

Screen time and the young brain – a contemporary moral panic?

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In recent years, excessive screen time has been widely discussed not least in relation to children and young people. Parents are advised to limit the amount of time their kids spend using digital devices, such as smartphones, tablets or computers, and there is a wide selection of apps that parents can use to monitor and manage their children's screen time. The arguments against spending too much time in front of different screens include fear of addiction, depression and other medical conditions, but also an increasing focus on how excessive screen time and constant connection affect social and cognitive abilities. Compulsory engagement with online technologies is assumed to make individuals absent-minded, easily distracted and indifferent to whatever goes around in the physical environment (Blum-Ross & Livingstone 2016; Kardefelt-Winther 2017). The latter debate emanates from the assumption that people, especially children and adolescents, are unable to control their impulsive behavior in relation to digital media. This inability among young people to resist their smartphones, although it might have negative outcomes, has sometimes been referred to as a contemporary moral panic in the media debate (c.f. Malik 2019; Orben, Etchells & Przybylski 2018; Therrien 2018).

Moral panics often occur when a new media technology is introduced and the users of these new media show disapproved forms of behavior, such as passivity or aggression. Historically there have been panic campaigns over a wide range of so-called low culture; comic books, rock 'n' roll, video nasties, et cetera, that is believed to degenerate in particular the younger generation due to violent or vulgar content (Buckingham & Strandgaard Jensen 2012; Carlsson 2010; Drotner 1999; Critcher 2008). Increasingly, though, the concerns in relation to new media technologies focus specifically on the *use* of the media rather than with any particular content. As Alicia Blum-Ross and Sonia Livingstone (2016; 2018) has shown, the term "screen time" indicates a homogenization of media activities that does not take different practices or modes of engagement into account, but only considers the amount of time spent online (see also Kardefelt-Winther 2017: 14). Indeed, the evidence cited in reports about screen time is dominated by short-time, quantitative studies that do not consider the broader life contexts of children. Additionally, in line with previous moral panics, they tend to focus on risks rather than on the opportunities of new media practices (Blum-Ross & Livingstone 2016: 13; Kardefelt-Winther 2017: 10). Other more qualitative inclined studies on children and media use have responded to this imbalance by highlighting the particularities of different media forms and uses as well as how parents react differently to advices on screen time depending on socio-economic and cultural factors (e.g. Blum-Ross & Livingstone 2016; 2018; boyd & Hargittai 2013; Clark 2012; Lee 2013; Livingstone, et al 2015; Livingstone & Byrne 2018). In this chapter, we wish to contribute to this body of research by questioning the dominant perspective on the impacts of excessive screen time on young people.

The dominant perspective in relation to the use of online technology are increasingly supported by simplified accounts of findings from neuroscience and psychology. In this cross-disciplinary field, excessive use of digital technology is suggested to change brain structures and cause inability to focus, pay attention and think rationally. On the market there is a wide and growing selection of popular scientific self-help books with titles such as: *i-minds – how cell phones, computers, gaming, and social media are changing our brains, our behavior, and the evolution of our species* (Swingle

2015), *Mind Change- How 21st Century Technology is leaving its mark on the brain* (Greenfield 2014), *The shallows – what the internet is doing to our brains* (Carr 2010). The popular scientific concerns of online technologies capacity to damage brain structures has received a lot of attention in the mass media, spreading the idea of a “re-wired” or hijacked brain to an even wider public (Kardefelt-Winther 2017: 23). This mixture of mass media debates and popular scientific books, finding support in neuroscientifically and psychologically based arguments of online media effects, will be referred to in the chapter as *popular neuropsychology discourse*.

