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An Impatience Culture?
Technology, Habits, and the Affective Mind in Contemporary Media Experience

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Abstract

In this article, from the perspective of media theory, I will discuss the often debated issue of impatience, which many commentators identify as a distinctive response mode of our times. I will refer to the contemporary media landscape, which comprises entertaining contents, platforms, AI algorithms, and digital mobile devices; I will regard the widespread content fruition via smartphones as a very significant phenomenon in the present context; and I will focus on the impact of technologies on human affectivity, which allows to understand impatience as a responsive disposition or habit, other than just a common behavior. To understand this impact – which manifests itself, for example, in problematic or addictive internet and smartphone uses, and which may even permeate everyday "offline" interactions – it will be necessary to understand users' experience by considering the ongoing interplay between the different levels of consciousness that characterize it. Drawing on affective, enactive, and embodied neuropsychological and theoretical approaches to the human mind, I propose overcoming an overly rigid distinction between "mindless" versus "mindful" behaviors. Therefore, I will comprehend habits by focusing on the affective mind, which is characterized by its own specific level of instinctual "awareness" – one that lies and swarms below conscious and cognitive awareness, but above the level of generalized arousal or unconscious automatisms.

Keywords: media platforms, attention economy, smartphone addiction, digital habits, affective neuroscience, enactivism

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It is common to read or hear that impatience is a prevailing responsive attitude of our time; nevertheless, there is no univocal definition of it. In the following pages, I will offer some insights to describe and comprehend the complex nature of impatience, here understood as an affective habit that is unreflexively enacted when experiential processes do not flow smoothly. This habitual attitude can be regarded as related to, and reinforced by contemporary media practices. Nevertheless, it tends to persist even when we are not online (Carr), and this reinforces the assumption that contemporary media experience (here understood as the global attitudes and practices induced and made possible by the

internet, AI-based technologies, and social media platforms) may develop into an "impatience culture". Surely, this is not an unintended consequence if we consider that *The Impatience Economy* is the title of a book aimed at social retail marketing professionals (Fabela II). Seen in this light, impatience easily becomes a matter of business, as manifested, for example, in some freemium gameplay experiences in which players seem disposed to pay to reduce the time away from the game (Evans).

Impatience may turn out to be as much a byproduct as a required ingredient in achieving the interests of those delivering entertaining content and services. In other respects, from a psychological perspective, it seems that tendencies such as extraversion and impulsivity are positively related to "social network use disorder" (Sindermann et al.), thus attesting to the efficacy of media platforms' designs and suggesting connections between impatience and problematic uses – impatience being primarily regarded, as will be shown, as a kind of impulsive tendency toward stimulation seeking.

In what follows, I will focus on impatience as an attitude whose implications should be recognized. Impatience is here understood as a habit, namely as a kind of mental disposition toward action. I will mainly refer to an embodied cognition approach, and especially to enactivism and affective neuroscience, to give an account of how human non- or pre-conscious mental life may be exploited by media platforms with an impact on users' expectations and behavior, thus generating habits that affect and are affected by recurring practices. After a short contextualization, I will focus in particular on TikTok's "satisfying" content as an illustrative case to describe some relevant features of the structure of media experience, and I will provide a concise overview of neuropsychological studies on the effects of new technological media. Having thus framed some issues regarding impatience and related implications, I will address habit from an embodied and enactive perspective, and I will propose insights from affective neuroscience to qualify and explain the functioning of

human pre-reflective mental life, paying special attention to the appetitive tendency toward euphoric anticipation and "craving". This latter is an affective, non-voluntary, and "peri-conscious" disposition that media platforms typically exploit and induce, and it can be regarded as a substrate to explain the contemporary propensity to impatience. Ultimately, I offer a conceptualization of media experience as "de-facticized" and impatience-fostering by relying on Han's philosophical theory of entertainment and the de-narrativization of contemporary media culture.

The end of patience?

The issue of widespread "impatience" frequently circulates in the cultural debate on contemporary media experience. It would be relatively easy to enumerate behaviors or feelings corresponding to this broad category; more challenging, as often happens, is to define it more accurately or unambiguously in its general features. The involved affective qualities include impulsiveness, annoyance, and wanting, and the resulting behavioral attitudes lead, for example, to a lack of sustained focalization, unwillingness to wait or prolong experiences, and low tolerance for impediments. I will point out later how impatience can be understood as an affective disposition or habit that may permeate everyday experience, and that is nowadays expanding in relation to common media practices that foster impulses toward immediate rewards.

