

Free Will: a notion of information?

Kim Claire Wende, Dept. brain-imaging, Institute for mental health, Philipps-University of Marburg, Marburg, Germany

... why free will?

-just...Why NOT? (solve the brain-mind-problem?😊)?

„OR“ (=a french word),
...where (in the human brain)
is
„emergence“? –

My claim: Free will (mental causation) =
Ability (of the whole brain) to *change one's mind* by
INFORMING oneself.

→ BRAIN: two P's: Saggital (Y) and Axial (X)

First, Y: What is a function?

- language and creative behavior :
- human „minds“(brains) can produce „abstract“ information by higher-level thought processes
- if communicated, such abstract information can be retrieved/accessed by that or other „minds“

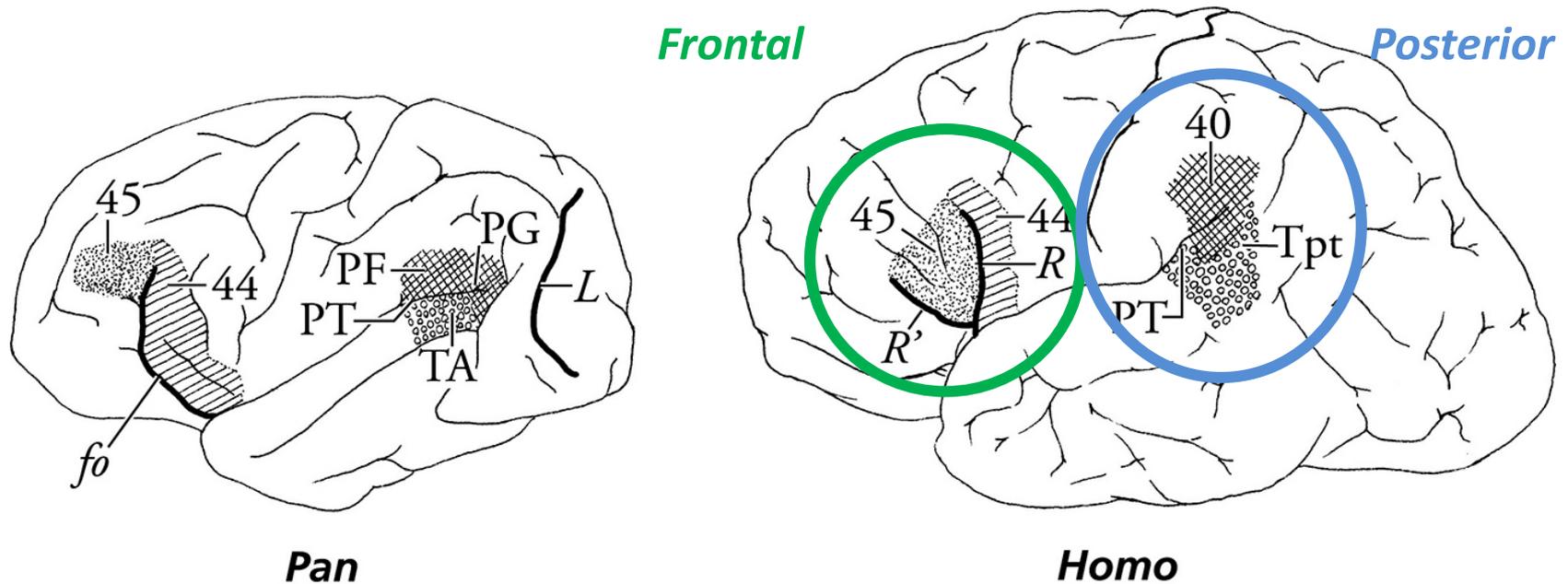
it is the **newest part of the neocortex that is responsible for these higher-level reasoning/thought functions:**

Where in the brain is “cognition”(thinking)?

The “faculty of language”

(Crow, 2008, the “big bang” theory of the origin of psychosis)

Only exists in the human brain!

