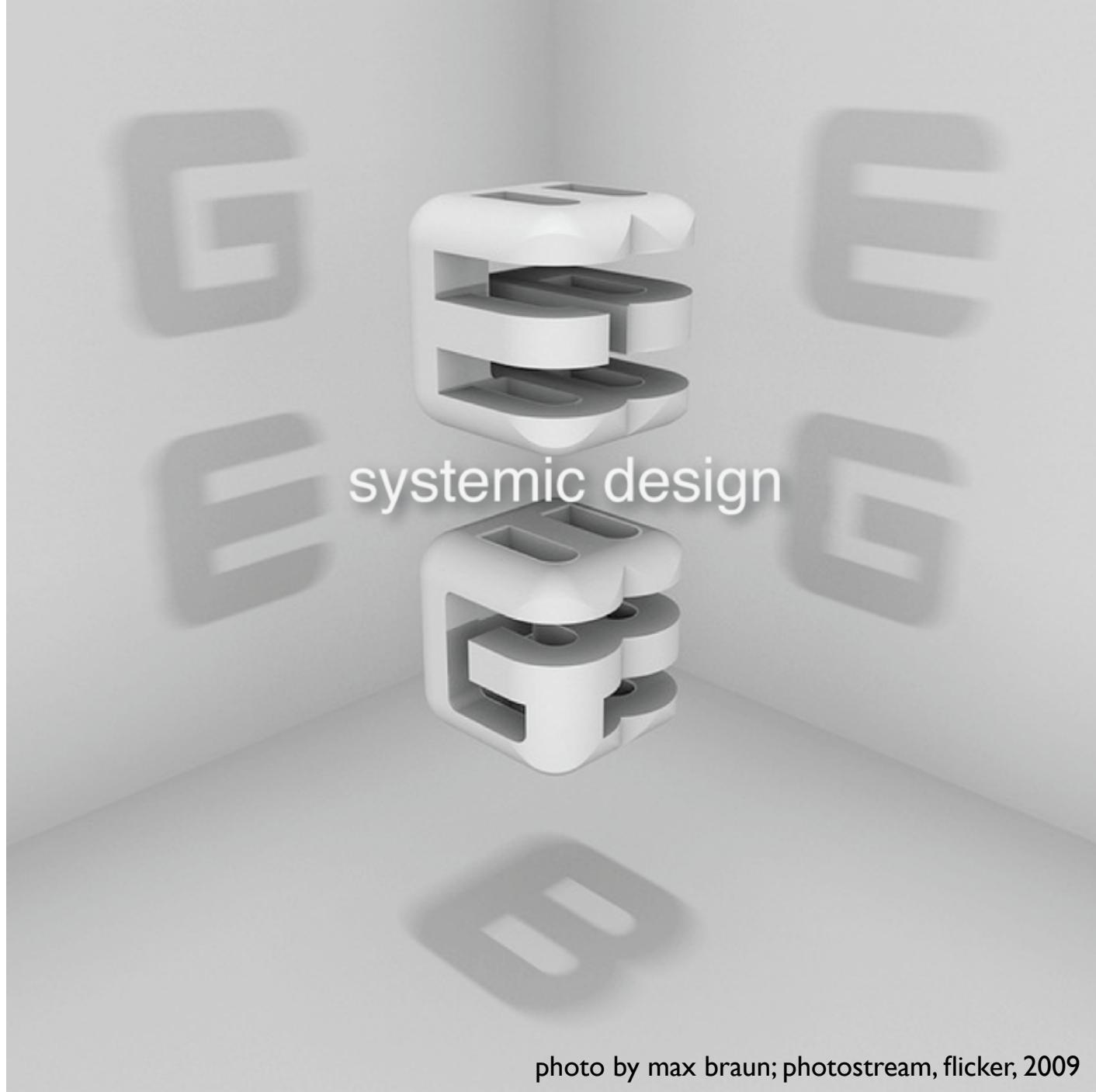


photo by max braun; photostream, flicker, 2009

observing the whole - view points



strange attractor

systemic design



<http://www.hdanimalswallpapers.com/2013/01/wallpaper-of-flock-of-flying-birds.html>

**shared inquiry - self organizing behavior**



CoolScienceGifs.tumblr

protocols give rise to complex  
self organizing behavior

protocols: rules of relationship

- **conversation** turning together in the same place
- **dialogue** letting things be seen through language
- **graphologue** letting things be seen through images

# shared inquiry

what is the symposium’s design of inquiry?  
what is revealed by the symposium’s inquiry?

## invitation to a shared “appreciative inquiry”

“Valuing the symposium’s designs of inquiry—espoused and enacted.”

