



Information Science and Philosophy

A science-theoretical Comparison

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A human thought is founded in the whole knowledge of an individuum. First definitions especially, which want to get exact and permanent valid fixings by one single human mind, need a mental corresponding, wide research borderline of that single person. They stay always an individual view and are a real mental adventure.

Author

To my daughters Clara und Isabelle with love!



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2. Abstract

Looking out of Information Science (IS) it's a dangerous attempt to compare this relative new science direct with Philosophy. Here you find a first circumspective trial of an investigation of the traditionally named "queen of science", **Philosophy**, two thousand years old and - direct opposite - the only a half century old **Information Science**. For me it is till now not yet clear how to do this in a serious scientific manner. I worked in Applied Informatics for 30 years and make Information Science since about 15 years. Here I dare to publish for first time the results.

SOKRATES (469 – 399 b.Chr.), PLATON (428/27- 348/47 b.Chr.) und ARISTOTELES (384 - 322 b.Chr.) as inventors of our traditional occidental Philosophy, have founded the search of the sense of our Human Life, Thinking and Acting as an own science. They set the Joy of Life on top of their way of thinking. PLATON has separated this special new thinking from the „Sophists“ who had a very good public image too at his time. But they were thinking more about common business facts and knowledge only. Today we would call them manufacturer, qualified skilled workers or even bachelors of special sciences.

Philosophy has (since over 20 centuries) till today first of all the smart and high duty to serve Religion and Ethics as mental, spirit- and language-grounded science-base.

In other direction it was used to overthink our whole surrounding nature theoretically and completely by our best Human Mind. It's our traditional science on our mental highest level. All sciences can be related by Philosophy. That's possible by our human ability to Learn, Think, Understand and finally Know any interesting new fact.

Where and how do we have now to integrate this new own science **Information Science**? We search consciously term-oriented and make an abstract science-theoretical comparison to find answers and definitions.



3. Terms, Search Items, Key Words

Knowledge, Consciousness, Truth, Information, Information Science, Philosophy, Science, Subject, Object, Storage, Data

4. The used terms and their descriptions

We can't create an all including, for ever valid accumulation of attached terms of course. In best case we can create a consciously, thematically oriented amount of the most important semantically similar terms. The author uses common, worldwide known and senseful usable, singular Primary-Definitions. A mentally deeper going, widely branched discussion of all of them will come surely but is now not yet senseful. First of all, the author wants a comparison of terms and principles of two sciences on highest mental level. New, branching cognitions and a scientifically satisfying overview are the goal.

4.1. Information

This word got an important term in our time and needs therefore here, first of all, a special attention. It gave our age a special name: „**Century of Information**“ and a little bit wider „**Digital Age**“.

The adjective „**digital**“ comes from the retrieved mathematical number system of two digits. Together with BOOLE's Logic – named by **George BOOLE (1815 - 1864)**, an English Mathematician – it's the mathematical base of our actual Software, Data, Hardware, even our whole world of business. **Claude E. SHANNON (1916 - 2001)**, a leading Mathematician of his time (around 1950), realised that this two-valued BOOLEs Logic and the common usage of the digits 0 and 1 matches the mechanical switch-process of „On“ and „Off“ perfectly. In BOOLE's Logic two values of a verbal sentence (an assertion) „True“ or „False“ get important. By these two scientists, George BOOLE and Claude SHANNON, the logical fundament of our Information Age or Digital Age was found and founded.

The noun „**Information**“ is much more layered. Especially if you want to give this noun a worldwide unified semantic.



A detailed etymologically and semantically research of this word was started – indirectly by **C. SHANNON**. In about **1948** he wrote a mathematically very narrow formula for it. He used the mathematical probability for it and was for short time in the area phones and channel-systems very well known - worldwide. But besides this Physicist other scientists soon criticised that probability-formula as semantically too narrow. Because of this even a new science - **Information Science** - was founded some years later (about 1968).

