

Remote life: neuropsychological reflections

By Professor Jan Willem de Graaf

Professor of Brain and Technology, Saxion University of Applied Sciences, Deventer, Netherlands

The human adaptability is great. Only a week after the lockdown, the work of many people went on again via meeting apps such as zoom, Google hangout and MS teams. That certainly also applied to me. I was involved in peer reviews, meetings about grant applications, and even counseling conversations and lectures with students on the screen. However, the technology was (and still is) in fact far from ready to take such a flight under less extreme circumstances. It was online “business” continuation, or nothing, and therefore the risk of study delay, or even job loss. Now, six weeks after the lockdown, I am used to meeting the screen, but I notice that I get much more tired. How is that possible?

With a number of students who - because of the Corona virus - had to stop their research, we started by investigating the consequences of the lockdown for both students and employees. The scientific literature has already shown effects from the delay between speaking and being heard. It results in a perceived incongruence between what you say and what you see of the other person's facial expression and non-verbal response. The speaker's most directly measured emotional response is hostility; the other person seems to be uninterested. However, after a few seconds the speaker will see a more adequate (“congruent”) reaction. Because of great human adaptability, we learn to filter this “time lapse”. However, neurodiverse persons like me, who do not process information in the same way, may lack the required selection function. Therefore I must deliberately glue the delay together; to me it feels like playing on a church organ with a piano technique: a huge latency. I tend to speak slower and slower and greatly exaggerate my facial expressions.

My neurotypical students and colleagues, on the other hand, tend to laugh more by default, eliminating possible pre-assigned hostility. In addition to these neuropsychological information processing aspects, there is a second functionality that is much more affected by online conference communication: filling in “blanks”. Due to the still premature digital technology, the connection is regularly lost, so that parts of speech and / or images freeze and can no longer be followed. The blanks consist of a few words or whole sentences. Here too, remote conference participants have to work hard via screens. Filling in the gaps also takes a lot of energy. Again, there can be major differences between people, with neurodiverse people sometimes having a relative advantage or a greater disadvantage. People who speak more generally may be easier to follow than those with more idiosyncratic thinking and expressions. In addition, it is not possible to speak at the same time, which makes it more difficult to take the turn, but once you have it, it is relatively easier to keep it. It is quite easy for a lecture; monologues are undisturbed by the “audience”. But of course this is not ideal. Again, under normal circumstances, these forms of distance learning and meetings would never have taken off under the current technical conditions.

In addition to both the neuropsychological problems, and these technical imperfections - which may have unequal consequences for neurodiverse and neurotypical people - there are still other consequences. This way we no longer have to travel and meetings can be planned quickly in succession. Nowadays I sit behind the screen for hours, listening to the shrill voices from the small computer speakers. Little movement, little consolidation time, resulting in noticeably weaker memory tracks. We know from research that distance learning is sub-optimal in knowledge transfer: physical activity - walking and moving - helps to consolidate the knowledge acquired.

We also found that adult workers generally see the benefits of screen meetings much more than students. Students seem to miss social contacts enormously. Adult employees now have the chance to integrate work and private life. A culture of working from home and informal care had already developed. But now there is a much broader understanding, even of employers who did not want their employees to work from home before. Perhaps this gives a new dichotomy: people who do essential work and people who coordinate from a distance. So far my column, written with love from a distance!