PHILOSOPHY DRIVEN — PROCESS DRIVEN DESIGN
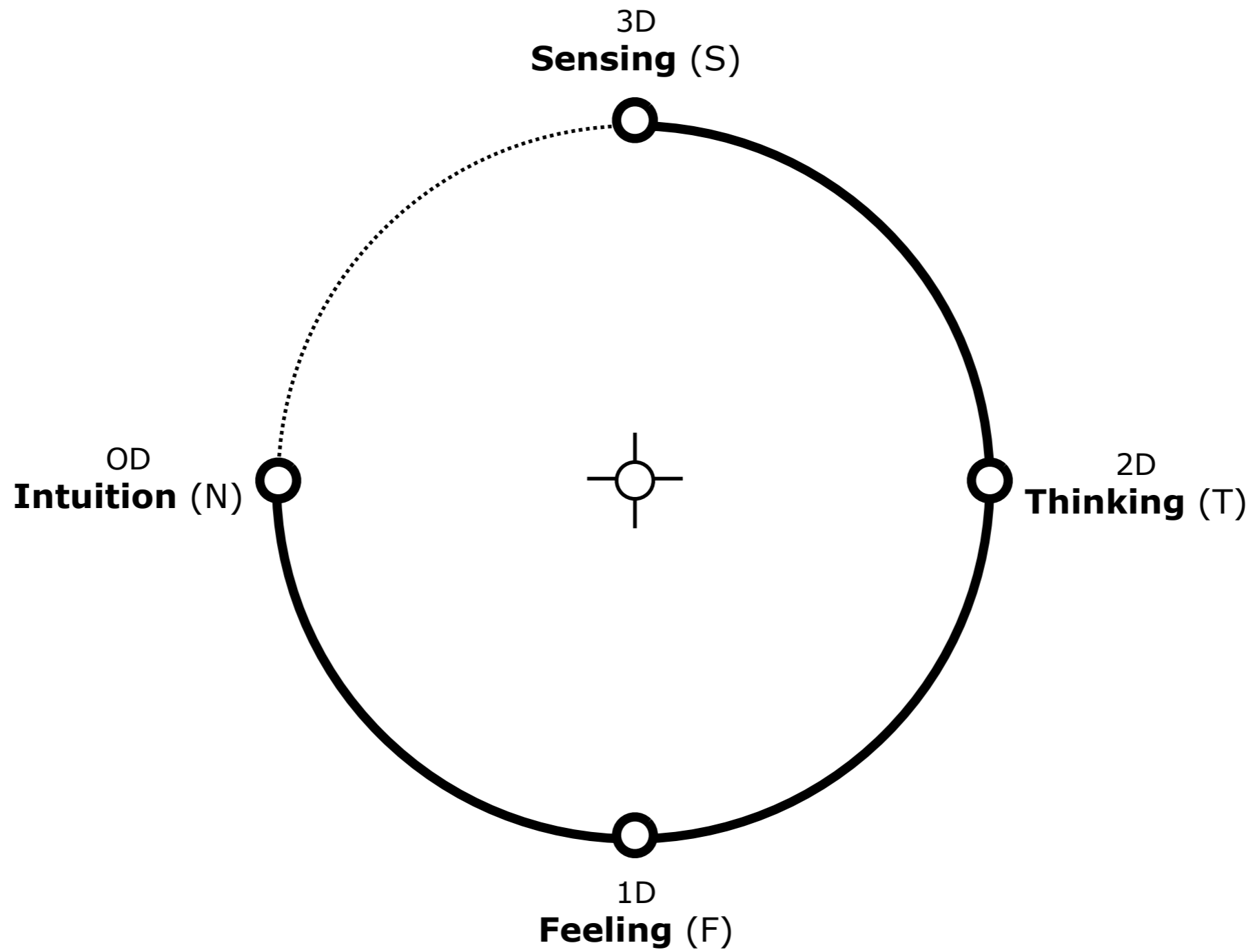
Professor Peter McGrory, Design Management & Leadership TaiK

CULTURE / COGNITION / **CONCEPT** / CREATIVITY

CONDITIONING ...

COGNITION

3D
Sensing (S)

OD
Intuition (N)

2D
Thinking (T)

1D
Feeling (F)

| SENSING | INTUITION |

people who prefer sensing
tend to focus on the present (past) and on
concrete, real, practical, direct,
facts-of-life experiences;
information gained through the senses
(explicit meanings).

people who prefer intuition
tend to focus on future possibilities,
with a view towards patterns,
abstract relations and
implicit meanings.