In **1978** wrote **R. CAPURRO** (* **1945 in Montevideo, Uruguay**), **Information** (<http://www.capurro.de/information.html>, see **R. Capurro, Information** in References) a philosophically, today information-scientifically important Dissertation at Universität Düsseldorf. He researched this term etymologically and philosophically very manifold and more exact than anyone before. A lot of historically uses of the word and term Information can be found in it – as we used it in our whole European History of Mind since Socrates. He made by this work perhaps one off most important basics for actual Information Science till now. It's typically till this time that Information was classified by different attributes (f. i. in R. Capurro, Information: p. 37 *informatio materiae* or p. 39 *informatio sensus, informatio intellectus*).

At about **2003** the author of this article you read started personally to follow this new goal, to define the term Information worldwide unified – but as a single noun. You can read his results under [Information Scientific Axioms](#) and find it in References. In it the term Information gets **bound directly to usage by Human Being as Subject**. The author wrote the kernel sentence:

“The Human Being (or in reduced form every living organism) is a necessary requirement (premise) for using the term Information.

Or:

The Human Being only is able to use Information. Without any relation to the Human Being the common unified term Information makes no sense and has no value.”

This sentence is a logically assertion – besides two others. It's always true = given by nature. Therefore, the author named it **Axiom: “By Information all recognitions and reactions (responses) of a Human Being in connection to surrounding nature (= all objects) are named in an elegantly way”**.



Another formulation is: “**Information is all what human senses and movement organs can recognise consciously, what a Human Being can treat by his mind and what he/she can give back as response to his naturally surroundings.**”

By „all“ is meant: all Living, Conscious and Mental, all what *flows out from or into* Human Being.

This very common form is for the author the single possible one only. He uses it personally yet over decades and has only positive experiences. A confusing, disturbing discussion with uncountable versions of the term Information can be finished by this definition. It was possible for the author by working in Applied Informatics in pioneer times (1978 – 2003) over 30 years.

Finally, by these definitions it's possible to separate very exactly the terms **Storage and Data** from the term **Information**.

One important condition is the **conscious recognition (by Human Being)**. It's a verbal definition, which hits most appearances of Information. But it can't be defined exactly by Psychologist and Brain Scientists. So, it's a borderline too.

You realise – genuine scientifically - these Information Scientific Axioms are postulates only. You are right. But the criterium is: Information is given by Nature. Therefore, the scientifically classification as Axioms is a basically important value for Information Science. That's a new scientifically fact.

4.2. Data, Storages

Besides the term Information that of **Data** or **Storages** were used since about 1970. They were new in arising IT (Information Technology) in a rich amount and were used very manifold in all publications.

Data can be defined clearly as „**Storages of Information (it has no form)** “. Data need a predefined form, because that's the condition for being treatable by computers.

In other direction - **Information out of Data - the Human Being is necessary.**



So, these most important terms of Information Science correlate – simply and powerfully, or **philosophically defined: true = in real world so existing.**

Besides, the author wants to underline or excerpt (only) **one special set of Data** in the uncountable amount of (structure-) forms:

Living Data

This term is as new as Data themselves. All data which are stored in living organs are named so. **All are existent in Humans or any other living organisms. They are between living organic cells transported signals, molecules or ions, which are living too.**

These data can't be read by human senses of course because they are already in human body but they can or will be recognised by our **consciousness** – then they are Information. These not yet consciously recognised Living Data can be shown as biological facts in modern Brain Science or Neuro Science. The real biological process of getting conscious to our brain is a very much discussed topic in actual Neuro Science. See later in chapter 4.7. Consciousness.

But now, to word and term **Data**. They got important by finding the Computer. We use the noun in plural. The Latin origin is „datum“ (the given) and was known before as calendar date only.

Conrad ZUSE (1910-1995) built at about 1940 a first programable (=steerable) Computer (Z3). The new fact was that a stored, formal structured text (**Program**) could steer an electro-mechanical machine (the Computer) and **separated, imported Data** could steer the program as wanted. Not switches – as before – only text steered a machine!

Data together with Programs were called **Software** – separated from **Hardware**, which got the new summarising name for the electro-mechanical machine. **Data** got - together with Hard- and Software - the third main part of a computer. A new science was created - called Informatics (Europe) or Computer Science (Northern America). Their importance rose in our times immense as we know.