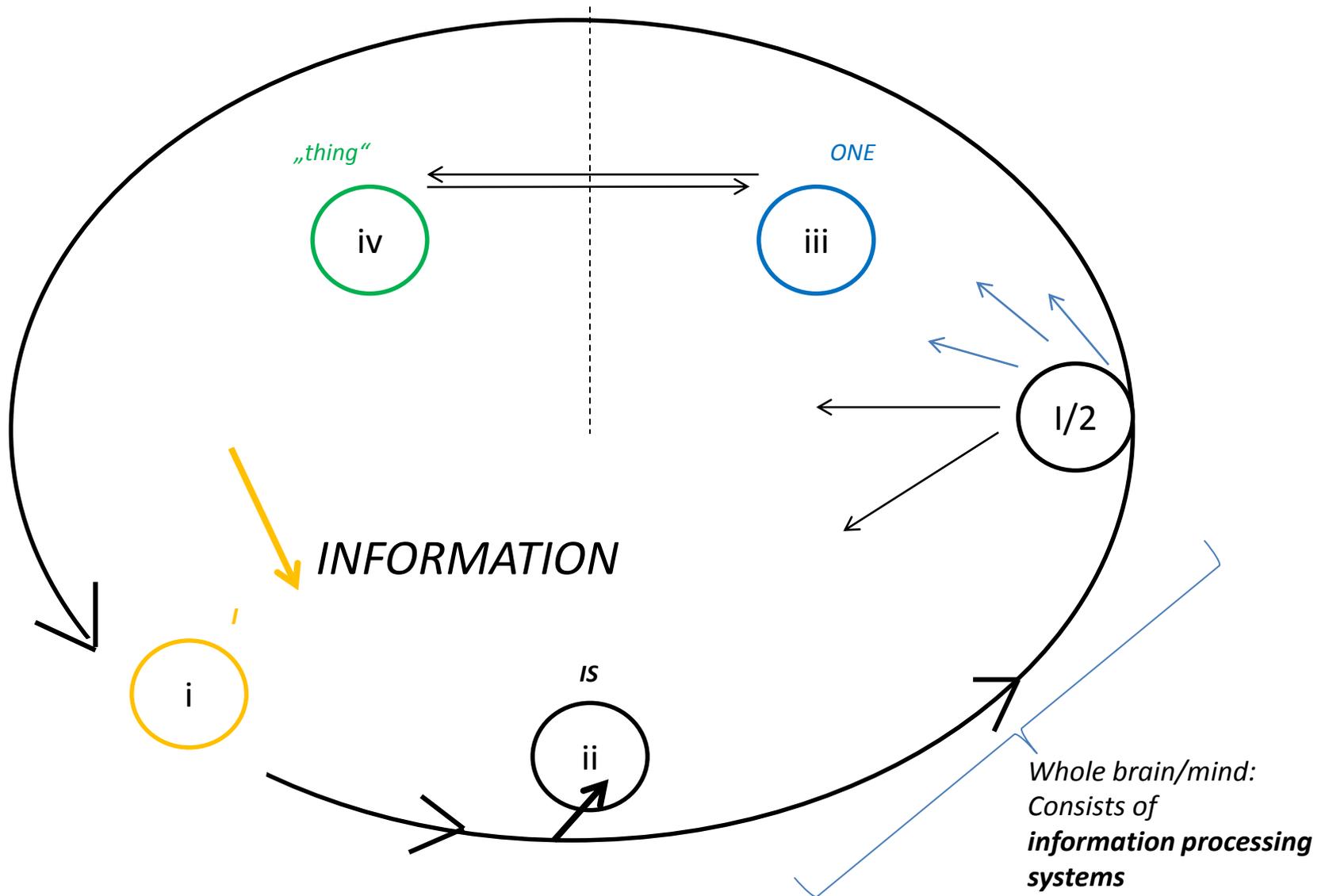


Where is it not? in sensation (of “IMPULSE”, or bottom up signal).

Free actions: thought and control processes enable the human brain to direct the stream of information (interplay bottom-up and top-down processes) according to the self’s “imperative” (representation of motive at the meta-cognitive level). Thereby thoughts (and thus the decision to perform an action or not) are free.

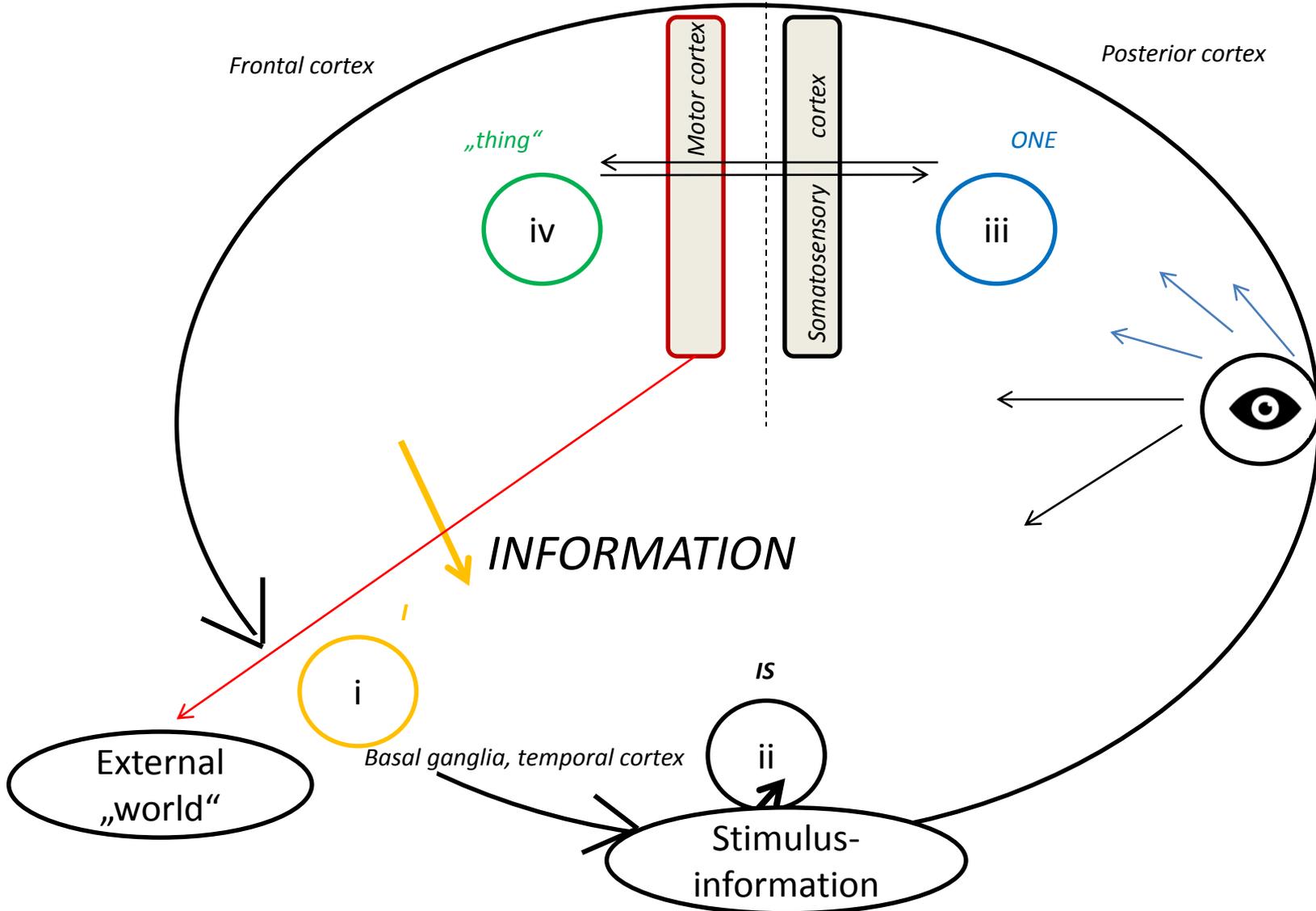
Vs. Determined behavior (monkey, formal thought disorder: no meta-cognitive monitoring, no control over own “stream of thoughts”, behavior is caused by bottom-up signal).

