"Understanding that ChatGPT does not understand me" – AI unplugged part I and student´s concepts of human vs. machine learning

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This abstract Is part of three thematically related abstracts by Paula Bleckmann, Robert Neumann, Norbert Harz which would fit together well in this order and will also form part of HERMMES practice collection.

The discourse on challenges and opportunities of using so-called artificial intelligence in the context of educational institutions recently puts a lot of focus on the use of large language models like ChatGPT (SWK, 2024), while other authors widen the focus and explore the pros and cons of data-driven vs. knowledge-driven ITS (intelligent tutoring systems, Richter, Allert, 2024). We have argued that too little attention is given to the question how the use of AI may influence student´s anthropologies, i.e. their ideas on what makes them human and what distinguishes them from ever more advanced technologies (Bleckmann, Segessenmann, 2024). In this presentation, we will look at a learning scenario that instead of exploring how the use AI could be integrated into teaching, we explore how unplugged learning scenarios could contribute to students´understanding of fundamental principles of informationprocessing systems. We lookin more detail at the hexapawn matchbox computer system which can be used to introduce the concept that an information-processing system can be designed in such a way that a „training dataset", i.e. a collection of input data linked to a required output, changes the way the data is processed („machine learning"). This can be understood both as lessons in computing science as well as in anthropology. We will argue that two seemingly similar videos1 show an extreme contrast in their transported anthropologies, one ultimately technomorphizing humanity, one demystifying technology.

Literature:

Bleckmann, P., Segessenmann, J. (2024). "I grasped that the computer calculates
everything and does not think" – ICT Education Can Challenge or Cement Computer-
1 https://www.youtube.com/watch?v=sw7UAZNgGg8&t=22s vs.

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SWK (Ständige Wissenschaftliche Kommission der Kultusministerkonferenz): Large Language Models und ihre Potenziale im BildungssystemImpulspapier der Ständigen Wissenschaftlichen Kommission der Kultusministerkonferenz https://www.swkbildung. org/content/uploads/2024/02/SWK-2024-Impulspapier_LargeLanguageModels.pdf