

Living in an Uncertain World - Information, Truth, and Alternative Facts

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The nature of war has not changed:

„War is an act of violence, conducted to force an opponent to fulfill our will.“

„... and so, both will increase [*the violence, ML*] to the utmost without any limits except for the inherent counterbalances^{*)}.“

*Carl v. Clausewitz, Vom Kriege, Erstes Buch,
translation by ML*

^{*)} counterbalances depend upon the means for violence

... but its goals have:

ancient wars : **territory** and **resources**

modern wars: **information** and **knowledge**

simple reason: **dependencies of the economy**

principle difference:

territory and resources **are singular**

information and knowledge are **still usable
by opponent**

(information can be copied without losing its quality)

the new goal is twofold:

1. Gain access to information and knowledge of an opponent
2. Deny usage of information/knowledge by opponent

Question: How can we keep someone from using information he already has?

Information is ...

... „data containing something new to the recipient“

Information processing
often used synonymously for
data processing

Data processing (schematic)

Data Acquisition Unit
(DAU)

Data Processing Unit
(DPU)

Output Unit
(OU)

sensor,
keyboard,
etc.

input

CPU plus
peripheral units

output

memory,
disk,
etc.

limited in
spectrum,
capacity,
velocity

limited in
capacity,
velocity,
accuracy

limited in
velocity,
capacity,
volatile?

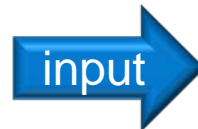
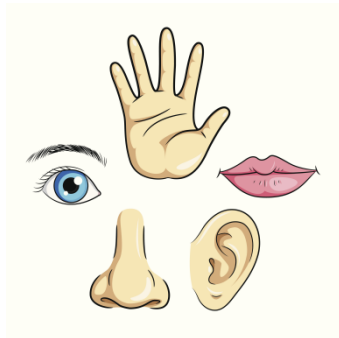
signals from
ontological
background

Data processing (biological solution)

Data Acquisition Unit
(DAU)

Data Processing Unit
(DPU)

Output Unit
(OU)



limited in
spectrum,
capacity,
velocity

Purpose: survival of the being

limited in
capacity,
velocity,
accuracy

limited in
velocity,
capacity,
volatile?

signals from
ontological
background

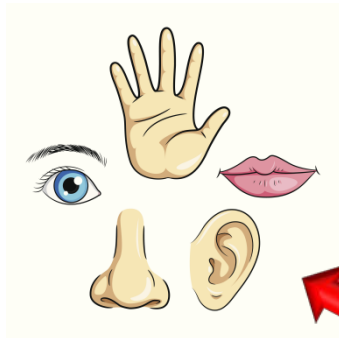
Quellen:
https://media.sandiegoreader.com/img/events/2015/Five_Senses.jpg, https://www.mindyourlife.de/wp-content/uploads/Fotolia_42096420_Subscription_Monthly_XL-1.jpg, https://i.ytimg.com/vi/sCB8_AuA_Mo/maxresdefault.jpg
am 05.10.2018

please bear in mind:

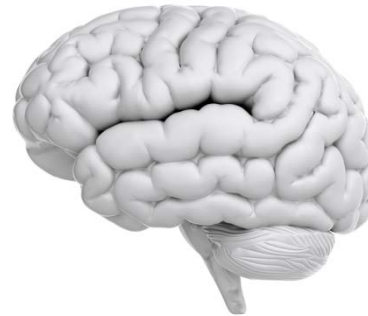
Data Acquisition Unit
(DAU)

Data Processing Unit
(DPU)

Output Unit
(OU)



input



output



Virtual reality!

**Single source
for input!**

**still running
on OS 1.01!**

limited in
spectrum,
capacity,
velocity

limited in
velocity,
capacity,
volatile?

limited in
capacity,
velocity,
accuracy

signals from
ontological
background

Quellen:
https://media.sandiegoreader.com/img/events/2015/Five_Senses.jpg,
https://www.mindyourlife.de/wp-content/uploads/Fotolia_42096420_Subscription_Monthly_XL-1.jpg,
https://i.ytimg.com/vi/sCB8_AuA_Mo/maxresdefault.jpg
am 05.10.2018

A simple algorithm ...

1. general rule: anything coming in from the senses is true.
2. exception: in case of severe contradictions replace external data by internal ones.

... made by evolution!

Remark: German word for „perception“ is „Wahrnehmung“.
Direct translation reads „taking for true“

What is truth?

Philosophy provides three major concepts in the theory of truth:

1. the concept of correspondence
2. the concept of consistency
3. the concept of consensus

Remark: German word for „perception“ is „Wahrnehmung“.
Direct translation reads „taking for true“

What is truth?

1. Concept of correspondence

1. General rule!?



objects of the
ontological
background



directly correspond to



elements of the
theoretical model

What is truth?

