

Media Release / May 2, 2018

## Low Self-Control Influences Smartphone Use

**The wide use of smartphones in our working and private lives has led to an unprecedented level of networking between people. Aside from the possibilities that the smartphone offers, there are also side-effects such as distraction while driving or at work. Bern researchers now show that differences in personality in our capacity for self-control can explain whether people react immediately to smartphone signals.**

Anyone with a smartphone knows: Dozens of times a day, we receive chat messages, push notifications from news apps or calls. The messages or calls often disrupt our concentration on our current task, whether this is in a work environment or driving, for example. It is important to understand which motivations lead to people reacting immediately to a signal and pulling out their smartphone.

### **Distraction caused by smartphones is a question of personality**

In a new study, an interdisciplinary team at the University of Bern, consisting of Prof. Dr. Sebastian Berger and Annika Wyss from the Institute of Organization and Human Resource Management as well as Prof. Dr. Daria Knoch from the Department of Social Psychology and Social Neuroscience at the Institute of Psychology shows that people with low self-control capacities tend to react immediately to the signal sounds of their smartphones.

The researchers based their study on an established method in psychology: They invited 108 test subjects to take part in an "experience sampling". This is a method where the test subjects receive a message on the smartphone several times each day to answer a few questions on their current state. In this case in particular, these were about consumer behaviour. The actual aim of the research team was, however, to measure the time the person required to react to the message. Of a total of 1,620 signals in the study (15 per test subject, spread over 3 days), 1,493 were answered. 335 of these were answered within the first minute. The core aspect of the study was to link the response times to the test subjects' self-control capacities which had been measured by means of standardised tests seven weeks before.

The analysis showed the following: People with lower self-control found it significantly harder not to react to the smartphone signal immediately. This effect remained stable, even when a series of further personality features were also incorporated into the statistical model. "Self-control measures the capacity to maintain control over an impulse", explains Daria Knoch. "This is necessary to defer the need to react to the message to a time when, for example, you have completed your work or the car has been safely driven to its destination", the neuroscientist continues. Interestingly, the form of

this capacity for self-control is not suitable for explaining differences in the answer response times per se. "The degree of self-control cannot explain why a person answered after 11 or 12 minutes," explains Annika Wyss, "a low degree is suitable as a diagnostic instrument, however, for explaining immediate responses."

### **Analysis of psychological processes important for shaping working conditions**

"When researching the side-effects of smartphone use, first of all, it is important to understand which psychological processes lead to our smart companions being used so often in high-risk situations. With self-control capacities, we have now identified one of these processes", study leader Sebastian Berger summarises the results. "This study also again shows the advantage of interdisciplinary research", continues Berger. Business managers, who are interested in establishing the best possible working conditions would rely on fundamental neuroscientific research, for example. "In this way, the study results can be consulted if we wanted to discuss whether it would be meaningful as a company to give smartphones to all employees or whether emails should no longer be pushed to employee mobiles after the end of the working day, for example", says Berger.

### **Publication details:**

Sebastian Berger, Annika Wyss & Daria Knoch: *Low self-control capacity is associated with immediate responses to smartphone signals*, Computers in Human Behavior, 2018, in press, <https://doi.org/10.1016/j.chb.2018.04.031>

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