

CONSCIOUS EXPERIENCES ARE CODED BRAIN INFORMATION

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Conscious experiences are analysed
from the point of view of information

Which entities exist?

The material world: things, waves, forces, fields...
Human brains belong to the material world.

The “world” of conscious experiences:
sensations, emotions, experiences of will,
cognitive experiences, conscious decisions.
They are not entities of the material world,
they are not located in the brain.

Both neural networks of the brain
and conscious experiences have information.

Two basic assumptions:

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1. All activities of the body are caused by brain activities and other physical causes (the four known physical interactions).
2. The brain can **call forth** conscious experiences (G.H. von Wright)
Conscious experiences are subjective, strictly privat.
The process which calls forth conscious experiences is not physical.
Only neural correlates of conscious experiences can be studied in physiology.

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1: Description based on conscious experience.

2: Neurophysiologic description.

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These two descriptions have same information content.

Thus I can say that my act originated from my conscious decision, although the act was **caused** physically by the neural impulses from by brain.

There are three levels of information in the brain:

1. **Apparent information:** the same as the information of the present conscious experience.
2. **Available information:** that information in the neural networks which can be brought to consciousness.
3. **Hidden information:** the information in the neural networks which cannot be brought to consciousness. Sometimes hidden information is essential in our behaviour.

The information of a conscious experience is **coded** brain information, **qualia as the coding tools**.

Three types of cones in the retina are activated
vs. the experienced colour.

Specific distribution of the stimulations in different
receptors of olfaction and taste
vs. specific experiences of smell and taste.

The positive or negative value of an event or a physical
object is coded in brain circuit and thus also in emotions.

Experiences of acute pain

The “sense of tissue damage” is based on nociceptors (pain receptors). Their excitation causes changes in brain activities which further lead to muscle movements to prevent damage activities.

These brain activities also call forth the experience of pain.

According to the basic axiom one pain may seem unnecessary, because conscious experiences cannot cause muscle activities!

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We need **conscious** decisions: we may accept pain if we think it is necessary. Thus the information of the pain receptors has to be brought to the consciousness.

The information of possible tissue damage has to be coded as unpleasant.

Chronic pain is unnecessary, an error in physiology.

Brain

Eyes and ears

Information processing, saving

Speech or writing and the ears and eyes of the receiver

The process calling forth conscious experiences

Information in the conscious experience is a copy of brain information

Consciousness does not send information to the brain

Computer

Camera and microphone, USB

Information processing, saving

Internet

Connection to the monitor

Information on the screen is a copy of computer information.

Monitor does not send information (text or images) to the computer

Conclusions

1. The available information in the brain includes “the world model” which guides conscious acts.

The neural circuits also call forth private conscious experiences. This process is not physical.

2. Two descriptions of a conscious act, one in the brain and another in the consciousness, have the same information.

The **cause** of the physical activity is the activity of neurons in the brain, and the conscious **reason** of this act is the conscious decision to act and the realization of that decision.

3. When the brain calls forth conscious experiences, this information has to be coded (qualia).