BRAVE NEW SMARTPHONE WORLD? PSYCHOLOGICAL WELLBEING BETWEEN DIGITAL AUTONOMY AND CONSTANT CONNECTEDNESS

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The last decade has seen the fast-paced advance of digitalisation, resulting in significant changes in the communication and media use patterns of German citizens. As a result of the "web 2.0 revolution", internet users evolved from their mostly passive role of consumers into active producers of usergenerated content. Concurrently, the second most impactful change to internet use has been the growing spread of mobile devices and internet connections. Indeed, a growing proportion of especially the younger generations has undeniably developed an "always on" lifestyle. As the most important access point to the internet, the smartphone has long since overtaken the stationary PC (Medienpädagogischer Forschungsverbund Südwest, 2018). What's more, mobile users already make up a total of 71 per cent of the total population, and the majority of 14 to 29 year-olds use the mobile web on a daily basis (Frees and Koch, 2018).

These numbers demonstrate that a fast-growing proportion of users is at least potentially "POPC", that is, "Permanently Online and Permanently Connected" (Vorderer et al., 2018). These users are constantly supplied with online communication, information and entertainment options: WhatsApp, Instagram and YouTube have established themselves as constant companions to the younger generations of users and provide an almost continuous connection to virtual social circles and world affairs. Figuratively speaking, the smartphone has become a social tether connecting users with their peers and a digital pocketknife that can fulfil its owner's needs and desires instantaneously at any time.

As such, the use of mobile technology has become routine: from reaching for the smartphone being the first action after waking, via numerous phone-checking episodes throughout the day – often lasting only seconds, to a last look at the smartphone before bedtime when the phone is placed within

reach on the nightstand. Aside from such "always on" modes of behaviour, many users have also developed a "POPC" mindset, that is, an almost constant mental orientation towards and alignment with online activities. The concept of "online vigilance" (Reinecke et al., 2018) is the perfect descriptor of such states: the smartphone reliably provides instant satisfaction of needs, and the experience of successes and rewards, which activate psychological learning processes. Users develop chronic alertness to "connection cues", prompts that emanate from mobile devices in the form of acoustic signals and other notifications, alerting the user to the potential to satisfy their need for information, interaction or entertainment.

Cognitive and motivational predispositions are formed through the strong reward mechanims associated with the use of smartphones. Mental preoccupation with the online world increases, even if the internet is not being used at the time: What is happening online and in my social networks? Am I missing important events or interactions? The consequence is that the smartphone is checked for incoming notifications very frequently, messages are reacted to within seconds, and the opportunity to interact online often takes priority over any simultaneously running offline activities.

Always on: opportunities and risks for psychological well-being and mental health

The digitalisation and mobilisation of communication and media use has not only impacted on users' behaviour but also on users' thought processes and experiences. What is the consequence for quality of life of an "always on" society? From a psychological perspective there are both opportunities and risks (for an overview see Reinecke, 2018). The potential for positive impact of a POPC lifestyle rests on the numerous coping resources that are available on an everyday basis via mobile technology. On the one hand these are technical problem-solving mechanisms that are available through smartphones and the mobile web: the navigation app that enables easier wayfinding in unfamiliar places, the timetable information service that provides information on transport connections and delays in real time, or the review site that assists with restaurant or product choice. On the other hand, besides empowering users to solve practical day-to-day problems, psychological resources are also readily available due to the ubiquitous possibilities of online communication. Omnipresent access to information and entertainment in what were previously often "media-free" spheres of life, such as waiting lines or while in transit, create new possibilities for mood management. The permanent connection to a virtual circle of friends can be constantly drawn on for emotional and informational support, and in order to cultivate one's social capital. The ability to post self-authored content online at any time and any place enables new forms of identity construction, the sharing of personal experiences and thus personal affirmation and approval, because of the mostly positive feedback from one's personal online audience.

