

People and their data clouds

Today, every person is surrounded by his or her own data cloud. The different sources of data are, however, not integrated, and their significance is therefore limited. Wearable technologies, also called *wearables*, simplify the collection of electronic data - particularly data that records patterns of human behavior, human interaction and human experience. The potential value of such data to psychological research is enormous, but the data's reliability and validity have not been extensively researched – it is here that Professor Bernad Batinic and his team begin.

Wearables are portable technologies, generally worn or carried on the body. They simplify recording of a variety of patterns of human behavior, interaction and experience, in the form of electronic data. Wearables record physiological and geotracking data, as well as data on activities in social, athletic and other spheres. The best-known wearables: smartphones and fitness trackers.

“In research, we are now faced with new kinds of data and new amounts of information about people,” says Batinic. He would like to use existing technologies to record data on people, and combine the recorded data with questionnaires and interviews in such a way that valid results are obtained.

If, for example, a person suffers from stress-induced insomnia for a longer period of time and would like to do something about it, they must usually fill out a questionnaire about their sleeping behavior. Their responses are subjectively falsified and difficult to verify. If, however, the affected person is literally put to bed on a sensor mat and their sleeping behavior tracked for one to two weeks, the mat data can be put together with the questionnaire responses to provide a far more accurate result.

In other medical fields the relevant research can also provide valuable results, e.g. when it is important to know how and how much patients move after a hip operation, and how they respond to the movement.

“Personally, I find it shocking that so much data is recorded today on every person, often without us knowing,” says Batinic. “But in our case, we only need a certain number of people for our research. They take part in and supply data to a clearly-defined project that runs for a defined period of time - voluntarily and after making a conscious decision to take part.”

Through the LIT project, Batinic and his team have been provided with the opportunity to accurately determine what value certain data have. Their goal is to develop a method that can be made available to other researchers. “We are pioneers, here. But other research groups are also standing in front of the same open door, so we have to work quickly!”

Video „Technik fürs Handgelenk“ for the conference *DaWe17 – Tagung für Datenerfassung und –analyse mit Wearables*

<https://www.lt1.at/programm/15-05-2017/episode/smartwatch-technik-zum-tragen>