From a psychological perspective, impatience can be conceived as a personality trait (Schnitker) but also as a kind of reaction to incidents related to the perception of an extension of the time span preceding a desirable event (Geoffard and Luchini), which generates frustration and irritability, together with the urge of "skipping" transitional phases of ongoing actions or events. It will be understood here especially as a category of reactions and as a reiterated style of response that tends to develop into a widespread tendency, independently from deliberate intention and irrespective of what is actually expected.

In his book on AI consequences, psychologist Tomas Chamorro-Premuzic entitled a chapter “The End of Patience” (47-60). According to him, in a context in which emotional intelligence, empathy, or self-control appear increasingly necessary to contain the outcomes of human-technology interactions, patience seems to be a kind of virtue in jeopardy. In what he labels a contemporary “AI age”, moreover, impulsiveness and instinctive responses may be preludes to technological addictions, all the more since AI-based technologies and platforms increasingly tend to make interactions faster and more efficient, thus gratifying users with rapid satisfaction of requests and making self-control efforts almost unnecessary. The behaviors that are associated with this disposition are commonly referred to as “mindless”; we will see, however, that they depend on our “affective mind”, and follow pre-conscious logics that largely rely on the functioning of emotional affects. In this perspective, it is difficult to draw a clear line that separates what is “mindful” from what is “mindless”.

It is not hard to assume that the mix of speed and simplification, coupled with ample opportunities to move elsewhere to find resources, would diminish users’ inclinations to slow down their reactions or accept incidents. A platform such as TikTok uses AI algorithms extensively to engage users in a way that can be regarded as paradigmatic, and which well illustrates the background of media-related impatience. To show how this functions, however, it is necessary to articulate the conceptual transition between the platform’s increasingly pleasurable, bizarre, and sensational recommended content, on the one hand, and the users’ widespread restlessness or drive to displace the focus, on the other.

Satisfying content

In February 2024, the mayor of New York announced a lawsuit against the biggest social media groups of the time, accusing them of contributing to worsening the mental health of younger users, especially by causing compulsive consumption. Among the main media groups accused are platforms such as TikTok, Facebook, Instagram, YouTube, and

Snapchat, which create feeds and features through personalized content via their algorithms, with inevitable manipulative strategies that contribute to the creation of harmful habitual practices (City of New York). Some of the arguments the lawsuit relies on are widespread in current public and academic debates (see, e.g., Rosen), of which they are exemplars to some extent, irrespective of their legal-political implications. Among the often-reported consequences of compulsive media consumption – including depression, anxiety, or impulsiveness – , I will consider diminished attentional capacity and the risks of addiction, which are something more than complications to be placed alongside the others, as they are themselves vehicles for specific discomforts or disorders.

However, let us first see what sort of content we are referring to. If we were to identify distinctive ones, we would be faced with violence, exhibitionism, and fakes, but also with harmless odd content that is sometimes difficult to enjoy, especially by older TikTok users (Marino and Surace). Among the most popular are "satisfying" or "oddly satisfying" videos: bizarre entertainment content, varying in length, in which one sees nothing but (among others) series of cakes being frosted, manipulated slime, shattered glass bottles, bursting balloons making colorful liquids splash, or the toppling of dominos[1]. Their very basic nature allows a sharper consideration of a specific experiential structure, which may be isolated and considered independently of other levels of meaning, as the type of engagement afforded here is more interesting than other aspects of this kind of content. These sometimes carefully designed spectacles reproduce successions of causes and effects, accompanied by salient visual or auditory stimuli, and sometimes initiated or carried out by a human agent. The structure integrates manipulation of materials, sensory stimulation, repetitiveness with micro-variations, and continuity of ongoing processes. Importantly, each typically proceeds

[1] Sometimes these are labelled "ASMR" (referring to the relaxing sensation called "autonomous sensory meridian response") videos, but the categories are distinct, as "satisfying" videos do not produce exclusively relaxing effects, although the two may share similar engagement devices or strategies.

smoothly, adopting a sequential logic with minimal room for unexpected micro-details that elicit a slight sense of anticipation of the outcome, which helps prevent boredom.