THINKING   **FEELING**

people who prefer thinking
tend to base their decisions on logic and
objective analysis of
cause and effect relations.

people who prefer feeling
tend to base their decisions on values,
beliefs i.e. internal sense of right
and wrong, including subjective evaluation
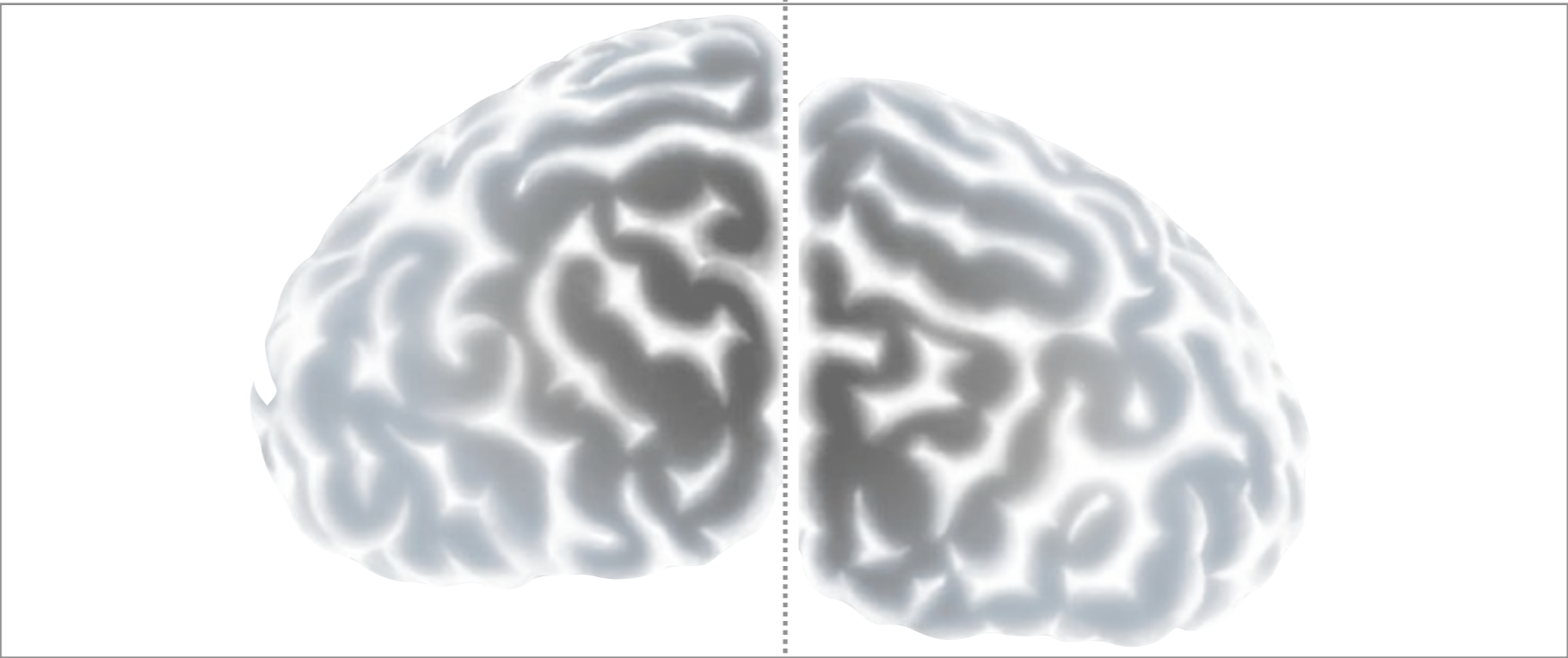of human-centered concerns.

| FACT | FEELING |

| FACT | FICTION |

FACT   **FANTASY**

ISTJ	ISFJ	INFJ	INTJ
ISTP	ISFP	INFP	INTP
ESTP	ESFP	ENFP	ENTP
ESTJ	ESFJ	ENFJ	ENTJ

| LEFT BRAIN | RIGHT BRAIN |

Herbert Simon (1916—2001) ...

bounded rationality

limits to rational decision-making

Models of bounded rationality [edit]

The term is thought to have been coined by Herbert Simon. In *Models of Man*, Simon points out that most people are only partly rational, and are in fact emotional/irrational in the remaining part of their actions. In another work, he states "boundedly rational agents experience limits in formulating and solving complex problems and in processing (receiving, storing, retrieving, transmitting) information" (Williamson, p. 553, citing Simon). Simon describes a number of dimensions along which "classical" models of rationality can be made somewhat more realistic, while sticking within the vein of fairly rigorous formalization. These include:

- limiting what sorts of utility functions there might be.
- recognizing the costs of gathering and processing information.
- the possibility of having a "vector" or "multi-valued" utility function.