What is „mental causation“ ?

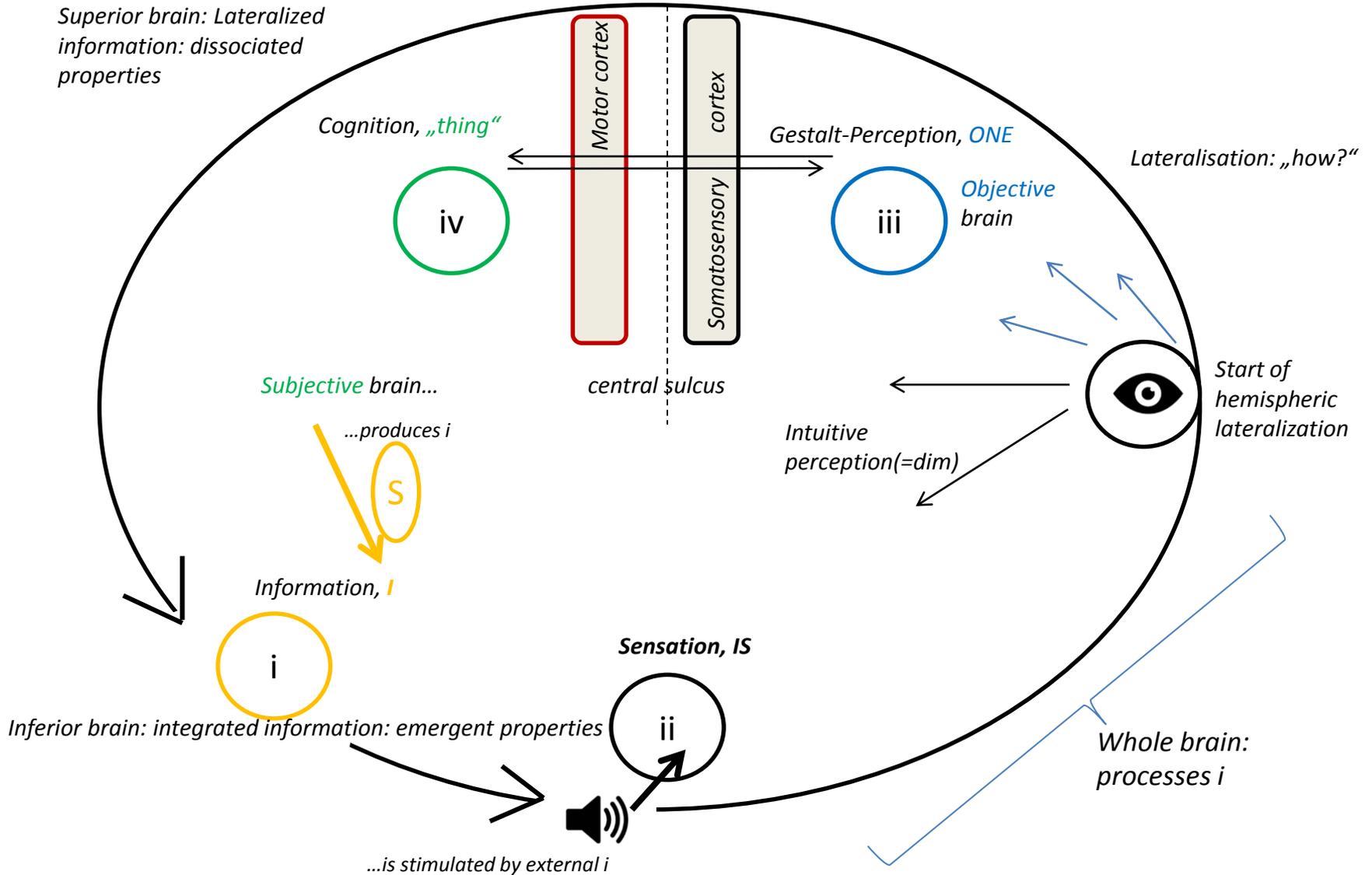


F.* the Atom?-n.p., The B. can do „I.T.“

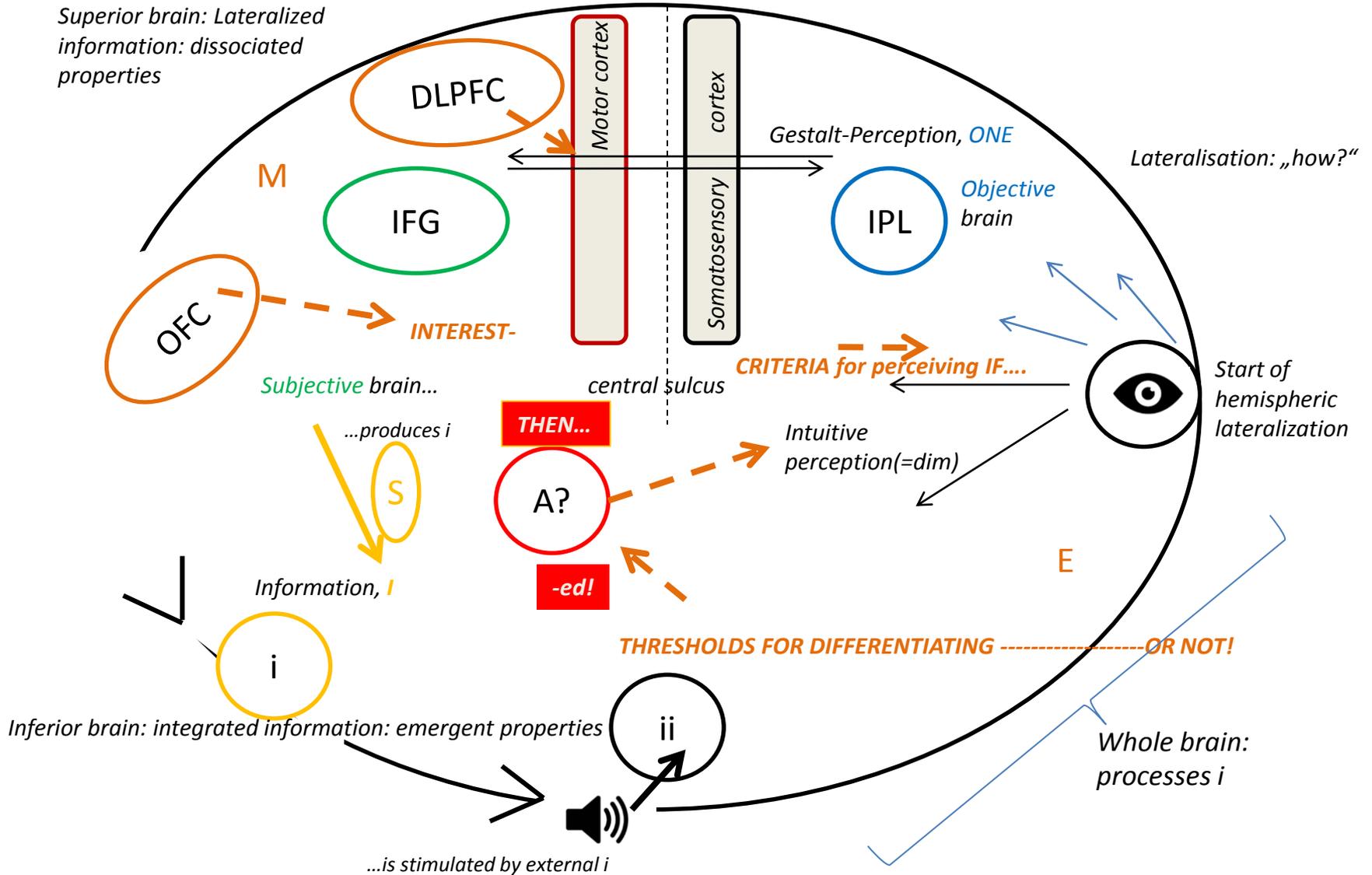
!