This entertaining structure seems to be particularly effective in generating an experiential flow that affects users' concentration and time perception. However, it must be mentioned that this is part of a more comprehensive apparatus that includes smartphone technologies and functionalities, the integrations between apps and platforms, and the interactions between users' routines and an algorithm. TikTok's "For You" feed, indeed, offers an endless series of continuously updated content that is algorithmically selected, and which can be easily replaced by scrolling down, without moving away from the platform. In turn, the experiential flow feeds the algorithm's functionality, which meets the users' needs or preferences by recommending content, sometimes generating loops that increase usage time so that users "seem to be caught in an entertainment spiral" (Qin et al.).

Essentially, this system works well precisely because of a circular logic in which repetitive use and technological optimization mutually feed each other (Zhao). To take over and order our world (Eugeni 13), however, algorithms must intercept the users' minds most vulnerable mechanisms. The latter, as I will illustrate later, are better understood when regarded as pre-reflective, spontaneous, and relatively flexible affective dispositions rather than just as unconscious and rigid automatisms. In other respects, moreover, it will be clear how the nature of human affective life meets, in turn, some crucial necessities of digital platforms – first of all, the necessity of prolonging user experiences without them becoming devoid of entertaining relevance.

The internet, smartphones, and their effects

Paradoxically, in a regime that relies on the exploitation of our limited cognitive abilities to grab attention, and in the face of an enormous amount of information available on a global scale, digital strategies are increasingly taking the form of systematic *distraction* (see

William or, from a different perspective, Pettman). The business model of an "attention economy", in this respect, may provide a frame for understanding contemporary media habits and their implications (see Lane and Atchley) as the update of an earlier process of perceptual fragmentation and reduction of attention, which historically began in the mid-19th century (Crary). In the present, the label refers to the cultural and technological dynamic whereby media offer information and entertainment in exchange for attention (Citton), which has otherwise been more recently intensified by big web companies striving to concentrate wide audiences (Hindman). In this context, companies' search for attention and exploitation of cognitive abilities must come to terms with the short span of time that users are disposed to concede to content and media procedures.

However, even pleasurable experiences such as those mentioned above, which should limit themselves to eliciting surprise or relaxation, can generate an attitude toward repeated enjoyment to the point of losing control of one's own practices and dispositions. What is also at stake in this respect is the impact of platforms and technologies on the brain, which is nowadays a popular research topic. In a recent article entitled "TikTok Brain", for example, the platform is labeled a "dopamine machine" (Jargon), with regard to the distracting effect of gratifying dopamine discharges generated by short videos (I will return to this aspect later). In other respects, it seems that the content recommended by the platform contributes to the activation of the Default Mode Network (DMN),[2] which correlates with a lack of self-control (Su et al.). Moreover, both technological ease and persuasive app design (Chen et al.) contribute to generating smartphone "absent-minded" use, which seems essential in defining criticalities (Marty-Dugas and Smilek; Larsen et al.). None of this implies that the need for escapism that TikTok fulfills, along with its popularity as a "feel good space" and the perceived "familiarity" or "authenticity" of its content, have not had desirable or rewarding

[2] The DMN is a brain network that seems to be activated when a subject is not focused on the surrounding environment, e.g., in mind-wandering (for an updated overview, however, see Menon).

outcomes (Schellewald). From a different perspective, however, familiarity, ease, and convenience of use precisely facilitate the creation of habits that may constitute a root for dependencies or addictions, here understood as radicalized and rigidified habits (Everitt and Robbins; for a distinction between addiction and dependence, from a culturalist perspective, see Paasonen).

Quite often, social media addiction and "endless" or "mindless" scrolling are described in relation to gambling, as the effects of the controlled randomness of recommended or live videos can be compared to those of slot machines or the like (Levounis and Sherer). An important consequence concerns platform and smartphone dependence or addiction, which the more cautious prefer to label as "problematic" or "excessive" use (Panova and Carbonell). Some researchers argue that the use of TikTok specifically increases the indices that qualify smartphone use as problematic (Farzana et al.). Not everyone agrees that these are "addictions" in the strict sense; however, as far as I am concerned here, the "digital addiction metaphor" (Hartogsohn and Vudka) may be a useful frame for suggesting how technologies, social practices, and mental dispositions affect each other and create habitual styles of response.