Simon suggests that economic agents employ the use of heuristics to make decisions rather than a strict rigid rule of optimization. They do this because of the complexity of the situation, and their inability to process and compute the expected utility of every alternative action. Deliberation costs might be high and there are often other, concurrent economic activities also requiring decisions.

Studying decision-making [edit]

The task of rational decision making is to select the alternative that results in the more preferred set of all the possible consequences. This task can be divided into three required steps: (1) the identification and listing of all the alternatives; (2) the determination of all the consequences resulting from each of the alternatives; and (3) the comparison of the accuracy and efficiency of each of these sets of consequences.[15] Any given individual or organization attempting to implement this model in a real situation would be unable to comply with the three requirements. It is highly improbable that one could know all the alternatives, or all the consequences that follow each alternative.
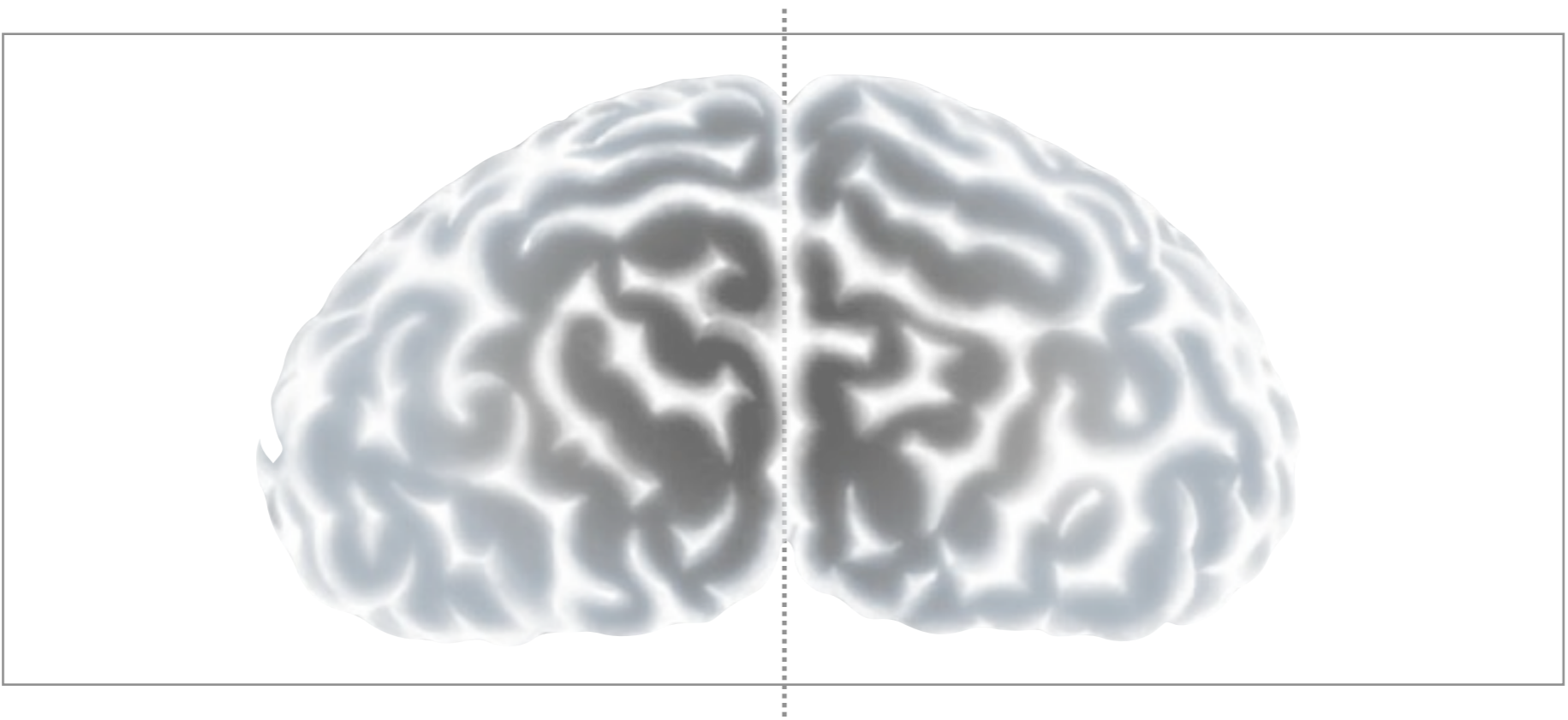