The four ½ modalities of „i“ in the human brain (sagittal view, schematic)



The four filters for „i“ in the human brain (sagittal view, schematic)

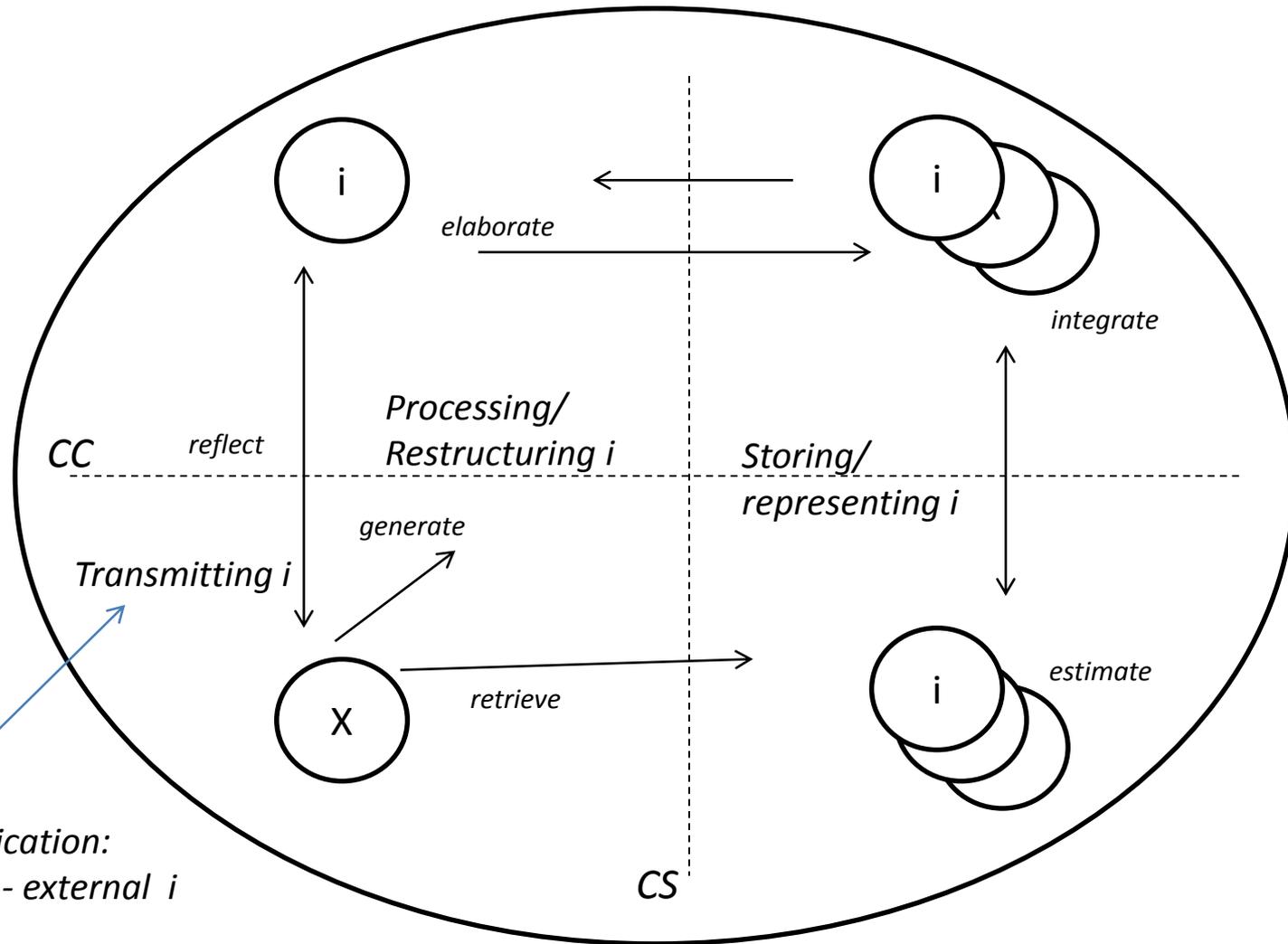


Now, X: What is a network?