For its part, neuropsychological research on internet and smartphone dependence keeps identifying problems and suggesting treatments (see Montag and Reuter), the digital impact on human cognition being frequently recognized as a specific behavioral addiction (see Lopez-Fernandez). David N. Greenfield identified the smartphone as a device amplifying digital distractions' effects, and showed that the very same brain circuits are involved in other addictions as well (27-47). According to his research, factors such as easy accessibility, overstimulation, dynamism, perceived anonymity, disinhibition, hypertextuality, and gratuitousness have made the internet an environment in which behaviors inducing compulsive cravings and decreased self-control have been amplified.

What emerges, generally speaking, is that the potential harmful impact of digital life involves negative changes in cognitive abilities due to overuse or overdependence, diminished agency or sense of control, and emotional distress (Lane et al. 191-192; see also Spitzer). As one can imagine, a great amount of research has addressed the consequences of overuse among adolescents and young adults (León Méndez et al.). In this regard, often-mentioned prevention and treatment strategies include mindfulness-based interventions that help foster widely recognized remedies, such as cultivating compassion, increasing consideration of life priorities, and, of course, improving patience (Ting and Chen 215-240).

Everyday cultural practices play a key role in understanding the phenomenon (see Vincent and Haddon), which is also relevant to corporations and content producers who must necessarily update their strategies (Nelson-Field), even as they confront the issue of users' widespread impatience (Bruun). In any case, the basis for many problematic uses seems to be located on the smartphone's capacity to form habits – from the classic "checking habit" (Oulasvirta et al.) to more recent ones, such as the increasing search for immediate rewards (Wilmer and Chein). These can be considered to be of even greater interest than problematic uses (Meier), as they allow for a more specific identification of widespread topics and themes.[3]

Enacting habits

A major issue in the contemporary context lies in the technological impact on mental life, which, as we have seen, is under investigation on both personal/psychological and subpersonal levels. Social, cultural, or philosophical perspectives are also part of such an area of research. In this frame, digital habits turn out to be particularly interesting, as much as disorders or problematic uses, as they impact the unaware everyday practices that permeate

[3] Let us distinguish, however, habit from habituation (see Legrenzi 57-105). Habituation is the automatic tendency of organisms' reactions to fade and disappear as a result of repeated stimulation; habits are behaviors or sequences of gestures that we apprehend and repeat, of which we are initially aware but later tend to lose awareness of. Habits are frequently regarded as results of automatic processes; however, although we know that modifying them requires enormous efforts, they are not automatisms.

an entire culture. For this reason, and given the impact on the users' non-conscious mental lives, I especially refer to neuropsychological studies, understood in the frame of an enactivist and embodied theoretical approach to human cognition. In this perspective, our mental life is regarded as constitutively integrated with the body and emerging from the interaction between organism and natural/cultural environment.

Since the issue of habits is highly complex (see, e.g., Caruana and Testa; Guerra and Piazza), I will limit myself to a few observations. Smartphone-related habits, for example, seem to negatively affect cognitive abilities, including sustained attention, inhibition or delay in gratification, and emotional regulation (Wilmer et al.). Long-term effects are still under-researched (Liebherr et al.), but it is reasonable to assume that as behaviors become habitual, they may affect styles of response that tend to normalize through embodiment and propagate beyond smartphone use. Mobile devices seem designed to become part of users' embodied minds, and users' attachment to them has been rapidly described as a non-conscious bodily process (Cooley). Its specific technological functionality, combined with a variety of social practices and usage styles, has suggested that the smartphone is particularly suited to the creation of habits, to the point that it can be regarded as an integral part of a person, as well as a kind of "transportal home" (Miller et al. 219-227).

Generally speaking, and with the exception of cases in which users are focused on the technological interaction itself, mediation processes typically tend to become imperceptible or irrelevant, thus making users "present" in a space that is remote from their actual environment. More particularly, media psychology shows that the more reliable, individualized, and transparent technologies are, the more our brains tend to incorporate their function as the material scaffolding of our embodied mental lives. Moreover, when dispositions or response patterns are incorporated, they become part of users' sense of agency,

and may tend to replicate even in non-medial contexts, especially when self-contained modes are not necessary (Waterworth and Riva).