The question here is: given the inevitable limits on rational decision making, what other techniques or behavioral processes can a person or organization bring to bear to achieve approximately the best result? Simon writes:"The human being striving for rationality and restricted within the limits of his knowledge has developed some working procedures that partially overcome these difficulties. These procedures consist in assuming that he can isolate from the rest of the world a closed system containing a limited number of variables and a limited range of consequences."[16]
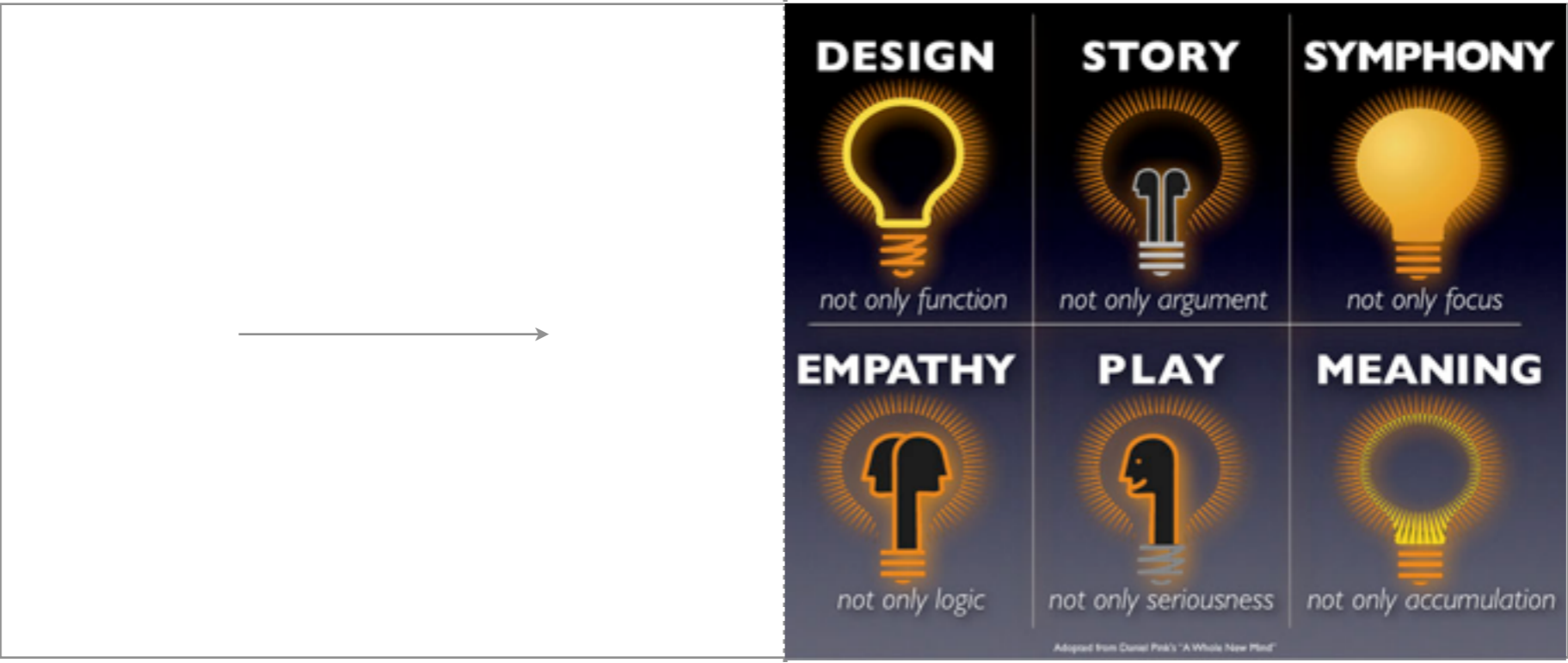
Herbert Simon ...

the simplest scheme of evolution is one that depends on two processes; a generator and a test.

the task of the **generator** (e.g. the role of leaders) is to produce variety, new forms that have

not existed previously, whereas the task of the **test** (e.g. the role of managers) identify those

forms which are most likely to succeed or survive.

DESIGN
not only function

STORY
not only argument

SYMPHONY
not only focus

EMPATHY
not only logic

PLAY
not only seriousness

MEANING
not only accumulation

Adapted from Daniel Pink's "A Whole New Mind"

CULTURE

from an organizational perspective, **culture** incorporates and integrates

a set of values, beliefs, attitudes and assumptions which are shared.

culture typically develops through positive experience and the expectation

of further positive experience(s.