2. Concept of consistency

2. Exception!?

From these axioms we can derive further properties, e.g.

$$P(\bar{A}) = 1 - P(A)$$

$$P(A \cup \bar{A}) = 1$$

$$P(\emptyset) = 0$$

$$\text{if } A \subset B, \text{ then } P(A) \leq P(B)$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$



A definition of probability

Consider a set S with subsets A, B, \dots

For all $A \subset S, P(A) \geq 0$

$$P(S) = 1$$

If $A \cap B = \emptyset, P(A \cup B) = P(A) + P(B)$



Kolmogorov
axioms (1933)

new fact or
statement

consistently fits into

already existing
system of
statements

no direct connection to reality necessary!

What is truth?

3. Concept of consensus



new (alternative)
fact or statement

is agreed upon by

a critical amount
of (or all) people

**no direct connection to reality necessary/intended and
contradictions are widely accepted, real facts are rejected!**

... coming back to the problem:

Question: How can we keep someone from using information he already has?

Answer: shatter his believe in the truth of an information by surrounding/replacing it with alternative facts.

Make use of the simple algorithm of our data cruncher.

... coming back to the problem:

Question: How can we keep someone from using information he already has?

Answer: Drown the truth in an ocean of alternative facts in order to disalign your opponent's vectors to reality.

Stay below the threshold of critical contradictions.

Change his internal picture of the world until his view on reality is blurred.

Be advised, there is an inherent danger:

➤ Your opponent will do the same.

Remember:

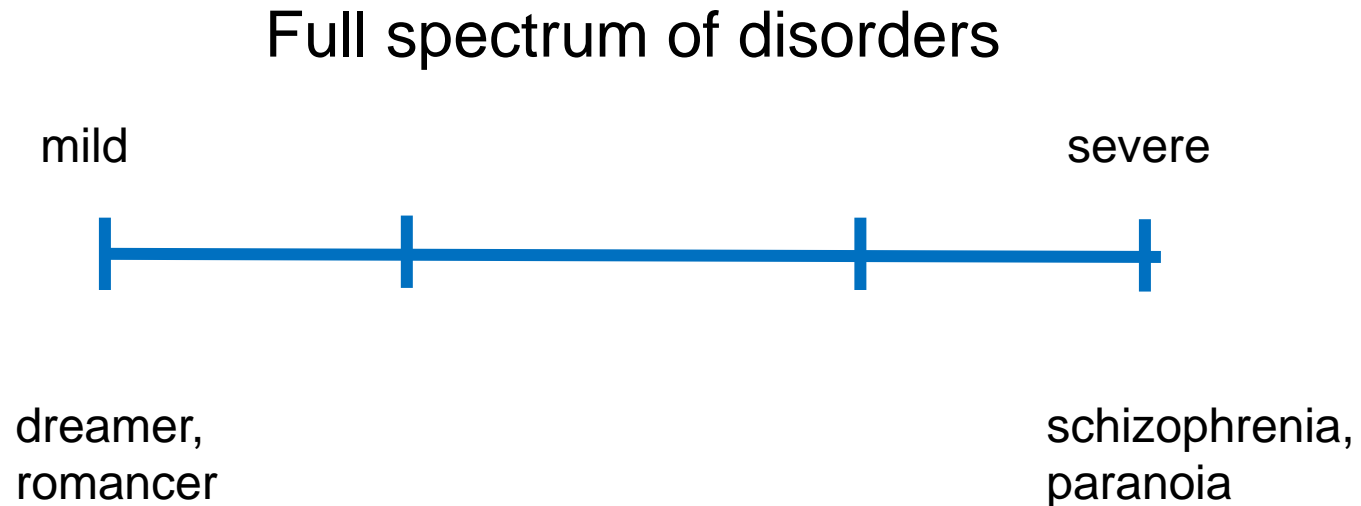
„... and so, both will increase [*the violence, ML*] to the utmost without any limits except for the inherent counterbalances*).“

➤ Counterbalances are only given by the limits of the technology (i.e. nearly none)

➤ Ethics and Code of Conduct?

Be advised, there is an inherent danger:

We might loose contact to reality.



A cure?

Once upon a time, in a distant future

Thou shalt not lay false witness upon thy neighbour!

Book of Exodus, the Ten Commandments

Aka : You must not lie.

But until then ...

... develop a robust strategy to stay in contact with reality by:

- promoting a critical attitude
- trying to falsify facts rather than to defend them
- fighting arguments like „it goes without saying ...“
- carefully listening to critical arguments
- being vigilant against „common sense“
- ...

Messages to go:

(instead of a summary)

- Modern IT lets us build alternative but virtual realities that endanger our internal VR
 - Internal VR secured survival since many thousand years by comprehensive coherence with ontological background
 - Strategies (and perhaps a CoC) are needed to save our internal VR and thus contact to reality
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Thank you for your attendance!

