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Image credit: Christian Doninelli - University of Fribourg

Research Success Story

University of Fribourg

LONG-TERM FUNDING TO UNDERSTAND SLEEP FROM A PSYCHOLOGICAL PERSPECTIVE

Improving sleep without medication is the aim of the Horizon 2020 project “Memo Sleep” (A memory-based sleep and cognitive functioning). Prof. Björn Rasch of the Department of Psychology, University of Fribourg is examining how sleep can be influenced by psychological means. The ERC Starting Grant enables him to carry out fundamental research in the domain of sleep, memory and health research for five years.

Björn Rasch is a Cognitive Biopsychologist at the University of Fribourg. In his previous research he examined how memories are consolidated during sleep. He and others have shown that newly learnt information are internally repeated during sleep like an ‘internal training programme’. These unconscious reactivations during sleep improve memory the next day. In his project funded by an ERC Starting Grant, he aims at applying the ideas and findings from memory research to influence and improve sleep itself.

Fundamental research

The basic idea of the ERC project is that we are able to influence our sleep with our thoughts due to the unconscious reactivation of these thoughts during sleep. For example, if we think of an important exam coming up the next day before going to

bed, this thought is then reactivated repeatedly during sleep. As it is associated with stress, reactivating “exam” disturbs our ongoing sleep. “Can we experimentally prove that this idea is correct?” asks Björn Rasch.

“If it is first of all understood how thoughts and intentions influence sleep, we can think of theory-based applications to improve sleep in daily life.”

In the project, three main questions are traced:

Can we experimentally prove that reactivation of thoughts and concepts influence our sleep?

Can this reactivation be used in a positive way - for example generating positive thoughts or intentions while

being awake to then sleep better?

Can we apply these findings to improve disturbed sleep?

Valuable funding

“What is missing is a theoretically understanding of how thoughts, beliefs and intentions influence our sleep. The ERC Starting Grant gives me the unique opportunity to look at this topic from a fundamental perspective.” The opportunities of the project are great. “If it is first of all theoretically understood how thoughts and intentions influence sleep, we can think of theory-based applications to improve sleep in daily life.” The intention is to develop a theory. Based on that theory interventions for patients as well as for everyday life could be developed to improve sleep without medication.

About Memo Sleep



Image credit: Christian Dominelli - University of Fribourg

“The ERC Starting Grant gives me the unique opportunity to look at this topic from a fundamental perspective.”

Prof. Björn Rasch

Department of Psychology, Division of Cognitive Biopsychology and Methods, University of Fribourg

CONTENT SUMMARY

The Horizon 2020 project Memo Sleep aims at examining how sleep can be influenced by psychological means. In the long-run the aim is to improve sleep without medication. In this project, Prof. Rasch and his team will carry out fundamental research in the fields of Sleep, Memory and Health Research for five years.

FACTS AND FIGURES

Project Name

Memo Sleep - A memory-based mechanism to improve sleep and cognitive functioning

Research Area

Sleep, Memory and Health Research

Organisation

University of Fribourg

Start Date – End Date

01.09.2016 – 31.08.2021

Duration

5 years

Project Cost

€1.5 million

Project Funding

€1.5 million

Programme

Horizon 2020 Excellent Science: ERC Starting Grant

More Information

www.unifr.ch/psycho/en/research/cogpsy

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