CREATIVITY

creativity (creativeness) is a mental process involving the creation and generation of new concepts and ideas, as well as new connections and associations within and between them.

*"**creativity** involves breaking out of established patterns in order to look at things in new or different ways"* *(de Bono)*

CONCEPT

concepts are a framework for thought which help envision, inspire and incite

creativity and change.

concepts are bearers-of-meaning, as opposed to agents-of-meaning, they are

cultural and contextual in nature.

concept a general abstract notion that has to be carried out by means of an idea

or typically a set of ideas.

a concept (like a 'compass') suggests direction or relative position,

but does not tell one how to get there — *what to ...*

ideas are ways to signal (i.e. agents) and satisfy (i.e. to convey and realize) concepts.

an idea (like a 'road-map') helps to achieve or realize a concept — *how to ...*

COMPASS

ROADMAP

holistic concept (conceptual scheme) incorporate and integrate a set of concepts,

sub-concepts and ideas ... which are connected together to form a reflexive and

holistic entity.

IDEA

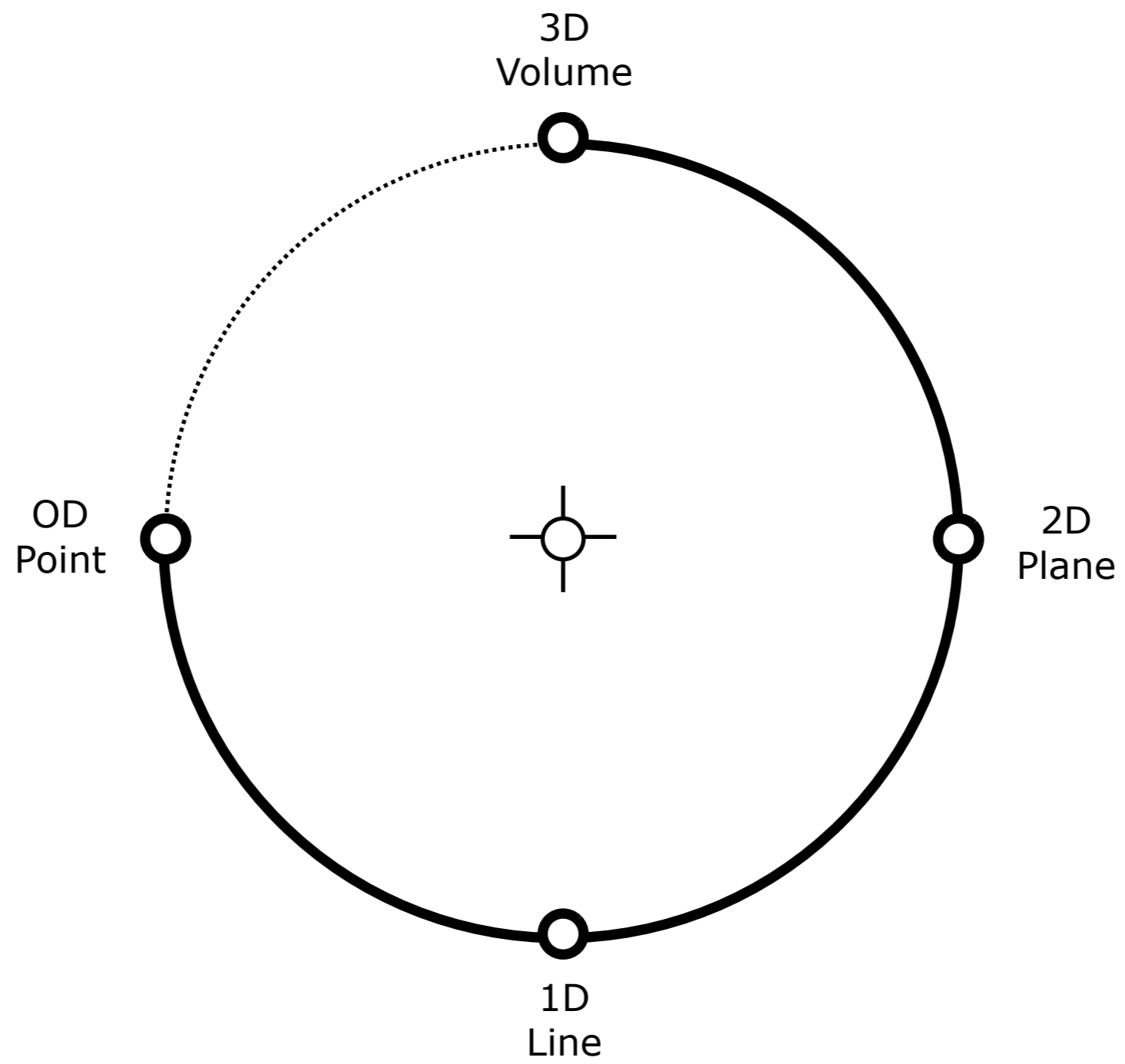the IDEA of something, is the FORM of something