These three compounding terms (**Software, Hardware and Data**) are in our actual IT (Information Technology) equally important. They are clear and used today (in 2018) very much.



4.3. Human Knowledge

It's the fundament of every **Science**. It makes sense to look more exactly on this. By the new defined terms of Information Science, we can make a new elegant definition:

Knowledge is the storage of Information in a Human Being.

This definition is a positive signal of up to date Information Science.

But: Is it already complete?

Knowledge is a well-known term in Philosophy - since Socrates. At his time no written papers were used, living verbal dialogs only. His student **Platon** started to write down his mental rules of thinking. Platon bound Knowledge together with Idea. His term got very special: we could say „the mental side of something, the mental imagination or the mental picture, which have to be separated from the physical object “.

The term Idea is used today mostly for a „new thought, a new invention or a solution of an unsolved problem.

Generally, our amount of Knowledge – mainly in Physics and Biology – has grown immense. Knowledge is still a mental term but we differentiate it very manifold, f. i. how to get it, how to keep it and how to store it for long time. Our Humankind has created a much more complex and true access to nature by that term.

We defined the biological organism and space, where Knowledge is stored as our **Memory**. Till now we know, that it's a Net of biological Neurons in our brain – not more. Platon had still defined it as Soul.

Still constant and valid in Human Philosophy since first appearance is the importance of the term **Truth**. Platon differentiated in his *Analogy of the Divided Line* the term Opinion (no or partial truth) from Knowledge (look **Michael BORDT S. J., PLATON, 1999** in References).

It will stay open for our genuine, latest knowledge to get at any time finally definitive and logically completed. For every serious scientist of our time it's clear that no Human Being can ever know all. Best levels we can reach are little, staying basically connecting collections of thoughts and theories out of them. These will stay **for some centuries** and then will need to get rearranged in parts or generally.

Since **Johannes Gutenberg (about 1400 – 1468)** and his finding of Book Printing (1450) the **Storage of Knowledge** got basically easier. By his „Printing Machine“ books could be



printed very easy, the amount of printed books arose immense. In actual terms we can say: the amount of *Stored Knowledge* arose. Of course, this knowledge had to be read too, but the **Access to Knowledge was generally possible for more people.**

In present times superficially, we mix up genuine Knowledge with „**Stored**“ Knowledge.

Latest Information Science defined that clear as a separated term: **Data.**

The amount of that is growing in actual times permanently and can't be bordered.

What stayed, is the **Demand of Truth.** We still need a congruence with whole nature. Die amount and complexity if all stored Data need the trust in knowledge and scientific reputation of Scientists and first of all **their own ability for critically judgement and selection for deeper differentiating research.**

Later, after the Age of Enlightenment, about 1800, the state of Human Knowledge grew to the experience and decision that no Human Being can know all. The whole existing Stored Knowledge of our times has the form of Texts, Acoustical Storages, Graphics or Pictures. The **treatment with Knowledge** has changed. The genuine Knowledge (= stored in memory of Human Being) has to be separated from that in digital media (= Data). But Human Knowledge stays important and precious for whole science. Some people can store more and some less of it in their living memories as precious Human Information. In present times we learn that digitally stored data are much more than one individual person can store and all Human Beings together perhaps can't store all of them – in one moment in time.

We see, by consciously learning and repeating got Human Knowledge has to be permanently refreshed or used. Otherwise it diminishes in biologically naturally habit. Permanently Learning and Refreshing of own Knowledge is a necessity for whole of our life. But permanently refreshing of the state of our knowledge got much easier by digital data. It brings sense to our life, brings new experiences and self-confidence.

In a new way we can reread Data - in a rich way structured and stored. F. i. **Internet** is reachable by every Home or Mobile Computer. Actually, we have to „reorganise“ our whole world of work and mind – but we don't have to fear the future of our work and life.

Let's make a summary:

The term **Knowledge** has to be seen as Human Knowledge or Genuine Knowledge. It has to be separated strongly form the term Stored Knowledge or Data.