A coupling between subject and environment seems to be readily established when the mind-extending technological resources are perceived as reliable, accessible, transparent, and possibly shareable (see Colombetti and Krueger), and this may impact the ability to construct niches that support our embodied, situated, and world-involving cognitive activities (Parisi). From an enactive approach, an organism tends to spontaneously integrate mediating structures to interact and produce meaning. Accordingly, the human mind may spontaneously tend to favor the "transparency" of mediation processes, which is nowadays supported by the elimination or minimization of the users' conscious mind interference pursued by technological systems.

Also, from an enactive perspective, habits can be viewed as "self-sufficient networks of bodily, neural, and interactional processes that become a source of normativity for an agent, such that the preservation of his or her habitual identities guides much of his or her perceptions, thoughts and behaviors" (Ramírez-Vizcaya and Froese 7). Patterns and normative criteria are part of our ongoing sense-making activity, and contribute to making the world more familiar and accessible. In this frame, a bad habit is a construct that may be somehow positive per se, but not necessarily optimal for holistic well-being. It can be viewed as a norm that tends to override other situationally relevant and more appropriate behavioral patterns, thus reducing the range of conduct of interaction (Ramírez-Vizcaya and Froese 8). Addiction, correspondingly, can be regarded as a deep-rooted bad habit that is very difficult to disrupt. For example, there are reasons to believe that the creation of habits, in immediately incentive and rewarding media contexts, conditions our disposition to explore the environment (in order to interact and make sense of it), "fixing" it on behaviors that cause it to lose its intrinsic adaptability (Alcaro, Brennan and Conversi).

Excessive or problematic uses, in short, imply a rigidification of an individual's habitual practices and behaviors. A further consideration in this respect, which I will touch on in the next section, involves the ways in which dispositions fostered through digital life may be regarded as *affective* habits. A remark before proceeding concerns the nature of our affective life: as I am going to assume, it should be regarded in itself not as conscious but pre- or peri-conscious (Panksepp in Gallagher and Shear 113-130), although routinely intertwined with more voluntary, aware, and "mindful" cognitive processes. In other words, what we refer to as the *affective mind* differs from both cognitive unconscious processes and the psychoanalytic unconscious mind, while corresponding to this latter in some respects – which explains my inclination to refer to neuropsychoanalytic perspectives grounded in affective neuroscience findings, in the enactive/embodied approaches that I have assumed as a general frame.

Seeking pleasures

Therefore, a further move to understand impatience is the overcoming of the usual distinction between mindful and mindless behaviors, as the latter can also be regarded as motivated and somehow intentional, even if not in the more common philosophical frame, in which "intentionality" would be equated with "consciousness". A different approach, more focused on the features of human affective life, may allow for a thicker understanding of the widespread behavioral customs favored by contemporary digital habits.

Adam Gazzaley and Larry Rosen's experiments investigated behavior whereby digital users often tend to shift their attention to new sources of information even before they have exhausted the source they have been exploiting (159-179). This attitude can be explained in relation to that which leads some animals to spend only an optimal amount of time around a source of material sustenance, and then to move to another one, which appears sufficiently close and promising. From this perspective, our brain resembles the animal one, as it seems to

consider media sources as resource-laden "environments" whose surroundings demand constant exploration. In humans, as in animals, this would have the advantage of implicitly supporting time optimization; however, when intercepted by new technological devices, it ends up contrasting the desire or ability to linger on a source to complete consumption. If regarded from the perspective of a person's behavior, it is not difficult to describe this spontaneous attitude as "impatient". In the digital experience, according to Gazzeley and Rosen, this attitude is fostered by additional factors, such as boredom, anxiety, reduced metacognition, awareness of the enormous availability of resources, and the "protention" toward us on the part of the technological systems themselves, which interfere with our occupations in a "push" mode through visual, aural, haptic, or kinetic stimulation. Also, for reasons of this kind, one becomes increasingly annoyed, wants to quickly move on to other occupations, and presumably becomes more vulnerable to compulsive behaviors, attention disorders, or social phobias.[4]

What could possibly motivate subjects to interact compulsively but continuously interruptedly with content, platforms, and devices following a behavioral pattern that is clearly *not* optimal? An explanation should acknowledge how animal emotions drive human behavior (see Montag and Davis), and start from the human brain's primary impulse to search for resources, information, and meaning by exploring material, immaterial, or virtual environments. In doing so, I will consider pre-cognitive and affective dispositions, which nevertheless are difficult to describe as "automatic" or "non-conscious" in the more usual sense.