Networks consist of (sub-)processes of *information flow*

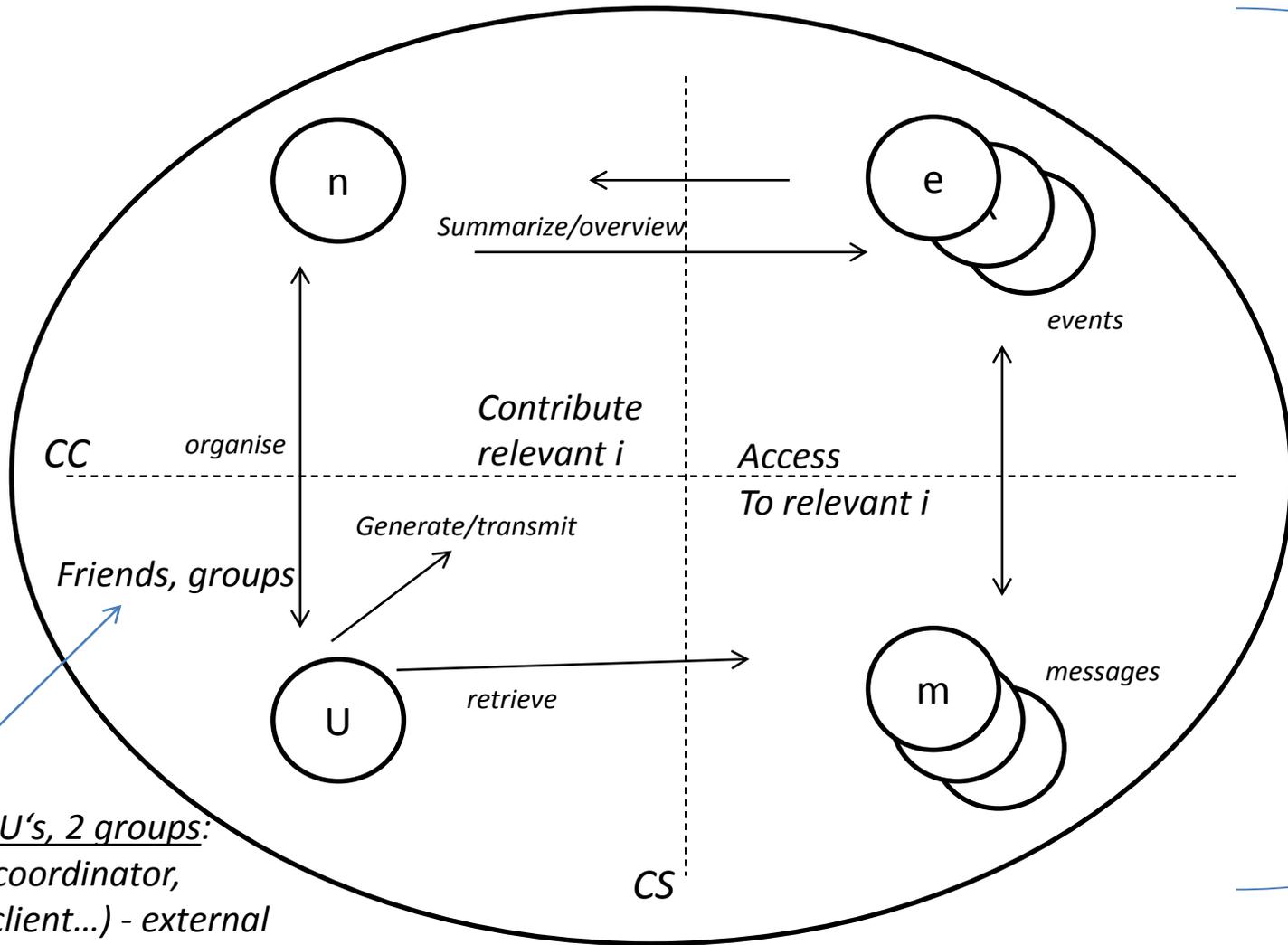
- *structure that is embedded in external environments*
- *and an internal structure*
- *Functional subsystems (e.g. in the brain: modalities of processing)*
- *hierarchy?*
- *effectiveness of communication depends of the efficiency of information processing*