The concern of damaged brain functions is mainly directed towards children and young people that are claimed to be particularly sensitive to a large amount of time in front of the screen since they have undeveloped brains (Crone & Konjin 2018; Kardefelt-Winther 2017; Livingstone & Byrne 2018). According to Kirsten Drotner (1999), constructions of children and young people as a vulnerable group in need of protection is characteristic for moral panics, based on the assumption that culture holds a civilizing potential and only by consuming the right kind of culture through the right kind of medium can children develop into responsible grown-ups:

[C]ultural development and human development are aspects of one and the same process. Children's cultural edification is part of, indeed proof of, their social elevation. Therefore their cultural fare must be guarded, watched over and protected because its composition is vital for their mental growth. (Drotner 1999: 611)

This chapter takes these concerns as a point of departure to discuss what the current debate about young people's' screen time and possible brain damages reveals about contemporary culture and society. Moral panics are ultimately about reconfirming cultural values and as such they offer “a unique possibility to gain insight into the ways in which the media invoke and serve to reflect fundamental social and cultural problematics” (Drotner 1999: 597). To map the popular neuroscientifically based assumptions and imaginaries underpinning what we in the chapter will refer to as *a screen time panic*, we follow the analytical model of moral panics developed by Erich Goode and Nachman Ben-Yehuda (1994). Their model, which we explain below, define five criteria with which a moral panic can be recognized and distinguished from other kinds of social problems.

Panic! Definitions and conceptual development

Before exploring the screen time panic, the concept as such (as well as neighboring concepts such as media panic and technopanic) needs to be explained. In an often-cited definition Stan Cohen describes moral panics as follows:

A condition, episode, person or group of persons emerges to become defined as a threat to societal values and interest; its nature is presented in a stylized and stereotypical fashion by the mass media; the moral barricades are manned by editors, bishops, politicians and other right-thinking people; socially accredited experts pronounce their diagnoses and solutions; ways of coping are evolved or (more often) resorted to; the condition then disappears, submerges or deteriorates and become more visible. (Cohen 1972/2002:1)

While Cohen indeed acknowledges the role of the media in his seminal definition, other scholars writing specifically about the reactions evolving around media, have preferred the label *media panic* developed by Drotner. In Cohens definition the role of media was merely to make the problem known and condemned. Drotner, however, maintains that the concept media panic is more appropriate when

“the media is both instigator and purveyor of the discussion” (1999: 596). In the literature, there exists different interpretations of what this means, with on the one hand those that apprehend this as “instances where the media themselves are the focus of panic rather than just the means by which it is spread” (Buckingham & Strandgaard Jensen 2012: 414) and on the other hand those who read this as the media inventing the panic (Dalquist 1998).

A more recent variant of the media panic concept is *technopanic*, originally labeled by Alice Marwick (2008). She defines technopanics as follows: First, they focus on new media forms and practices such as hacking or file-sharing. Second, they pathologize young people’s use of the media. Third, the anxiety that are invoked leads to attempts to modify or regulate this particular use. As Adam Thierer (2013) points out, technopanic as an intense response to the emergence or use of media technologies is a version of the moral panic concept but with clear emphasis on form over content:

By extension, a “technopanic” is simply a moral panic centered on societal fears about a particular contemporary technology (or technological method or activity) instead of merely the content flowing over that technology or medium. (Thierer 2013:7).

Even though the technopanic definition seems promising to understand contemporary panics over (especially) young people’s use of media technologies, the assumption that earlier media panics are mainly occupied with content is debatable. Historically, media forms have evoked as much panic or concern as the message that it mediates. This is famously illustrated by Walter Ong (1982) and others through Socrates complaints about writing and its impact on the human mind, as diminishing memory and prioritizing facts over deep knowledge. As Ong points out, these concerns are recurring in the debate about computers and calculators:

Writing, Plato has Socrates say in the Phaedrus, is inhuman, pretending to establish outside the mind what in reality can be only in the mind. It is a thing, a manufactured product. The same of course is said of computers. Secondly, Plato’s Socrates urges, writing destroys memory. Those who use writing will become forgetful, relying on an external resource for what they lack in internal resources. Writing weakens the mind. Today, parents and others fear that pocket calculators provide an external resource for what ought to be the internal resource of memorized multiplication tables. Calculators weaken the mind, relieve it of the work that keeps it strong. (Ong 1982: 78)

The idea that new media forms harm the human brain and its’ cognitive abilities is in other words not a new one. What is new is however how this risk is discussed and who gets to speak. While older media panics have been instigated by representatives from academia and education (Ong 1982) or journalists and media workers (Drotner 1999), the contemporary debate about brain development and screen time is dominated by accounts from popular neuropsychology discourse.