In contrast, there are also clearly recognisable risks to being constantly connected. Often, rather than personal needs, perceived social expectations and pressures make people reach for the smartphone and communicate online. Social pressure to be constantly available, the "Fear Of Missing Out", and the sheer mass of content communicated, and of notifications and messages received are part and parcel of daily smartphone use. They are also the root causes of "digital stress" for a not insignificant number of people. In social media, continuous confrontation with the often positively distorted selfportrayal by other users increases the risk of making dysfunctional social comparisons. This creates dissatisfaction with one's own life which appears much less attractive and successful. Prioritising smartphone use over other, offline activities can lead to social tensions and conflict with other responsibilities. So-called "phubbing", that is, the use of smartphone in social situations offline, leads to a perceived loss of intimacy and conversation quality by the affected offline parties. In the face of constantly available and rewarding alternatives in the online world, the potential for smartphone messages to distract from work and academic tasks together with the conscious procrastination of unpopular tasks and duties, mean that we face new challenges to self-discipline and new risks to the realisation of longer term goals and personal development potential.

What to do? Possible measures for increased digital autonomy

In a sense, the consequences of "always on" behaviour and of constant online vigilance have a paradoxical impact on our quality of life. On the one hand, the smartphone with its psychological gratifications and variety of functions broadens our personal agency and empowers us in many a situation to behave in new self-determined ways. On the other hand, social pressure to be constantly available, Fear of Missing Out, chronic alertness to "Connection Cues" and that frequent automatic and thoughtless reach for the smartphone curtail our personal freedom. So, what can be done in order to gain back our digital autonomy in everyday life?

At first sight, a plausible answer might be to invest more into addiction prevention. Public discourse and news reports quickly refer to "smartphone addiction" in the write-ups of new forms of mobile use. Considering the - at times overly enthusiastic - uptake of new forms of communication by the youth, one may be forgiven for believing this to be a widespread issue. However, the available empirical data paints a different picture. The inflationary use of the concept of smartphone addiction must thus be prevented, just like the tendency to inappropriately pathologize common usage behaviour. In a scientific context, the terms "smartphone addiction" and "internet addiction" are used only to describe excessive use that leads to a functional loss in day to day life and to severe consequences in work-related and interpersonal contexts (Kardefelt-Winther et al., 2017).

Such forms of addictive use are real and must be taken seriously. Relative to the totality of internet users, they are, however, a rare phenomenon. Representative studies show that those affected by such serious addictive behaviour only make up one to three per cent of the general population (Müller, Dreier and Wölfling, 2017). No robust empirical evidence exists to prove any clear increase in internet addiction in recent years. While the prevention and treatment of addictive behaviour is extremely important, these solutions do not fit the non-pathological "always on" lifestyle that is affecting ever more people.

In order to further digital autonomy across the board, in the sense of selfdetermined use of information and communication technologies, advancing new media literacy and skills appears to be essential. The central goal must be for young users to have the capacity to critically reflect on their own communicative behaviour, not to bow to the social pressure from peers to be constantly available, and to be more consciously in control of their own use of digital technology. Naturally, parents and teachers are equally challenged by the digital lifestyle. Thus, conveying any competence in this field to their children and students is easier said than done. Investing in continuing education for teachers and in schools' digital infrastructure is therefore an imperative. Furthering digital autonomy in the general populace can also be seen from an entrepreneurial and health policy perspective, both of which are fields in which there is a need to act. Corporate culture would be an important contributor to increased autonomy in digital communication if it encouraged tech-free and the "right not to be reachable" outside agreed working times as important conditions for a healthy work life balance. Especially for companies in the digital economy, the protection of informational selfdetermination of their customers must become a core concern. In the health sector, important tasks include the development of a policy agenda that addresses the positive potential of new mobile technology in the fields of eHealth and mHealth, as well as preventive and information programmes on health-enhancing interaction with new technology.

It is indisputable that individual empowerment to be digitally autonomous plays a pivotal role in enabling a self-determined life in today's digital society. The ability to safely balance the tension between digital self-empowerment and social as well as technological paternalism is a core competency that is needed now and in future times to achieve psychological wellbeing and health (also see Meier, 2018). Finally, beside the individual user's responsibility for their own user behaviour, governments have the responsibility to create the parameters for digital autonomy for societies as a whole.

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