Information Scientific Axioms
Foundations for HO (Human Orientation) of IT

DI Franz PLOCHBERGER
Information Scientist,
at TU, UNI and WU of Vienna/Austria

http://www.plbg.at

©Franz PLOCHBERGER (2013)
SUBJECT – OBJECT – DATA

The traditional philosophical terms „Subject“ and „Object“ out of Old Greek roots in their original meaning are still valid in our times:

**SUBJECT**

(= human being, living organism)

- other organisms
- electro-chemical, biological energies
- notices e.g.
- items, artificial systems, physical data carriers
- letters, numbers, pictures...

called all together by one term as an

**OBJEKT**

(= alive or genuine material)

and may create

living, biological, live, scripts, notes, IT- or documentation-

(all together)

**DATA.**

Diagramm 1
SUBJECT - INFORMATION - SUBJECT

SUBJECT  
human being, living organism

gets

INFORMATION

OBJECT (living or material)  
fact, organism, item

DATA

stores

by direct dialog

in predefined structures

about

direct from

indirect from

in new created notifications

in form of

direct in

Diagramm 2

© Franz Plochberger, 2013, Information Scientific Axioms
Information Scientific Axioms (IA)
First publication: F.PLOCHBERGER (2012)

The way of thinking is **bottom up** from practical experiences over decades in IT to theory (Information Sciences, Philosophy). The mental cut-set seems to be scientifically usable even historically.
The usage of the term **axioms** is nature scientifically, factually founded. Information Technology (IT) has born them. IT is the nature scientific (physical, software-systematical) source. A philosophically-logically reasoning between them is not necessary. These axioms are given assertions. Their content got important in our Information-Century but they are no new constructions. These axioms are logical true assertions (in the rules of legacy propositional logic).

- **IA 1: Data describe an Object.**

Date are here divided in only two main groups:

a) written down, materially existing, dead Data
b) living Data, in living data carriers = organisms

Between a) and b) one single connecting subset is helpful: “1:1-Data”, “Natural Data” or “Documentations”.
Any further structuring has no sense here, because it’s too manifold. It’s depending on uncountable applications and objects.

- **IA 2: Information is that content of an Object (or of Data) which is interesting for a Human Being.**

By this definition “Information” gets usable uniquely (in our time and historically). The “relation to the Human Being” is a logical necessity. Indirect Reasoning is definable: **No Human Being -> no Information.** Human Being is here used as a synonym for all entities – graduated by their evolution-biologically status. Information is founding a relation of a Human Being to “something recognized”. Information doesn’t have to be more exactly defined but is so valid as an existing word for something existing.

Data and Information are exactly separable.

- **IA 3: The value of Data is given by their included Information.**

Advantage of these axioms: General validation in all sciences, especially in Physics too. SHANNONS Information theory evaluates to an enumerations of Data.
Information Scientific Postulates (IP)
Following Information Scientific Axioms

- **IP 1: Human Orientation (HO) of IT**

  Is the direct consequence of IA2 (necessary relation to human being). User Centered Design (UCD), ISO 9241, Human Computer Interaction (HCI), Ergonomy et al. are known impacts in actual IT, but in my thinking not enough general or efficient. Mind and soul got conquered by IT. A new paradigm challenge in our way of thinking – not only by market predefined little steps – is necessary: The Human Orientation (HO) of IT. The human being in his cognition-evolutionary and biological borders has to be pointed out as most active agent and as only deciding and creative part of IT.

- **IP 2: Principle of Continuity**

  Source of it is the human Organisation (according to C.MATURANA) and the human agitation. Nerve-systems and blood-circles, the most important information-carriers in our human organism, have continual principles of operation.

  What's missing? E.g.:
  - Incompatible challenges of hard- and software cause economic damages.
  - Long-termed maintenance of electronic data got very complex and uncertain by incompatible development breaks of IT-instruments (computers and media).
  - Sociologically inappropriate challenges in working area got important by bad usage of IT: e.g. permanent unemployment and rising difference between the poor's and the riches seem to be already accepted without generating new anti-strategies.

- **IP 3: Using the word Information needs more scientific differentiations to get valid**

  This word is used very often in our life. We say it for something new, not defined, but interesting. On scientific level it's therefore also used very much, but we have to expect a more definitive item for that new thing what's interesting. Otherwise we lose it again in our memory. We need at least a new name, differentiated to legacy items or defined in a new way.

  Follows direct IA1-3.

  Data for their own can be seen as objects too.
Literaturverzeichnis


B. O. KÜPPERS (1996), The Context-Dependence of Biological Information, K.KORNWACHS & K. JACOBY (Eds.) Information. New questions to a multidisciplinary concept (pp. 137-145), Berlin, Germany, 1996, Akademie Verlag

G. MAHLER (1996), Quantum Information, In K.KORNWACHS & K. JACOBY (Eds.), Information. New questions to a multidisciplinary concept (pp. 103 - 118), Berlin, Germany, 1996, Akademie Verlag


C.W. MORRIS (1972), Grundlagen der Zeichentheorie, München

Gregory BATESON(1985), Ökologie des Geistes. Anthropologische, psychologische, biologische und epistemologische Perspektiven, Frankfurt am Main, Suhrkamp


http://igw.tuwien.ac.at/igw/menschen/hofkirchner/papers/InfoConcept/Informatio_revisited/in-format.html

F.W. HAGEMEYER (1979), Die Entstehung von Informationskonzepten in der Nachrichtentechnik, 1979, Dissertation FU Berlin

G. KRAUS(1972), Vorlesungsverzeichnis Telegraphie, TU Wien, etwa 1972

Eigene Home für HO http://www.plbg.at

Franz PLOCHBERGER (2012), Kontinuität eine neue Forderung der Informationswissenschaft, Eigenverlag, 2011,
http://www.plbg.at/Werke/deutsch/Kontinuit%C3%A4t,%20eine%20neue%20Forderung%20der%20Informationswissenschaft.pdf

© Franz Plochberger, 2013, Information Scientific Axioms