This debate is further focused around the use of media technologies rather than on form more broadly, as in the term technopanic that also includes panic related to new technology that has nothing (or little) to do with actual use, such as radiation or cloning. Gerard Goggin (2006), for instance, argues that public fears about electromagnetic radiation from cell phones and transmission towers are early expressions of the panics related to the current cell phone culture. The technopanic concept might therefore be too broad and inclusive to capture the screen time panic discussed here. Media panic, on the other hand, seems too narrow and media centric to capture a phenomenon that - as discussed further on in this chapter – to a great extent is focused on individual responsibility and self-

governance, rather than on media regulation. While also using literature about media panic and technopanic to discuss specific aspects of the screen time debate, this chapter draws mainly on the overarching concept of *moral panic*.

But why reiterating the old and much criticized concept moral panic at all? Angela McRobbie and Sarah Thornton (1995), for instance, suggest that the model of moral panic needs to be updated to remain relevant today. They are in particular critical to the morality aspect of the concept. Some scholars maintain that if the panic is not concerned with a *morally* deviant behavior it is not a “real” moral panic (e.g. Critcher 2006: 3). McRobbie and Thornton however argue that maintaining a consensual social morality is becoming increasingly fruitless in a time when “nothing could be better for sales than a bit of controversy” (1995: 572). According to them, being radical and rebellious has actually become more desirable than to exhibit a morally acceptable behavior, not the least among youths. While recognizing that the idea of what moral behavior is might have changed, we argue that the term is still useful to understand the screen time panic. In the current risk society (c.f. Beck 1992), risks “are often subject to processes of moralization as individuals are called upon to ‘be responsible’” and thereby self-harm “is evidence of a failure to manage one’s risk—indicating *irresponsibility*, a moral affront” (Wright Monod 2017: 39). This means that the call to manage screen time and disciplining the brain could well be seen as a question of morality. We further argue that moral panic is useful as a “sensitizing concept” that might “suggest directions along which to look” at a certain phenomenon (Blumer 1954:7).

Brains at risk – five criteria

To distinguish a moral panic from other mediated debates on social problems, Erich Goode and Nachman Ben-Yehuda (1994) have developed an analytical model with five key criteria, including 1) a heightened level of *concern* over a new behavior which is assumed to be threatening for the rest of the society, 2) *hostility* against the group held responsible or engaging in the disapproved behavior, often portrayed as the enemy or as “folk devils”, 3) *consensus* among the majority of the population that this is a serious threat, 4) that the concern is *disproportionate* to the nature of the threat, and 5) that moral panics are *volatile* and tend to disappear as quickly as they emerged. In the following we intend to discuss the screen time panic in relation to each of these criteria.

Concern

The most basic criteria of a moral panic is that it is occupied with a new kind of behavior or practice that is considered problematic and unwanted, not only on an individual level but also as a threat to the rest of the society. In other words, moral panics reflect a concern over a social problem, that is “manifested or measurable in concrete ways, through for example public opinion polls, media attention, proposed legislation, action groups, or social movement activity” (Goode & Ben-Yehuda 1994: 157). Whereas some writers claim that a moral panic occurs when the threat “is felt to represent a crisis for that society” (Goode & Ben-Yehuda 2006: 50), others settle for a behavior that is considered “a threat to societal values and interests” (Cohen 1972: 1). Whether it is assumed to be “a crisis” or merely “a threat”, panics in one way or the other occur on a societal level.

