

# *A gentle introduction to cognitive science*



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- Introduction of myself
    - My name is Sebastian Schutte
    - I'm currently studying in Freiburg (Germany)
    - My fields of study are Anthropology, Informatics and Cognitive Science
    - I'll finish my study in about one year (hopefully), with the gradient of a master
    - I'm currently doing a practical at the chair of Professor Rauch (with a focus on LISp-miner extensions)
    - My Czech is weak, but I'll try to improve it!
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- Motivation for further meetings
    - There are ongoing courses on Cognitive Science at this university
    - There will be even a field of study in a few years
    - I'm sure that this university and its professors do a very good job in teaching Cognitive Science!
    - I don't think that I can do any better...
    - I could provide background information on how the different parts of Cognitive Science fit together!
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# *A gentle introduction to cognitive science*

- Questions to be asked and answered



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- Questions to be asked and answered
  - What is cognitive science?



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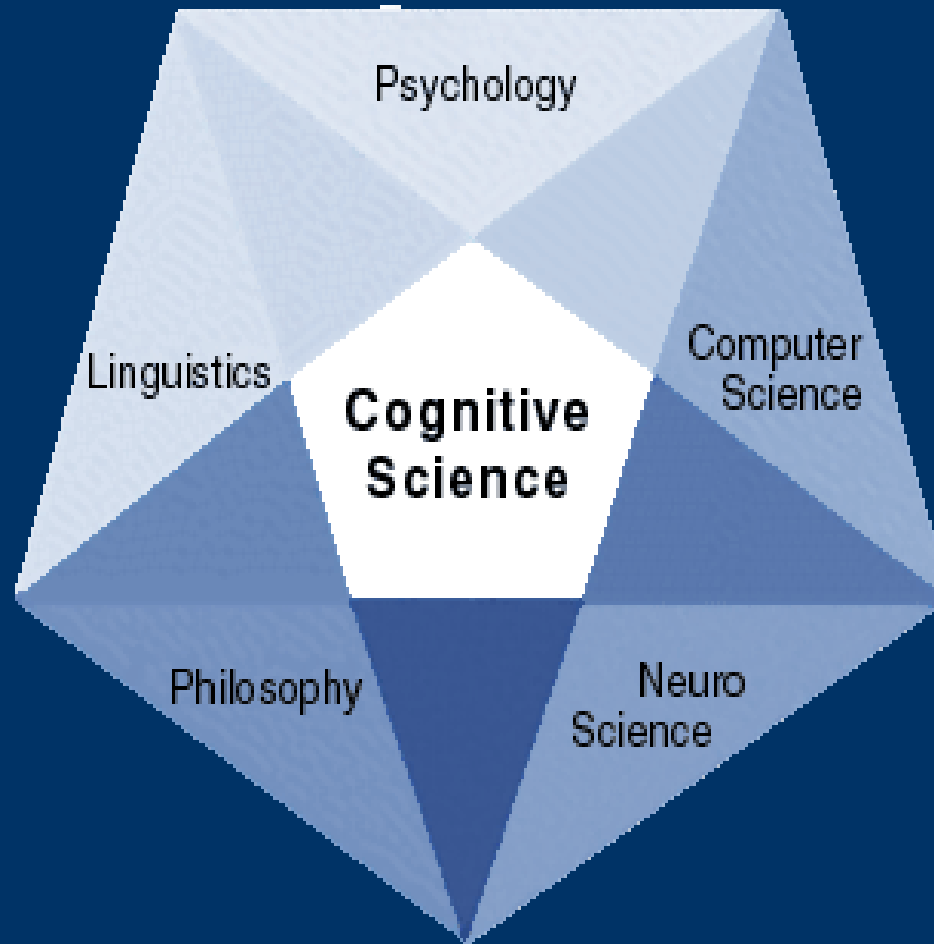
- What is cognitive science?
    - Cognitive Science mainly performs research on mental processes that take place in humans, their underlying principles and their requirements
    - Above that, C.S. tries to explain *cognition* in other organisms and even in technical systems
    - The goal of C.S. is therefore, to do research on *cognitive systems* in general, their technical requirements and the involved (informatic) processes.
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- What is cognitive science?
    - With a look at the methods of research, the interdisciplinary character of C.S. becomes visible:
    - It combines the analytic techniques from different humanities (like anthropology) with formal techniques (from theoretical linguistics) and with the empirical methods from psychology and the neurosciences
    - The character of a valid answer to the research questions is not easy to define
    - Building an informatic model of the processes that are involved, is a common solution for this problem...
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- Questions to be asked and answered
  - What is cognitive science?
    - A mixture that is more than the sum of its parts



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- Questions to be asked and answered
  - What is cognitive science?
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  - What is the purpose of the upcoming introduction?



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- What is the purpose of the upcoming introduction?
    - Informatics, Anthropology, Philosophy, Linguistics and Psychology are universes for themselves!
    - Some aspects of these disciplines drifted together in the past. (They shared questions or methods of research)
    - From the late 1950's on, a constant discussion *between different disciplines*, concerning the problems of Artificial Intelligence, could be observed in the US
    - In 1970, an association for Cognitive Science was founded in the US
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- What is the purpose of the upcoming introduction?
  - The history of C.S. and the related field of Artificial Intelligence provides an insight into the involved parts of the major root disciplines
  - Short excursions into specific aspects of other root disciplines can help to understand the topic as well
  - Therefore ...



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  - What is cognitive science?
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  - What is the purpose of the upcoming introduction?
    - To make the hidden links within the root disciplines visible



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    - You will never know that, unless you join the introduction :)



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  - What is cognitive science?
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  - What is the purpose of the upcoming introduction?
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  - What inspirations and awarenesses can be achieved by sharing this introduction?
    - Even without a study background in C.S., the principles of its research activities could be understood and (critically) discussed





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- Ideas for the next weeks
    - A detailed look on example publications in C.S. would be the first step, to show the *research cycle* of C.S.
    - A closer look at the root disciplines (especially informatics and AI, linguistics and selected parts of philosophy) might be done afterwards
    - During the whole time, a critical discussion about the origins, the aims and the limitations of Cognitive Science is desirable
    - Any contribution from your side is very welcome, too!
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*...could be given on your demand!*

*...Thanks for your attention!*



