



What is Artificial Intelligence?

An information scientific Research

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Vienna in Austria, in May of 2023

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1. Dedication

This work is dedicated to my two loved daughter's.



2. Abstract and Motivation

In our **Age of Information**, the new catchword, **Artificial Intelligence (AI)** gets established more and more. Till now I heard in this context the term **Digital Age** or fitting for our children the combination **Digital Generation**. So – how to understand this catchword?

This term **Artificial Intelligence (AI)** is a very comprehensive one. Journalists or public speakers use it actually very often, because it includes all what sounds up to date and interesting new - in life and work. Most of us know: Information Technology (IT), and Industrial Production by robots are involved. It's fascinating but not yet exact understandable. This term is not new; it was created about 1950 in USA but it's content gets just now in center of actual IT-world.

Scientific thinking people need and create more staying and definitive terms. They want understand connections to the original reasons.

Therefore, I try in the following text a discussion of some headwords in this connection. We need to know, what AI is.

3. An Overview

- Common description of the term AI
- Some more characteristic keywords
- Pointing out of storage and fixing
- Determination of sequences and repeatability
- Unconditional binding to Human Being
- Unconditioniinal basic requirements in usage of AI
- Human Rights and Ethics generally
- Regional and global laws stay valid, but have to be updated
- That shall be all yet

These orientations are pointing the way ahead - in their shortness, but – one step deeper – just yet differentiating. It's not possible to make more differentiations, because the abstraction would be lost. This work wants to help understanding AI and reduce fears, which actually appear more and more.

We don't want and can't escape AI, so we should learn how to use it!



a) Common Description of the Term AI

Two words are rethink able generally: **Artificial** and **Intelligence**.

The content of both is a contradiction.

Intelligence is per se not **artificial**. It's a significant characteristic of a Human Being, as biologic species and it's living. This contradiction stimulates and frightens the world of science and work.

The reason for using the word **Artificial** is a necessary new state of science. The content of this whole new term is a materialistic and real object. It's a really existing sequence of computer commands (genuine Software) or an in any way stored and materialized instruction for steps of works (f. i. for a machine chain of robots, in form of Hard- and Software).

The word **Intelligence** points to an attribute, which is possessed by a Human Being only. We can neglect in this connection all forms of living intelligences of animals in our whole nature in a lower and differentiated way. Intelligence is – strongly thought – living and permanent variable.

A storage of Intelligence in Human Knowledge or by writing down on paper is well known. It's done by Human Being and creates – as we say in Information Science – Data. If you are interested more background, look at my publications on last page of this work.

Human knowledge is called Living Data, written down knowledge or Information is called Dead or Materialized Data.

Normal, not living Data is in that way always **artificial**. So this new term-combination is really necessary.

b) More, characterizing Keywords

- Modern, up to date, actual
- Industry, World of Work
- Computer (Hard- und Software)
- Half und fully automated Production in Machine-Chains in Industry (**Robots**)
- Complex structures, their contents are known by their creators only
- Dangers appear, when we don't know all new follow ups



- Positive is, that we can create products in a great amount and cheaper.
- Danger of abuse, if conscious, criminal intentions appear – but that's known in Human Society
- State has to update his laws permanently to avoid damage.

c) Point out of Storage and Fixation

Because we already know, that AI is something real and recognizable, we now look at the **Storability**. This is well known for genuine Software and Data – already valid.

In Information Science (look at appended literature) is Written-Down-Knowledge a form of Data. AI is first of all Data to steer Computers, but can be even more. It can be all fixations (instructions) too, which steer even whole chains of machines (robots).

Every storage of Information is a Fixation on Storage-Media to steer Hardware. In Information Science we call it a **fixed, artificial IT-System**. We get a synonym of AI.

Finally, we shouldn't forget the **Human Being, who is an urgent, necessary condition**.

d) Fixation of Sequences and Repeatability

By appearing of the Computer und his steer ability we found new correlations till our time. In line by line or step by step written down Programs or Production-Sequences a lot of new **steering, equal-staying Sequences** were created.

These are the basics for automatically Production-Follow Ups of machines. Lot and manifold possible Differentiations and Variations can be included and fixed in these Sequences.

These can only be created by an **intelligent Human Being and fixed to AI**. He can create it new and his intelligence is definitive included and fixed. Every necessary change of it needs additionally the knowledge of the original creator.

We say – colloquially – AI has a certain Intelligence (inside stored). It's the Intelligence of a Human Being in fixed, „sequenced“ form. When the Human Being needs the same product again, he doesn't have to repeat the whole creation process again, he only has to start this AI. This **repeatability** is the big profit of AI.



A certain mental **binding of a user of AI** to its creator is urgent necessary. The Human Being who is starting (using) AI, has to know what his AI is doing. He has to be trained by the creator.

e) Unconditional Binding to Human Being

This is an important discovery. The Human Being can't be substituted by AI.

The Human Being is

- **Planner und Constructor,**
- **Employer and**
- **User**

of all parts of Artificial Intelligence (AI). Without Human Being AI is useless.

f) Necessary Basics Using AI

The really intelligent Human Being has created a Set of Rules, which he calls „intelligent“, because he don't have to create every single step again.

But he has to know,

- **how he starts AI,**
- **what his AI needs for running correctly and**
- **which and how much products he has to create.**

g) Human Rights and Ethics, generally

By inventing the first working, steerable Computers (Konrad ZUSE, at about 1941) we had to learn a lot of sociological developments around this new technical device. We realized,

- **how proud the inventor was,**
- **how usable a Computer could be,**
- **which general new discoveries in Science and Society were found and**
- **even how dangerous Information Technology (IT) can evaluate.**



In last month's a lot of new AI was created, which was so effective, that we couldn't notice the real creator: was he the Human Being or one of another one created AI.

„**Fact or Fake**“ got a new challenge. That even may get a new profession too.

Every state with his social and Human laws stays further on stimulated, to update his laws. Technics and IT can't make the Human Being to a good member of society, it can only renew his world of work and life.

h) Regional and Global Laws stay valid, but have to be renewed permanently

It's our duty as confident scientists, to motivate every state to assimilate his laws to latest levels of technics. In last decades we realized how much errors we made in our natural environment since 150 years. We have to leave a better world for our children!

i) That's yet enough!

Why this?

So it's a little bit provocative, but the style of science – exact and conscious working – is necessary actually for AI.

It's irresponsible and not resident to try to explain - as single little mind - all actual existing variations and implementations of AI. Only main wrong ways and explanations can be prohibited. **AI is generally worthy of our recognition in a confident way.**

4. Published works

- ❖ Franz Plochberger, Information scientific Axioms, 2012,
Link: [Information scientific Axioms \(2012\)](#)
- ❖ Franz Plochberger, 2016, Human orientated Paradigm,
Link: [Human Orientated Paradigm](#)