The concerns of the distracted, always connected youths cannot undoubtedly be said to constitute a moral panic in those terms. Considering the popular neuropsychology discourse inclination towards self-help advices, the threatening behavior becomes first and foremost an individual problem. The screen time panic does, however, correspond with the definition of a moral panic as addressing

behavior that challenges norms and cultural values, not least those associated with modernity where “upbringing is seen as the locus of character formation” and consequently must be carried out to foster desired social values (Drotner 1999: 613). One such value in modern society is rationality, often juxtaposed against emotionality in moral panics historically (ibid). The screen time panic still holds rationality in high regards, but the threat is no longer violent or sexual content that might arouse strong emotions in the young mind, but rather how the constant interaction with screens provides “sensory and cognitive stimuli” that causes “hurried and distracted thinking, and superficial learning” (Carr 2010: 116).

By being constantly distracted by their smartphones and other digital media devices, young people are believed to be incapable of engage in time-consuming and cognitive demanding activities, such as reading longer texts or solving logical problems. This concern reveals a cultural ideal of how time ought to be spent. Since time is conceived as a “zero-sum commodity” (Kardefelt-Winther 2017: 11), spending time on digital media will detract from other more “valuable” activities, such as reading books or exercising. However, within the popular neuropsychology discourse the concern goes beyond worries about wasting time. It includes also the possible effects of long-term exposure to digital media on the young brain, explained through ideas of the “plastic brain”. Brain plasticity refers to “the capacity of the brain to modify itself in response to changes in its functioning or environment” (Pitts-Taylor 2010: 636). This means that the human brain can be trained to perform better, just like other parts of the body improve with exercise, but also that the brain loses capacities that are not used. An adult brain is less plastic than a young brain, giving that the change in brain structures caused by stressful environments or repetitive behaviors early in life might become constant, or at least harder to get rid of, as we grow older (Carr 2010: 26-35; Greenfield 2014: 57; Klass 2019). Constant calls for attention from digital devices is assumed to be stressful and might prevent the young brain from developing deep learning skills and, in the long run, strengthen this inability through lack of exercise. This raises concerns about the long-lasting effects of children's media use, not only as a “question of character formation” (Drotner 1999:615) but also as something that risks re-wiring the structure of the young brain permanently:

And, thanks again to the plasticity of the neuronal pathways, the more we use the Web, the more we train our brains to be distracted — to process information very quickly and very efficiently but without sustained attention. That helps explain why many of us find it hard to concentrate even when we’re away from our computers. Our brains become inept at forgetting, inept at remembering. (Carr 2010: 194)

The threat at the heart of the time screen panic is thus mainly concerned with individuals and their shrinking cognitive abilities, but this might in the long run challenge some of the central norms of the society, such as rationality and focused thinking. What will happen when today's' young generation are in charge of organizing the society if they cannot be focused and think rationally?

Hostility

The second criteria of Goode and Ben-Yehuda’s analytical model is that there must be an increased level of hostility towards the group engaged in the behavior in question. “That is, not only must the condition, phenomenon, or behavior be seen as threatening, but a clearly identifiable group in or segment of the society must be seen as *responsible* for the threat” (Goode & Ben-Yehuda 2006: 52). Moreover, those upholding the dangerous behavior are seen as evil – “folk devils” with Cohens (1972/2002: 66) terminology – and must be punished or rehabilitated to conform with established

societal norms. The folk devils of past moral panics have been groups with little societal power, such as children and adolescents, working class people or immigrants. The proposed solutions to their deviant behavior have in turn included changes in legislation and policy, local action groups and programs as well as extended rights and commissions for authorities such as the police and social services (Cohen 1972/2002; Critcher 2006; Drotner 1999: 614). In this “morality play of evil versus good” the deviant group is portrayed in a simplified and stereotypical way by the dominating voices in the media and public debate, leading to “dichotomization between ‘them’ and us” (Goode & Ben-Yehuda 1994:157).