“Valuing the symposium’s successes at revealing the nature of systemic design.”

- scholarship
- praxis
- scholarship & practice
  - *knowledge*
  - *expertise*
  - *systemic design*

frames-of-reference

- scholarship of discovery > • **inquiry for action**
- scholarship of integration > • **systemics logic**
- scholarship of application > • **service & agency**
- scholarship of teaching > • **capacitation**

Ernest Boyer

**scholarship reconsidered**

H. Nelson

**design scholarship**

**domains of design scholarship**

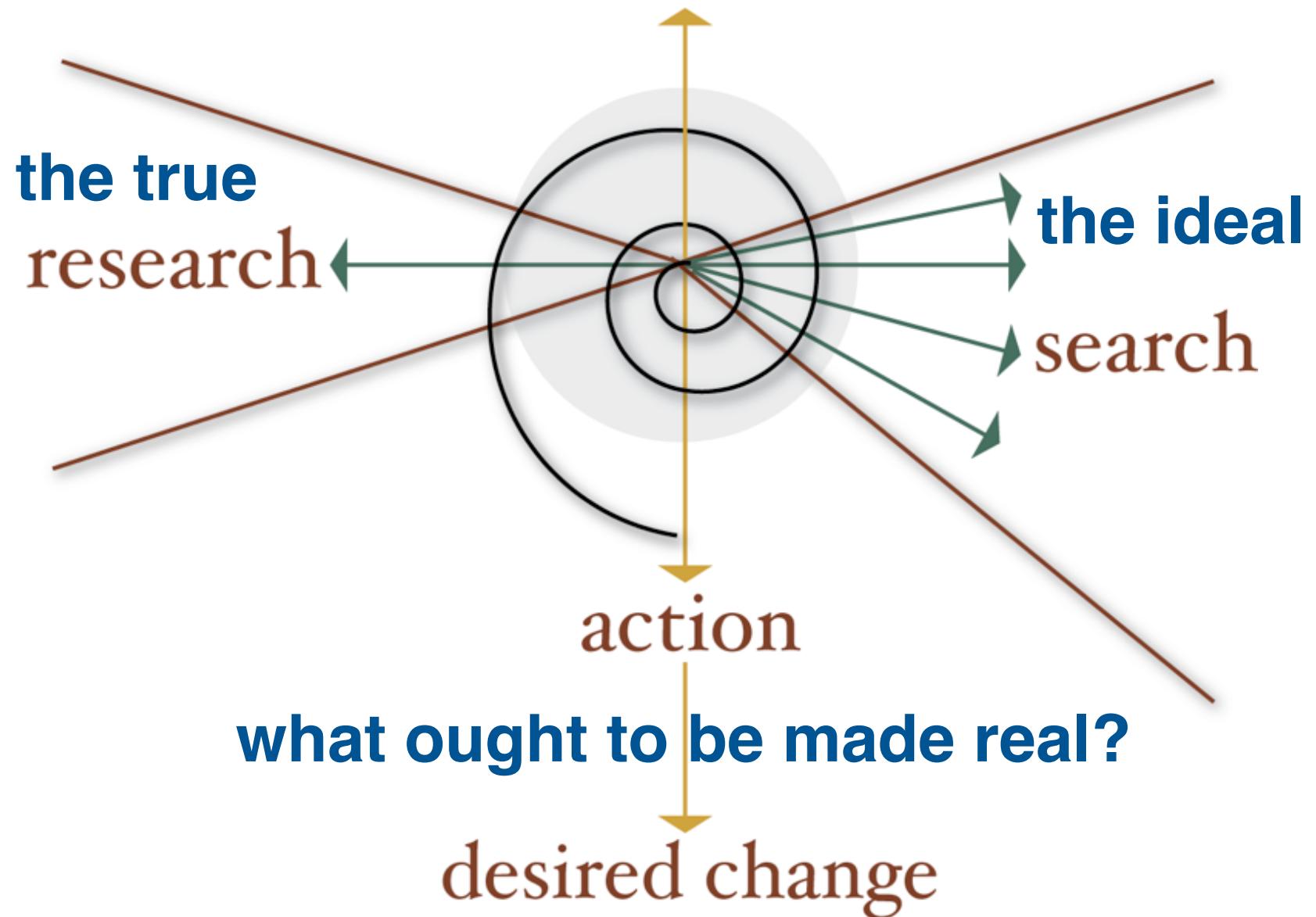
# protocols of scholarship

examples of protocols

# 1. scholarship of inquiry for action

i.e. design inquiry

# **the real assessment**



# 2. scholarship of systemics

the logics of design