- *„conceptual network“ of human brain: effective network, rapid information processing*
- *Other examples e.g. google, facebook*
- *graph theory/small world properties: +Flat hierarchies, +direct information routes, +limited number of hubs*

The semantic brain network (schematic)



Communication:
internal *i* - external *i*

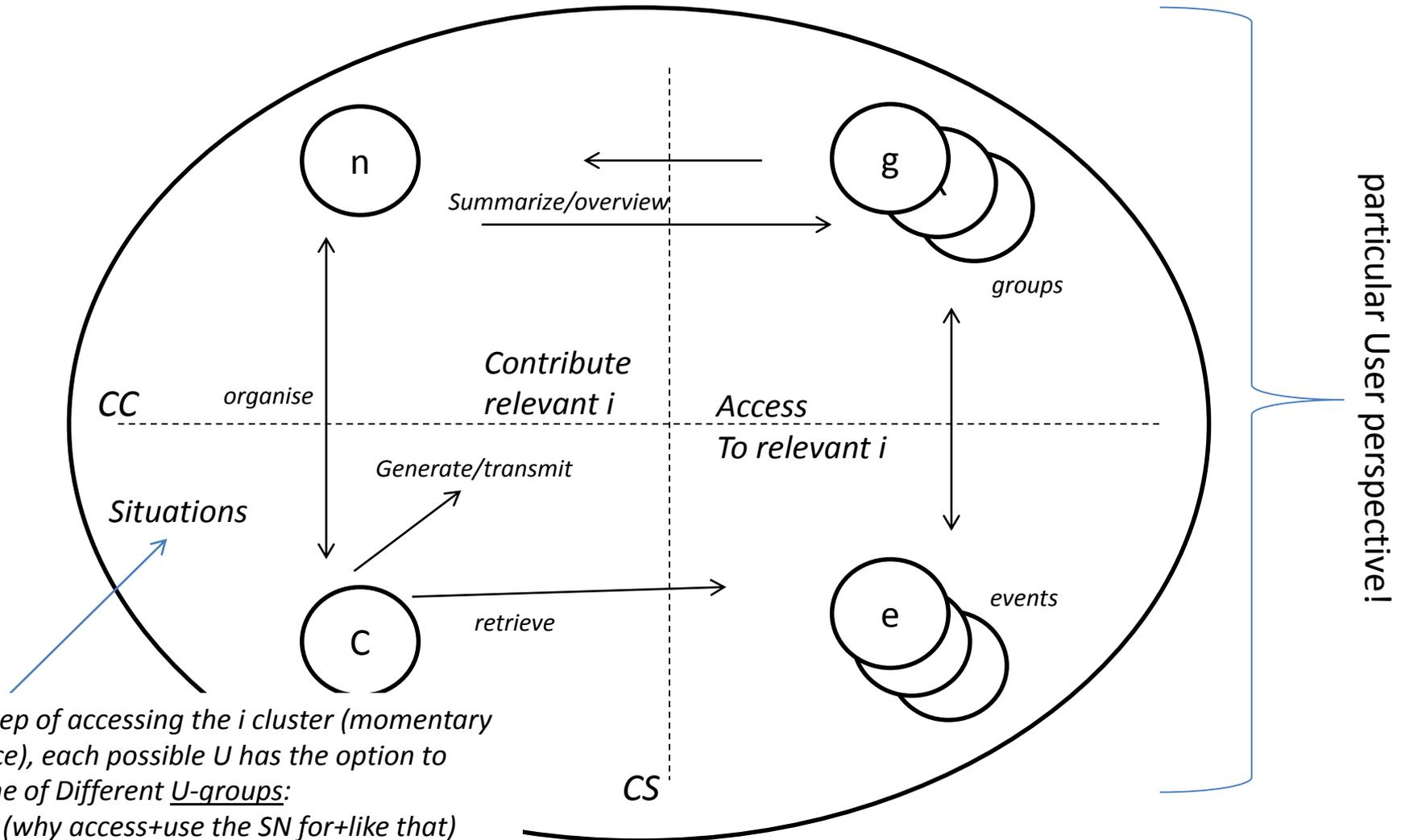
The S network of one U (schematic)