The “folk devils” of the screen time panic are, similar to many previous panics, children and young people, but also to some degree parents that neglect limiting the screen time of their children. The “evil” behavior that ought to be punished is the inability to take the eyes of the screen and concentrate on more serious matters. However, the question of responsibility is ambiguous. Today we live in an era of “deep mediatization” (Couldry & Hepp 2017) where not only interaction with other people becomes increasingly mediated, but also other aspects of life such as work, education, civil services and consumption. There are also strong commercial interests in keeping people online, and tech-companies strive to develop as irresistibly apps as possible (Alter 2017). It is hence recognized that the contemporary society is increasingly saturated by digital media technologies and that these devices and software are developed to be addictive, but, nonetheless, the main responsibility is not put on governments or companies but on individual families. With few exceptions, such as the proposed bill to the US congress to “prohibit social media companies from using practices that exploit human psychology or brain physiology” (Jeffrey 2019), digital media overuse is expected to be dealt with on an individual level. One of the most common responses to this expectation is screen time guidelines for the family. For instance, the American Academy of Pediatrics (2018) has provided “health and safety tips” for parents since, as they argue, “in a world where children are ‘growing up digital,’ it's important to help them learn healthy concepts of digital use and citizenship.” The tips include rather mundane recommendations, such as to “set limits”, “create tech-free zones”, and “encourage playtime”.

This marks a slight shift compared to previous moral panics. Although children and young people are still targeted as the object of concern, screen time panic differs from earlier examples that often led up to some kind of intervention on a societal level, such as legislation or action programs to be carried out in education or other institutions. Instead of promoting such public initiatives, screen time panic relies on individual responsibility in line with a neoliberal ideology where “caring and welfare moral duties that were once assigned to civil society and governmental entities” are now expected to be solved through self-governance (Shamir 2008:10). This individualized rather than structural coping strategy can also explain the focus on family and private life. Not even the most severe opponents to constant availability and stressful distractions suggest abandoning digital technologies once and for all. As Trine Syvertsen has shown in her book about media resistance, it is commonly argued that “you can still use devices for work or school, but should try to avoid digital entertainment and screens interfering with family time” (2017: 93). Tellingly, even high-level tech executives in Silicon Valley have begun to impose restrictions for screen time for their own children (Weller 2018). This transfer of moral responsibility from institutions to individuals demands a shared understanding not only of who is responsible for taking action but also in what way and why - in other words a consensus about the threat and what needs to be done.

Consensus

The third criteria in Goode and Ben-Yehudas (1994) panic model is that it must be a widespread agreement that the deviant behavior is in fact a threat. Chas Crichton (2006) identifies five groups with a capacity to define a deviant behavior as threatening; politicians, claims makers, law enforcement agencies, media, and the public. If all five groups unite over an issue as threatening their power to define the problem is huge and oppositional voices will be swept aside. This is however seldom (or ever) the case. According to Crichton (2006: 10), to establish a panic over a deviant behavior it is sufficient that two of these groups enter into an alliance concerning the threat.

The deviant behavior discussed in this chapter is appointed by three of these groups, namely claims makers, the media and the public. The key figures are the claims makers, or “socially accredited experts”, with Cohens terminology (1973: 1). In the panic of excessive screen time the main claims makers are, as argued, writers and researchers within the field of neuropsychology. They are engaged as experts, explaining the cognitive damages due to the increased use of digital technologies in an accessible language in popular scientific books. Their power in “the century of biology” (Rose 2013: 8) are based on their knowledge of the most objective and trustworthy source of information - the human brain. Today there is “an unparalleled truth discourse” about the brain and the human body (Rose 2013: 7). As Victoria Pitts-Taylor writes, “the ability to know key truths about the self and the social are dependent upon developments in neuroscience” (2010: 635).