- thing
- object
- entity
- event

- relationships  
in-between  
- connections  
- links

- thing
- object
- entity
- event

**emergent  
qualities**

# 3. scholarship of agency & service

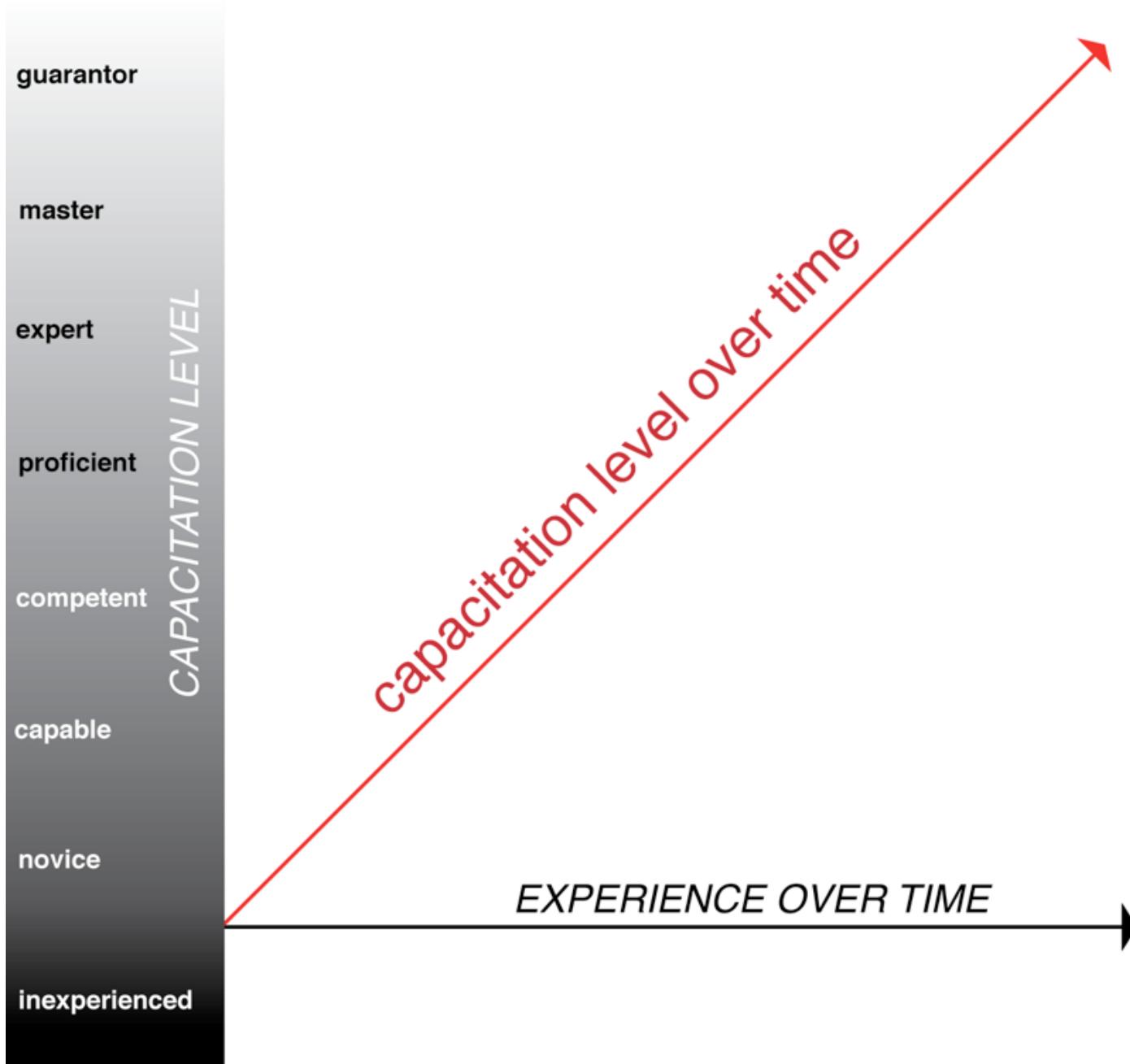
When you help, you see life as weak;  
when you fix, you see life as broken.  
When you serve, you see life as a whole.

Remen, Rachel Naomi

1991.

In The Service of Life.  
Noetic Science Review.

# 4. scholarship of capacitation



Capacitate: to render fit or make qualified; to enable.

# RSD3 Symposium

evidence of supporting and advancing

- **understanding of systemic design?**
- **collaborative systemic design inquiry?**
- **shared systemic design inquiry?**

ongoing inquiry