General User perspective!

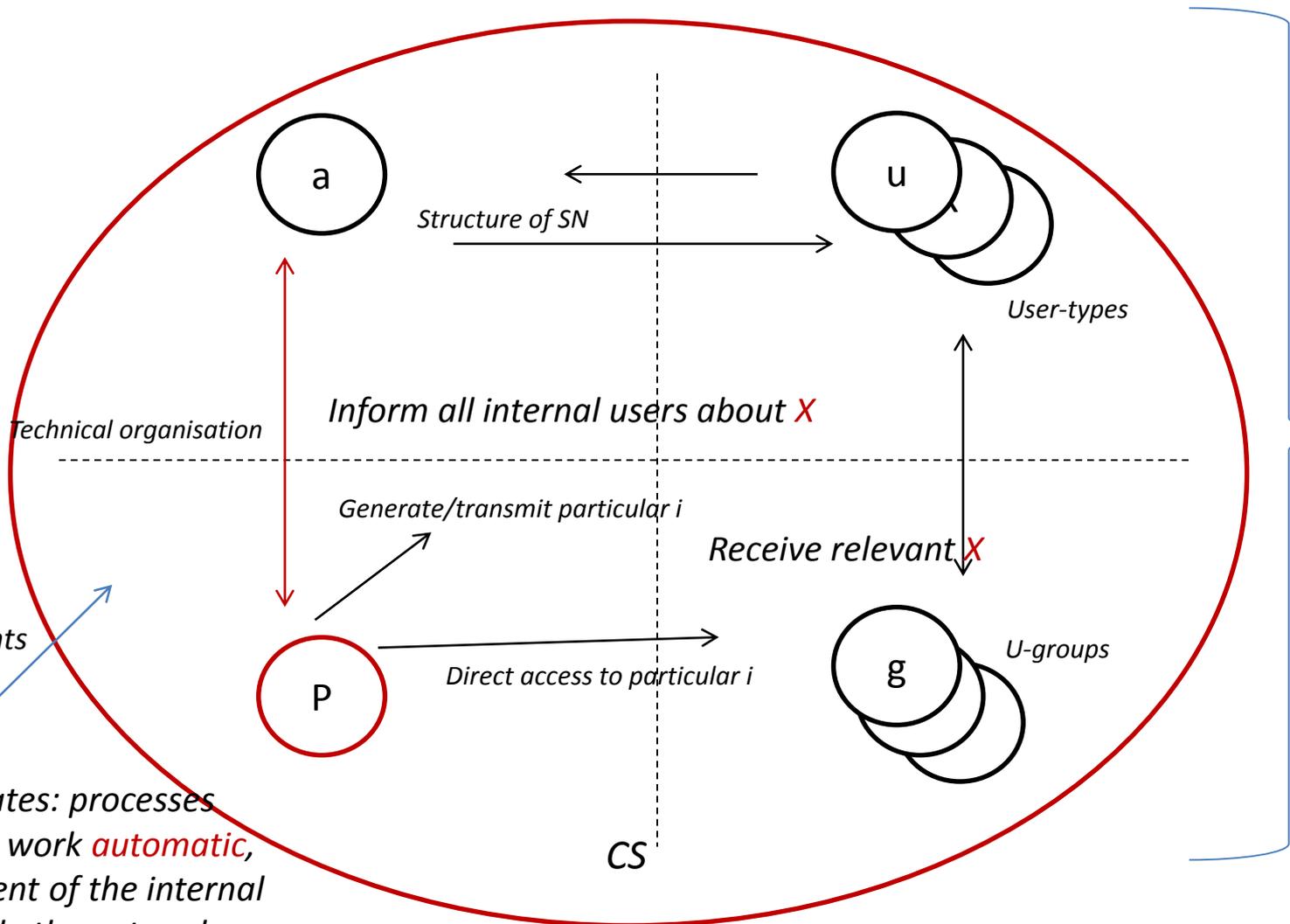
Different U's, 2 groups:
 internal (coordinator,
 member, client...) - external
 (other persons+their
 value/meaning for U)