These experts also offer a form of life coaching, an industry that has become a huge business (Cederström & Spicer 2015). The main idea in all forms of coaching is self-awareness, corresponding to the logics of *responsibilization* (Shamir 2008) discussed above, where “one of the central motifs running through most life-coaching interventions is that you must take responsibility for your own life and your own sense of wellbeing” (Cederström & Spicer 2015: 13). This is evident in popular neuropsychology as well, which contains numerous suggestions about brain exercises in order to become more focused and more effective (c.f. Griffey 2018; Klingberg 2009). The market for this kind of self-help books and courses seems insatiable:

Bookshelves groan under the weight of popular science discussing this new knowledge of our biology, and speculating about the implications for our capacity to understand and control everything from our cognitive capacities to ageing and death. (Rose 2013: 7)

Media professionals, such as science journalists, are the second powerful group in defining this particular moral panic. After all, much of what people know about the brain comes from “the press and from the experts in the self-help market who attempt to reach lay audiences through various kinds of media” (Pitts-Taylor 2010: 641). Media representations of simplified findings from new brain science are ubiquitous, as well as discussions about possible dangers with an overuse of media technologies (Pitts-Taylor 2010).

Closely connected to the media is the third group with power to establish the screen time panic as a real threat, namely the public. As Blum-Ross and Livingstone point out, parents are “inundated with guidance about screen time” not only by experts in popular media but also by other parents “through informal chats at the school gates” (2016: 12). The rise of “self-help tips” on how to manage this threat can also be detected in numerous social platforms, often in the form of testimonials “where individuals share experiences with media detox and abstention in the public sphere” (Syvertsen 2017: 90). While these testimonials and advices often are directed to adults, the suggested strategies also

include children and young people. For instance, Common Sense Media¹, which is a non-profit organization providing research and guidelines about media use for parents, is also used as a social network where parents share own experiences and give advice to other parents. There are also many self-help books picturing how families struggle with ubiquitous media eroding family ties, such as Susan Mausharts bestselling book *The winter of our disconnect* (2011). These testimonials and various strategies to take control over a presumed unhealthy digital use confirm a consensus that spending too much time online is harmful, especially when it comes to children and young people.

Disproportionality

The fourth criteria of a moral panic according to Goode and Ben-Yehuda (1994) has to do with disproportionality, that is that the public concern over the behavior and the problem it poses exaggerates the scale of the problem “in reality”. The criteria of disproportionality have been disputed by other writers since it assumes that there is an objective reality with which irrational panic can be compared (c.f. Buckingham & Strandgaard Jensen 2012; Wright Monod 2017). We agree with this critique, not least regarding the conceptualization of moral panics as social constructions where “social problems do not exist objectively; they are constructed by the human mind, called into being or constituted by the definitional process” (Goode & Ben-Yehuda 1994: 151). However, the aspect of disproportionality can be used to discuss an imbalance of how the problem of screen time is approached and how objectivity is constructed discursively in media representations.

To begin with, it must be established that research on the relation between screen time and brain effects or well-being has not yet given any clear answers (Kardefelt-Winther 2017). As previously discussed, voices from popular neuropsychology are convinced of the negative consequences of screen time for well-being and cognitive development but on a closer scrutiny, most of the referred studies assume a very cautious position. In a article about “digital dementia” due to spending too many hours on a daily basis online, MD Larry Dossey (2014) first states that previous research has shown that “eight hours or more of daily Internet involvement with video games is correlated with brain shrinkage and damage in adolescents” (2014: 72) but he also admits that it is still unclear if this fact is true for all engagement with internet content. In n other words, we do not yet know if “heavy exposure to online educational material [is] as damaging to young brains as playing video games” (ibid). The psychologists Eveline Crone and Elly Konjin (2018) likewise conclude that while adolescents’ have underdeveloped neural systems they *might* be more sensitive, a “critical question that remains largely unanswered is how adolescents’ abundant media use may impact them developmentally in terms of structural brain development, functional brain development, and related behavior” (2018: 7). Even representatives from within the field of cognitive neurosciences, such as Torkel Klingberg, argues *against* the otherwise widespread and easily bought worry that constant distractions from digital technologies make people unfocused and stressed:

There is, fortunately, no research suggesting that exposure to mentally more demanding or challenging situations impairs our powers of concentration. Indeed, there is much that points to the contrary: it is in situations that push the boundaries of our abilities that we train our brains the most. (Klingberg 2009: 164)