(Human) Knowledge is living and a precious treasure of one single, individual or all Human Being. **Stored Knowledge (part of all Data)** is materialistic and we can't border the amount of it.

If we use the word Knowledge for both we lose the way of thinking in regular science and start a new hubris for Mankind only.

4.4. Thinking, Understanding

These are further, central kernel-elements of Philosophy. This method of new thinking by new terms comes from Information Science. So new buildings of theories get structured and easier to understand. Logically equal ways of thinking can be trained and permanently controlled and made tuned.

Latest Informatics developed special Software packages, called **Software Design and out of it Artificial Intelligence (AI)**. **Repeating sequences of thoughts** can be elegantly analysed, structured and stored. So, the Human Being can take that results for same problems. The production of equal objects, f. i. in broad chains of automata's can be made easier.

But, this condition of **Staying Unchanged** is bordered. All changes in time have to be changed in Software too. That needs knowledge of exact state of an AI-System. A specialist in that system is necessary - with learned skills. A new profession, the IT-Specialist was born (the author was one of that pioneers over 30 years). This profession is a high mental challenge and needs analytical and creative abilities. It will be important and good payed in future too but needs the permanent ability to change.

A big question for our social world is how we can bring the workers which lose their manual jobs by that automata chains into other professions. The industrial word of work will be much more manifold in future – every worker has to be much more flexible. Fix working places may get rare.

We have to create financial systems which have to give money from serial-productions to that which have to get prepared for a new job and have to learn it. Legacy chamber-systems of owners and workers will perhaps lose their right to be a useful member of a state. The skills and abilities and will to work will be much more important than the amount of money



one person owns. Otherwise we have to expect new social revolutions which disturb our public organisation and social peace.

Besides, about AI-Systems actually a lot of fascinating stories are written in all media. It's a good food for talented story-tellers – but no one makes solid plans.

AI will never reach the intelligence of a Human Being. It's made by Human Being. All Science Fiction Stories about Computers are fascinating but no real plans, even no visions.

So, these kernel-elements – Thinking, Understanding – get more and more dominant in our world of work. Because of complexity of ought Know How we have an undeniable condition: **the specialising of our knowledge and the learning of it. So, we have to get (temporary bordered) skills and need the joy to learn that.** The old differentiation between Philosophy and Sophism is still valid – we have to get Sophists too.

Inside of IT-Specialists we got two great groups:

- a) that of IT- Specialists, who **create new or maintain legacy IT-Systems** and
- b) that of IT-Users, who **use these IT-Systems**, like a tool.

Both groups (Developers and Users) need different requirements in their Thinking and Understanding. IT-System-Developers have to create their Software systems with the goal that IT-User can use that without (Di-) Stress and get joy in using them. That's one of most important rules in world of actual IT. In actual times very successful little APPs (applications, small programs) for Mobile Computers or Smartphones make it easy to learn, write and use them. So, this gap between Creating and Using gets smaller and that roles can even be changed.

4.5. Speak, Transmit

Both are genuine Human needs. Procedures in our brain lose their sense, if they can't be translated by language to others. On lowest level we want to write them down on paper or into a computer. Thoughts are results of our mind and we want a control of their value by talking about them with other people. The Human Being needs the Saying to structure his thoughts. Before saying, a Human Being makes an order between them. If they are too much he/she writes them down and "organises" them.

This Speaking is a sign of mental retrieving and finished sorting of recognitions and Information's. We get joy and self-consciousness if we can transmit our thoughts to other people.



And, a new danger for Human Being is rising too: **the isolation of every single Human Being**. We would like to see our speaking partner directly and would like to see, smell and feel all his reactions. But, our IT has separated us in all our living world by partially connections (graphically, acoustically and optically) only. We realise that now – after we have learned to live with IT-media without fascination.

We can send more messages (graphically, acoustically or optically) to more people on more places in the world but our biological evolution can't follow our knowledge. It's like sugar which hurts our teeth or our lack on motion which hurts our spine and blood circulation.