The meaning of relevance (schematic)



In the step of accessing the *i* cluster (momentary relevance), each possible *U* has the option to enter one of Different U-groups:
 internal (why access+use the SN for+like that) and related to - **external** (how? =frame of access)*

The S network from „above“ (schematic, monitor/coordinator view)

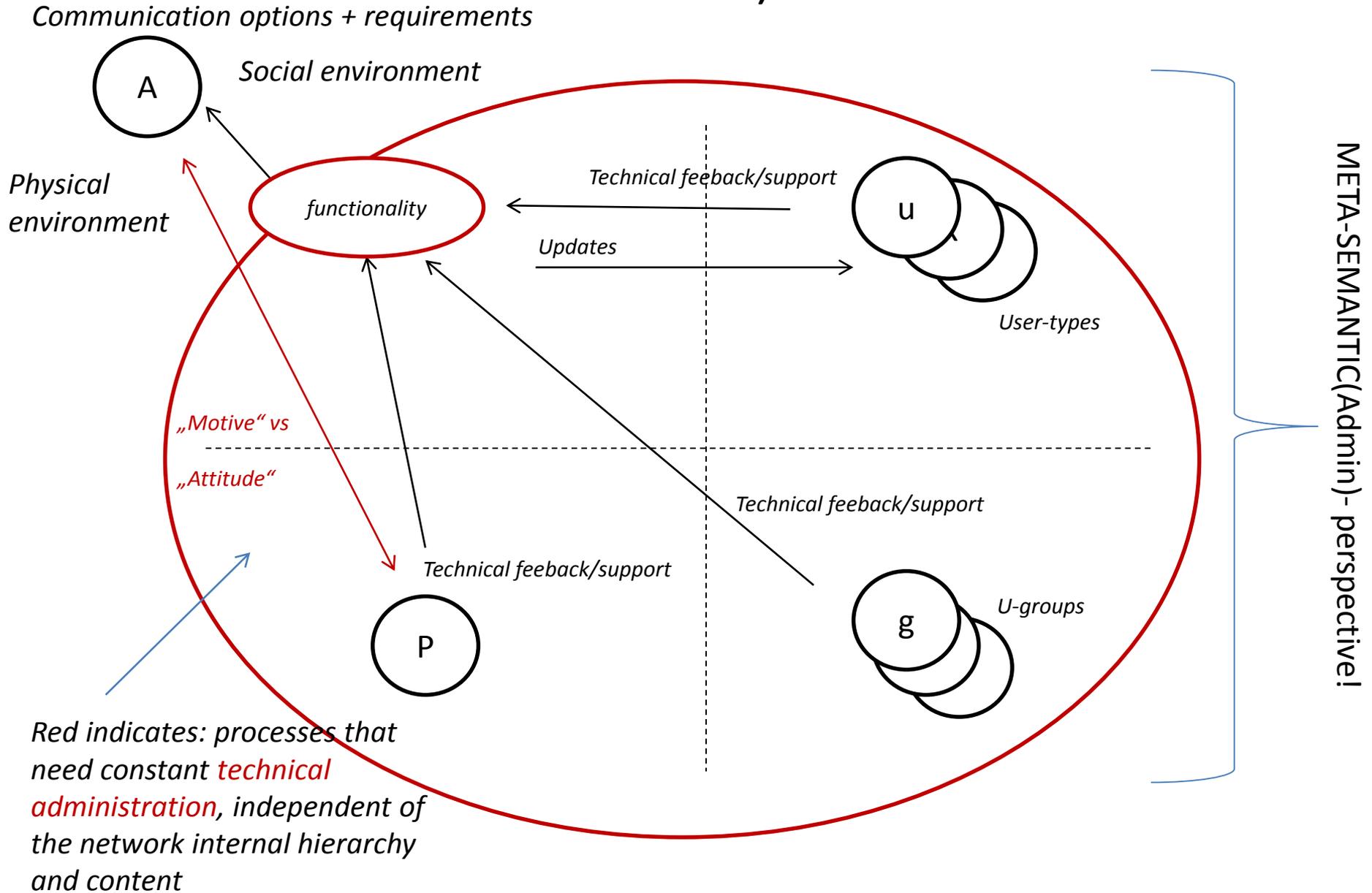


General/
relevant
requirements
from
external

Red indicates: processes
that must work *automatic*,
independent of the internal
„life“ inside the network

METAPHYSICAL (coord). perspective!

The S network from „outside“ (schematic, „admin“ view)



Merci!