So, is the threat of excessive screen time causing brain damages exaggerated? Of course, it is too early to tell. However, the cautious and sometimes contradictory statements about brain structures

¹ <https://www.commonsensemedia.org/>

expressed in popular neuropsychology discourse suggest that we are maybe dealing with a moral panic. There is still not sufficient knowledge about how the human brain functions. New findings occur almost on a daily basis (Pitts-Taylor 2010; Rose 2013). Furthermore, the dominance of popular neuropsychology in the screen time panic also reflects a disproportionality in terms of voices and truth claims, where perspectives grounded in biology are seen as more trustworthy than perspectives from social sciences or humanities, despite the weak evidence of the former. Cultural anthropologist Joseph Dumit (2004) argues that this trust in neuroscience can be connected to the use of imaging techniques such as brain scans and computer visualizations, that although they are the result of a range of cultural and scientific negotiations and interpretations, are understood as more objective than other sources, reflecting “our current cultural semiotics that privileges machines over experts in terms of objectivity” (2004: 133).

Volatility – what next?

The last criteria of moral panics in the framework used here is that they are *volatile*, erupting suddenly and fading away “nearly as suddenly” (Goode & Ben-Yehuda 1994:158). One indication that the screen time panic has emerged rather suddenly are the results from Google trends that suggest that searches for the term “screen time” have quadrupled in the last ten years², while searches on “screen time brains” show a similar growth curve only during the year of 2018³. If we accept the transient characteristic of moral panics, this trend will most likely be reversed in a few years’ time and the interest in screen time might be replaced by some other issue regarding media use, behavior and upbringing of children and adolescents.

The sudden fading away of a moral panic does not mean that concerns over a deviant behavior cannot be sustained over long periods of time, but rather that they become routinized or institutionalized. A moral panic that has faded away from the limelight might remain in institutionalized form as for example organizations, legislations or informal interpersonal norms (Goode & Ben-Yehuda 1994). The question is what will happen to the legacy of screen time panics: Will they be forgotten or picked up by institutions where it can inform education, legislation and media and information policy? Or will it play in to social norms and informal rules concerning tech-free situations (i.e. dinner) or zones (i.e. bedrooms)? Will neuropsychological perspectives continue to dominate the debate on media use, or will it be complemented with other theoretical and scientific traditions? Have we even seen the peak of this trend, or will it grow bigger before suddenly declining?

Concluding discussion

Based on the discussion above, we identify the debate on screen time and the young brain as a contemporary moral panic. Moreover, we argue that it is based on a neoliberal ideology where the responsibility to manage the supposed risks of extensive digital media use is put upon the individual. Similar to how personal health has become an individual responsibility, guaranteed through healthy eating and regular exercise, each person is now also expected to manage media related distraction by “training the brain” through a range of exercises and technologies. This requirement is connected to the neuropsychological idea of brain plasticity claiming that the brain can adapt to changing practices and environments. This means that a stimulating environment can help the brain develop as desired while the “wrong” kind of stimuli and activities might re-wire the brain in unwanted ways. The idea

² <https://rb.gy/cvbuae>

³ <https://rb.gy/inzr3w>

that brains can be improved fits well with the logics of responsabilization where neglecting to train the brain or offer a stimulating and (at least to some extent) tech-ree environment for your children could be considered deeply immoral. As summoned by Pitts-Taylor “the development of plasticity discourse is highly compatible with the neoliberal pressures of self-care, personal responsibility, and constant flexibility” (2010: 640). This paradox between on the one hand indeterminacy, and on the other hand a prescribed approach of dealing with the possibilities offered by the plasticity of the brain can be compared to that identified by Drotner as central to modernity where she asks: “Now, how can we all develop an individuality that at the same time is socially determined? Obviously we cannot. Modernity is founded on a paradox of sameness and difference” (1999: 612).