4.6. Direct Interhuman Dialog

Is the most precious – but actually most endangered – value in our actual human society (2018). We know that we live in a biological, permanent dialog to our surrounding (**Human Communication by Paul WATZLAWICK (1921-2007)**) but our senses get in little pieces diffused and our mind in little parts frustrated by actual media.

So, it stays important to take care on the **Form of our Communication**. Till now we are proud to have connections to many persons on many places. But we have reached the geographic borders of our terrestrial world. It makes no sense to dream from unknown Human Beings outside of our planet earth - we know nearly all of them. We can realise that our conquered Macro-Cosmos is physically exiting but we can't find new people – even no real life. We have to rethink our research interests.

This Digital Age or Age of Information brought a big new danger: **our personally isolation**. Cars are occupied by only one person, in buses, trams and railways all passenger read in their Smartphones or talk loudly with people which other people in the train can't see. The eyes and ears of one person are used biologically permanent - but separated and not coordinated. The Human Being in his every-day-life is permanent working and stressed.

It's main goal of the author to underline the value if a **direct interhuman dialog without usage of media. This is the best and most precious form of communication. The dialog** is since birth of Philosophy in Old-Greek Antique an important element. **This social aspect is endangered by modern IT- and Media and enforced badly by short time hypes.**



Information gets most precious if it is exchanged **in direct opposite position between the communicating people by whole body** and without technical instruments. Even most up to date media diminish the value of given and accepted Information. So, we should always take care of it as we eat Bio-Food in our kitchen.

4.7. Consciousness

.. is a deciding criterium for Information. As written sometimes before it's a border-criterium. If consciousness is active, it makes sense to talk from Information – if not, we can only call our Human activities **Living-Data-Flows**. Out of modern Brain Science and Neuro-Biology we know that our system of nerves (centred in brain and stomach) sends permanent Living Data (electro-chemical signals, chemical ions and molecules) in the Neurons and Neuro Transmitters in the synapses between them. Neurologists called that the permanent Axon Flow. If we work intensive and many times with an object then our nerve-structures get finer branched and tighter. This was f. i. very early found, about **1948**, by **Donald O. HEBB (1904-1985)**, a Canadian Psychologist and Neurologist, see References, p. 62).

Especially in our brain we have Neurons, which transport Living Data in both possible directions (Sensual Organ – Brain Centre). The forces for transport come from electric potential-differences between the single Neuron-cells which drive the single Ions. In the Synapses special forms of very small living objects – Neurotransmitters – are moved from one Neuron to the other. Moving in both directions are possible. Exactly this fact seems to be shown for first time by **Viktor A. F. Lamme (2004)**, see References p. 468, Fig. 4. He described biological criteria for consciousness: the flowing back from centre of brain to the sense organ. Living Data is flowing from sensorial organ (f. i. eye) to the brain centre for seeing. If this neural connection gets so strong that Living Data can flow back then the ability for consciousness is given biologically. That's for us a very welcomed criterium. After that moment the moment of mental consciousness must come – but itself isn't clear till now. Clear is: this happening is after our Neurons fire in both directions.

In actual stage of knowledge – the naturally arising of Knowledge (= a special form of Information) is a still very complex and interesting procedure in our brain. Who likes to go deeper is invited to look the **Video von V. A. F. Lamme (2014), When is a neural representation a conscious one?** (Link in References).



4.8. Truth

To find it is the basically goal of Philosophie. We know, the truth only satisfies our mind and makes us long termed happy. The **Aspiration of Luck and Satisfaction** is the most precious value of our Human Life – it's fix correlated with the **Aspiration and Finding of Truth**. We declare it as **Agreeing with real Nature**. That's the „holiest“ or „mental highest“ term in Philosophy. Aristoteles defined that for first time. In Post Modern Philosophy a lot of definitions of truth are made – f. i. **Jürgen Habermas (* 1929)**, a German Philosopher and Sociologist wrote even about *Theories of Truth*.