ROI — IDEAS

DECIDABLE | UNDECIDABLE

PROCESS DRIVEN APPROACHES TO INNOVATION

3D
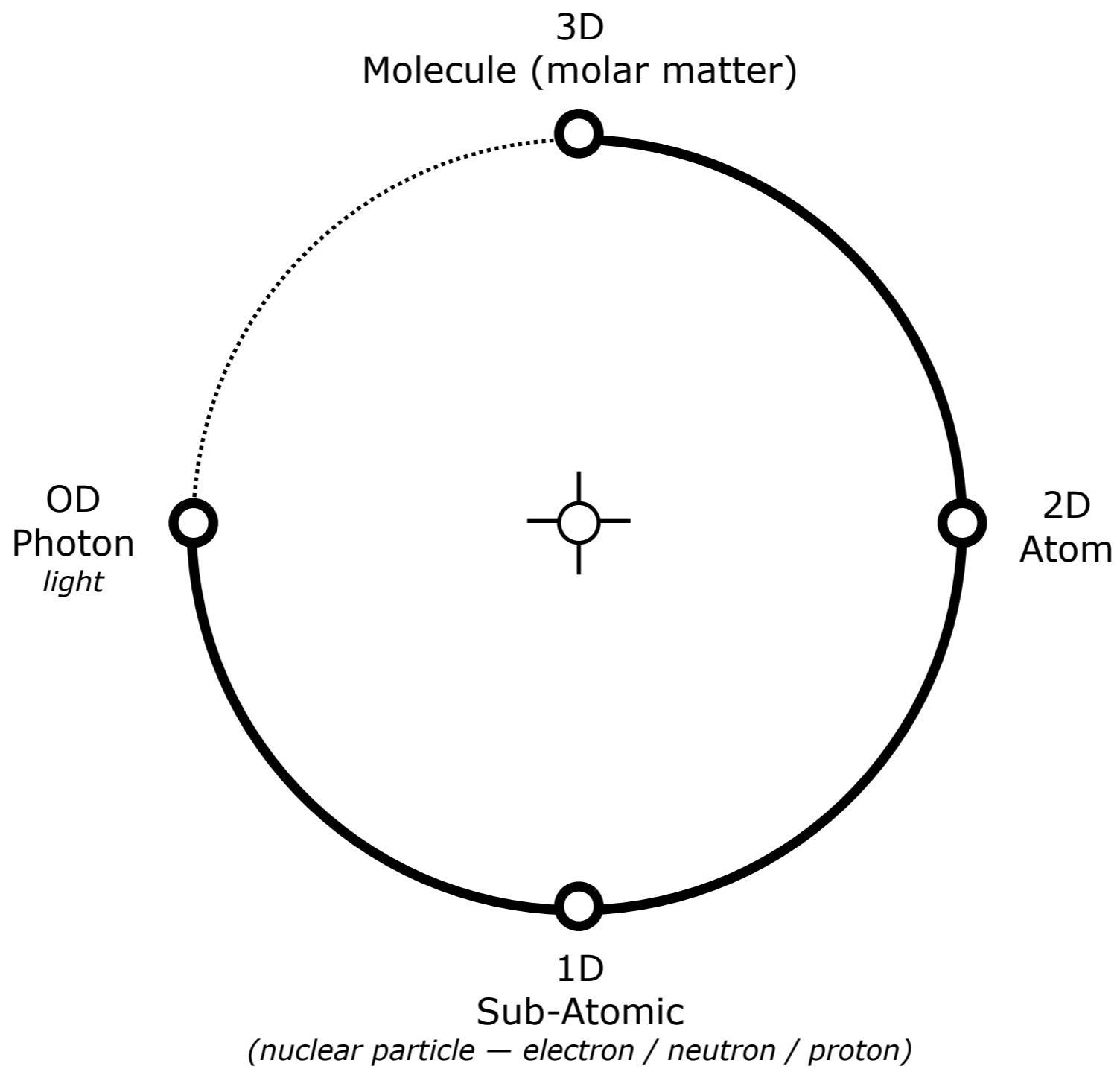Volume

2D
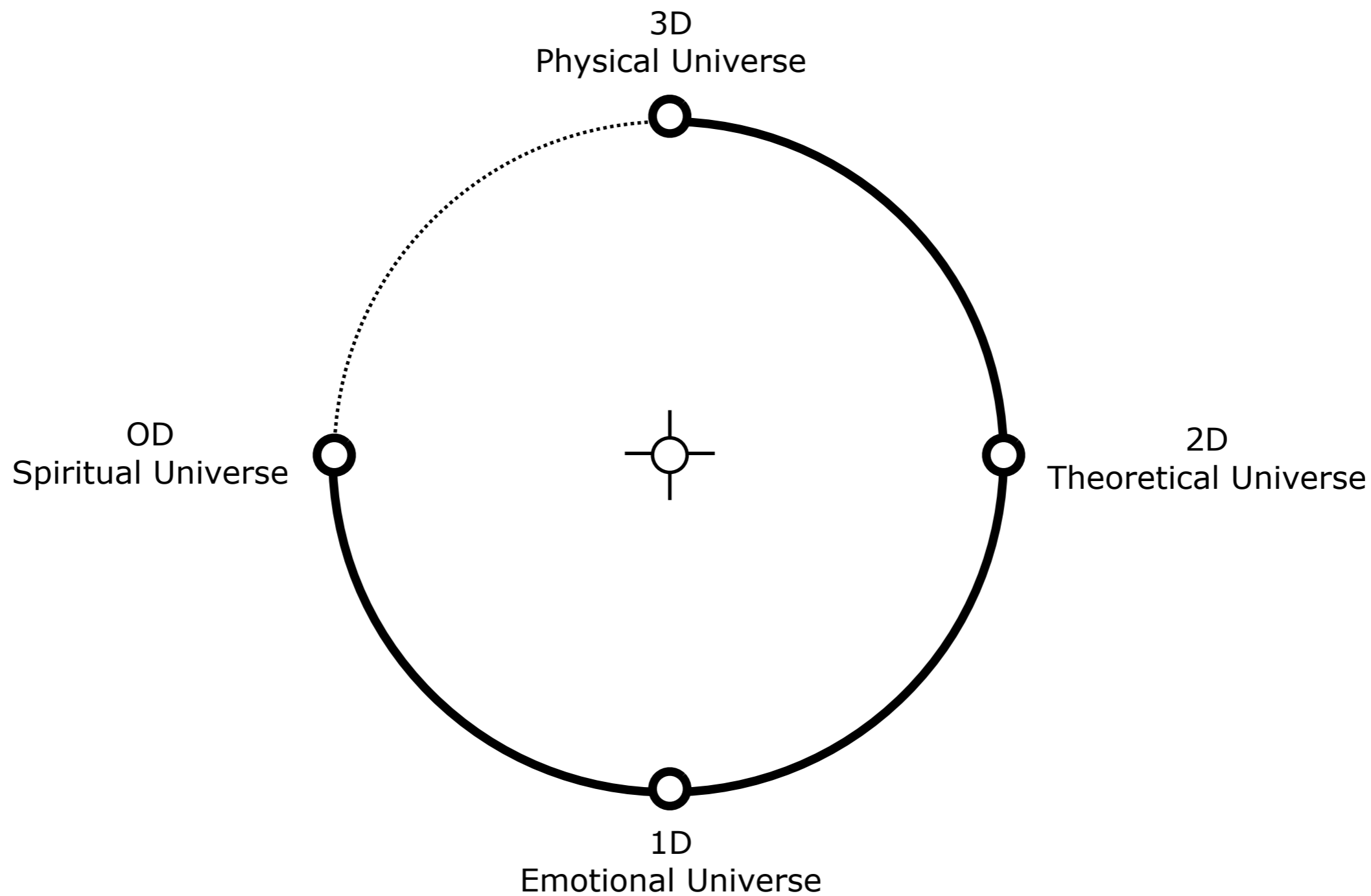Plane

1D
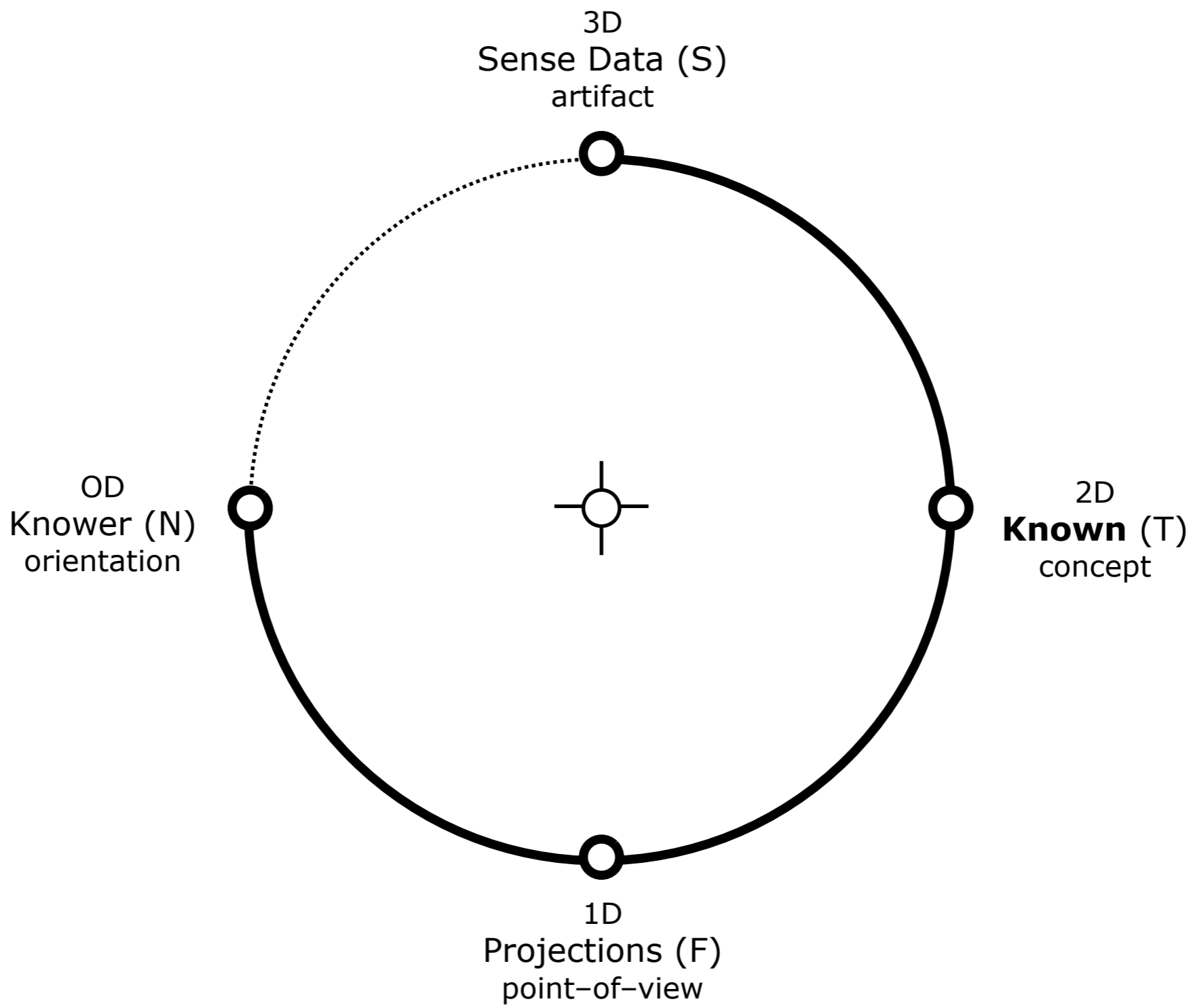Line

OD
Point

U_PROCESS

source: Arthur M. Young

U_PROCESS

3D
Molecule (molar matter)

0D
Photon
light

2D
Atom

1D
Sub-Atomic
(nuclear particle — electron / neutron / proton)

3D
Physical Universe

2D
Theoretical Universe

OD
Spiritual Universe

1D
Emotional Universe

source: Arthur M. Young — Reflexive Universe

3D
Sense Data (S)
artifact

OD
Knower (N)
orientation

2D
Known (T)
concept

1D
Projections (F)
point−of−view

3D
Artifact

2D
Feature Set

1D
Value Set

0D
Purpose

3D	Artifact
2D	Feature Set
1D	Value Set
0D	Purpose

3D
Artifact

OD
Purpose

2D
Feature Set

1D
Value Set

3D
Form (S)

OD
Focus (N)

2D
Frame (T)

1D
Force (F)

3D
Product (S)

OD
Purpose (N)

2D
Process (T)

1D
Philosophy (F)
point−of−view