Another paradox is that between weak and simplified arguments and claims of objectivity. As discussed above, the one-sided focus on neuropsychology in the screen time debate on the expense of more social perspectives indicates a shared imaginary of natural sciences and medicine as more objective and trustworthy than the perspectives on media offered by humanities and social sciences. The new connection biology/psychology also marks a shift in human ontology. Who we are is no longer defined in terms of inner psychological characteristics. Personhood “no longer concerns itself with the mind or the psyche. Mind is simply what the brain does” (Rose 2007: 192). At the same time, popular neuropsychology often draws on metaphors and tropes rather than on “hard facts”, and the arguments put forth often disclose a very romanticized view of off-line interaction. One example is Susan Greenfield’s laments over too much screen time, where she writes that “every hour spent in front of a screen, however wonderful, or even beneficial, is an hour spent *not* holding someone’s hand or breathing in sea air” (2014: 20-21). Besides evoking the idealistic pictures of love and freedom, it is not an argument that holds for closer scrutiny.

Not only does it build on the western middle-class premise that holding hands and breathing sea air is what would make most people happy, it also assumes that these activities cannot be combined with being online. In reality, it is of course possible to surf on the internet on the shore with your loved ones, while an hour off the screen could as well be spent staring into a wall completely alone. As researchers who studies the contemporary trend with digital detox camps have shown, the pre-digital sociality is idealized in technological discourses (Fish 2017; Sutton 2017). According to Sutton (2017) “digital technology has become the central culprit for the alienating aspects of modernity.” This applies not least to the discourse on children and screen time where an “exposure to a natural environment or natural stimuli, may be seen as a useful and relevant intervention strategy to counteract the effect of exhausted cognitive capacities associated with overuse of smart technology” (Schilhab et al 2018: 3). Tellingly, the American Academy of Pediatrics (2018) emphasize the importance of encouraging play and face-to-face interaction in the guidelines of screen time for parents.

But the idealization of the pre-digital sociality also has another dimension. We suggest that the threat attributed to the use of digital and smart technologies might have to do with temporality, more specifically the current shift from a “culture of speed” that relied of mechanical speed to a “culture of immediacy”, brought on by the ubiquitous media technologies. John Tomlinson defines this state as “a culture of instantaneity – a culture accustomed to rapid delivery, ubiquitous availability and the instant gratification of desires” (2007: 74). Previous generations have been socialized prior to the internet and therefore have a different conception of time. They perceive time as progressive, meaning that time-consuming, demanding tasks accomplished now might bring rewards later in life, and find the unwillingness among young people to do the same both incomprehensible and frightening. In

other words, part of the concerns inherent in the screen time panic might be the notion that the young generations have no other conception of time than immediacy, the “here and now”.

The occupation with *delayed gratification* in the screen time panic is perhaps best illustrated with the multiple references to the “marshmallow test”. In the test that was performed at Stanford in the 1970s, four-year-old children were given the choice between having one marshmallow immediately or having two if they could wait for a grown up to enter the room. The study hypothesized that children capable of delayed gratification would do better off as grown up, based on their ability to postpone a reward (Shoda, Mischel & Peake 1990). The idea that moral capabilities are coupled with cognitive abilities and future success fits the screen time panic framework perfectly, and the marshmallow test has been used as a reference in a multitude of articles and studies, such as in the research project *The Digital Marshmallow Test*⁴ where a specific app is used to map and understand impulsivity control among individuals, or to in articles describing “the ability to resist a blinking inbox or a buzzing phone” during school work as “the new marshmallow test” (Murphy Paul 2013).

From this perspective, fast digital technologies fostering a culture of immediacy could be seen not just as an inconvenience but as a real threat to society. The principle of delayed gratification is at heart of the educational system as well as of the modern life itself. If the current digital environment encourages short time gratifications over patience and delayed rewards, the whole system will fail. The folk devils in this morality play are the children who keep getting distracted by digital devices and those parents too permissive to help them out of this addiction. The good ones, in turn, are those disciplined enough to limit their screen time or helping their children to do so, preferably by guarding their own media habits and setting a good example. Morality has become a matter of disciplining the brain and managing time.

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⁴ <http://digitalmarshmallow.org>

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