By our new-found term of Information, we can elegantly structure that problem and make it easier to understand and usable:

Information is in its origin a living part of Nature, so **by itself and originally always true**. The Human Being and his Consciousness are necessary preconditions of this term. But the Human Being by his intelligence has the mental ability too to change Information consciously. He is able to make it consciously untrue = false.

That is possible

- a) by tactical, strategic („conscious“) reasons,
- b) by biologically disturbed (ill) origins or
- c) because of mental impotence (Silliness).

Out of these follows: **Information is got truly but can be changed by our senses, our mind and will consciously in its Value of Truth**. In special cases of another sensual cognition of some animals (f. i. seeing of bees) in difference to Human Being another Information is real. But it is Information too – for that special species of course.

We can define confidentially: **The Human Being defines the truth of every Information**. Included are Religion, Ethics, Moral and Justice in their legacy rolls as we defined them in our Human Society.

Truth and Information are not fix connected, but:

Truth is a basically valuing Attribute of Information.

We can't fix more. Finding of Truth stays a genuine philosophical challenge for Human Being.



5. Philosophy, generally

All in chapter 4 written terms are now a little bit clearer explained. They are welcomed kernel elements of classical Philosophy. Now we ask: How is Information Science comparable with Philosophy? Are they equal, are both valid or are both sets of each other?

Genuine etymologically the word Philosophy comes from Old Greek. It can be translated by words as „Love to Wisdom“. It's the highest form of mental Human Thinking after Theology or Mysticism. Today Theology is not welcomed, because it needs personally positive experience of the world over our real world - only by repeated trying to get mental connection to that world (God). She reaches that not direct in a logically way. Getting positive answers from that „Power over us“ needs more than our realistic thinking, it needs total connection of body and mind (by the own soul). That isn't a learnable treatment – it's a grace got by mental love to that God. The actual rational thinking of Human Being is fascinating more. Latest results in Nature Sciences are permanent sensational and exiting. The modern Human Being has lost the connection to the level over Human existence. But only that can really satisfy Human needs for long time (even eternally).

The way to get in permanent contact to God by Religion can't be learned like common knowledge - it needs Human love and fine feeling by own soul. Soul is more than mind - it includes all living activities and intentions. We can reach higher goals only by using the whole own soul. That is too complex for modern Human Being if he/she didn't get any positive experiences since his first moments of life. The typical modern and not religious Human Being can only find that area by life-crises, by experiences of his Human borders.

Philosophy stays a mental and rational bridge. In Postmodern Style many parallel, manifold sequences of philosophical thoughts are existent. They stay as long as they are up to date. In comparison to Religion their amount of knowledge is permanent growing. Religion has a legacy basic amount of knowledge. Philosophy allows manifold sequences of thoughts. They have to be consequent and logically - only. If we exclude Theology as experienced science with personally bindings – we have Philosophy only. That is actual „modern and postmodern“ state of the art in our mental life. Theologians exclude them self from Nature Science and are vice versa seen by Nature Scientists as not logically scientific.

Only Scientists with personal theologically education and positive experiences can be seen as „Keeper of the Holy Grail“ of eternal truth. For every Nature Scientist Theology brings



happy feelings and strengthening of his soul if he/she got lovely, personally entrance to it since his birth. If a Scientist is educated with critical annoying of all in connections to Religion, he/she will try to stay in that meaning. An educated Atheist will always get happy in finding arguments against God - an educated Theist will do the opposite. In genuine Philosophy both have the right to exist.

6. Information Science (IS), generally

This IS as own term exists since about 1968. She was published at that time in a script of **Association for Information Science and Technology** by **Harold BORKO** (see References):

„Information science is a discipline that investigates the properties and behaviour of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability. It is concerned with that body of knowledge relating to the origination, collection, organization, storage, retrieval, interpretation, transmission, transformation, and utilization of information. This includes the investigation of information representations in both natural and artificial systems, the use of codes for efficient message transmission, and the study of information processing devices and techniques such as computers and their programming systems. It is an interdisciplinary science derived from and related to such fields as mathematics, logic, linguistics, psychology, computer technology, operations research, the graphic arts, communications, library science, management, and other similar fields. It has both a pure science component, which inquires into the subject without regard to its application, and an applied science component, which develops services and products. “

Typically, it's readable that at that time it was only possible to describe that new science by many and manifold terms for the word Information. The form of definition have been a sequence of examples of usages – so a lot of describings was created. It was clear only that the at that time mainly used definition of SHANNON's Information Theory was too narrow. The mathematically-statistically formula was not enough for that word. Today the facts of our Information-Society say that was OK.

The author learned Informatics in industrial usages and followed this new trend with great interest. He is still fascinated by

„Science, which researches all around the word and term Information “.

He „found“ that simple fixing and is happy to use it. It's not manifold – it's worldwide unified usable in that common form. The knowledge of Humankind is growing – so we can talk on a scientific level clearer and better.



7. Relation Information Science – Philosophy

Now we can get - easy and clear like a pictured book for children – a relation between our two sciences. We realise the logically proceeding by defining of terms. They are valid and usable in both sciences.

In genuine mathematically thinking we get

Philosophy as a superset of Information Science.

The philosophically new-recognised terms „Information“ and „Data“ structure the otherwise not comprehensible amount of words of manifold nouns and attributes – for first time. So, this work can set a scientific impact. In elegantly way empirically found terms with many tautologies can be redefined clear and fundamentally.

7.1. Same goals?

By historical evolution that can't be seen. Philosophy is as science “over” Information Science but Information Science has other legacy goals.

Information Science is an Applied Science and has new Theories – Philosophy is a Theoretical Science only and has no goal of (sophistic) usage.

Information Science is used for a lot of sub-sciences like: Mathematics, Informatics, Electronics, Physics, Sociology, Communication Science, Human Biology, Psychology or Brain Science.

7.2. Which science has more value?

Both are precious – Information Science is nearly a summary science too but not so wide as Philosophy. The Old Greek differentiation Philosophy and Sophism is still valid – Information Science belongs to both.

7.3. Where do these sciences overlap?

As described above – Philosophy is a superset of Information Science. Philosophy does not want to think about practical usage and nature scientific realisation by f. o. artificial elements.

Really new are the terms Information and Data as philosophical terms.

- a) Information (as worldwide unified valid noun) and
- b) Data (as „technocratically“ newcomer).



Information Science brought other important topics:

- a) **Consciousness**, as neuropsychologic factum,
- b) **Communication**, out of nearly forgotten, evolutionary duty or
- c) **Direct personally Dialog** as staying source of Human-social energy (naturally joy).

7.4. Which mental influences are facts and important for future?

Two points only the author wants to mention here:

7.4.1. Real dangers in Digital Age

- a) Our body is not yet fit for latest technical challenges. Human evolution is too slow (f. i. over strengthening of our brain, loss of feeling for time, bad usage of our spine by sitting at computer),
- b) not recognising of new dangers (f. i. pathological gambling), changes of moral values (f. i. not recognised danger of power gambling) or loss of creative individuality,
- c) change of social habit (lack of motion, loss of joy for using of own muscles), loss of individual hobbies and activities in free time (f. i. sports, arts and culture – all active and passive),
- d) no critical energy for bad ethic moral influences, new media are fascinating but can isolate single users,
- e) loss of social communication and no intention for finding ethic moral bindings (healthy social hierarchy, individual habits and abilities, differentiation between good and bad),
- f) possible missing of individual verbal intentions (personally dialogs about own hierarchy of values), lack of control of values of sources of Information,
- g) consciously bad use of IT by Data falsification (Cyber criminality).



7.4.2. General advantages for all sciences (including Philosophy)

- a) More conscious and manifold organisation of free time by quick and easy access to necessary data (maps, plans for traveling, prices),
- b) Online Banking or Online Shopping can promote better personal and individual decisions,
- c) Open Source and Data make access to science and education very easy,
- d) Internet access to common stored knowledge (f. i. public administration or libraries) can organise that very clear,
- e) generally, every new developed IT-Software System can be changed as ought by whole company, according to organisation of it and abilities of money and time.



8. References

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