According to Jaak Panksepp, affective experiences are generated through the activation of certain neural systems common to all mammals and located in deep and evolutionarily ancient subcortical regions of the brain (see Panksepp and Biven). Panksepp

[4] These include multitasking and ADHD, but also anxiety (e.g. the CPA, continuous partial attention) or the so-called FoMO (fear of missing out, the fear of missing opportunities for interactions) and nomophobia (no-mobile phobia, namely the extreme worry of not having one's own smartphone available).

described the functioning of these primary circuits and inferred that their activation produces intense action tendencies and raw emotional feelings that in humans are monitored and regulated through connections with more recent, cortical, and "cognitive" brain areas. Corresponding to the activation of these systems is a kind of implicit awareness that emerges from what Panksepp and Biven sometimes call the "mammalian mind", which constitutes the pre- or peri-conscious foundation of our conscious mind.

Since addictions are often understood as alterations of appetitive mechanisms (Sussman), I will focus on the affective experience of "wanting" or "craving" that technological interactions typically induce. Among the primary emotional circuits described in the affective neuroscience approach, the most ancient is probably the "SEEKING system",[5] which drives humans (and mammals in general) to search for survival resources; it makes us sensitive to new or unexpected stimuli, and induces behaviors of exploration and approach. As a primary affective process, the system is anoetic, unaware, "objectless", and independent from voluntary control. It generates raw feelings of wanting, curiosity, interest, and expectation (Wright and Panksepp), which more recent "secondary" processes will direct toward specific objects of the world. It offers nonspecific conative impulses, appetitive and not consummatory, through rapid reorientations of attention accompanied by raw feelings of anticipation of a future reward; for this reason, the SEEKING system is also a possible brain substrate of the Freudian libido, understood not only as sexual energy but as a source of investment directed toward the external world (Alcaro et al.). Additionally, these feelings are accompanied by a particularly gratifying pleasure: indeed, evolution has associated this impulse with a "reward" that operates as an incentive, namely, a euphoric pleasure that is one of the most intense generated by brain activity (Leyton). This gratification is associated with

[5] Panksepp identifies these systems using full capitals, to emphasize that these are primary process circuits common to different species, corresponding to raw feelings and not yet to more elaborated human emotions. The seven systems are SEEKING (expectancy), FEAR (anxiety), RAGE (anger), LUST (sexual excitement), CARE (nurturance), PANIC/GRIEF (sadness), and PLAY (social joy).

the release of dopamine, which is the fundamental mediator of the system, and lies at the core of the anticipatory or euphoric search for “something”.

In this regard, the smartphone, which may trigger compulsive and addictive behaviors, has been defined as “a portable dopamine pump” (D. Greenfield 36). More generally, devices, platforms, and entertaining content aim to absorb us as continuously and completely as possible into an interactive mechanism that we willingly accept and strive for, mainly as it is highly pleasurable in itself. Endless scrolling, for example, is a behavior that manifests a spontaneous tendency of this kind; even other mammals, like humans, gratify themselves by pursuing this anticipatory dopaminergic pleasure as such, regardless of the actual relevance of its object, sometimes by prolonging the seeking activity or purposefully inducing it. Thus, in humans, the SEEKING system soon became “the unacknowledged darling [...] of neuroeconomics” (Panksepp and Biven 143), which precisely exploits the active but nonvoluntary and objectless nature of our primary affective life (see Reuter and Montag), with a special predilection for our appetitive impulses. From this perspective, what we label “impatience” may be described as a generalized desire to move “elsewhere” intertwined with angry feelings evoked by the RAGE system, which is largely provoked by curtailments of our freedom of action.

Personalized, familiar, and appropriately designed digital media experiences, from this perspective, facilitate the activation and maintenance of the dopaminergic SEEKING system (which, not by coincidence, is more often referred to by researchers as the “reward” system). In fact, where feelings exist to guide behaviors in uncertain situations, that affective system generates the only impulse that intentionally tends toward novelty and thus (relative) uncertainty, albeit in contexts perceived as nonthreatening, or such that other emotional affects (such as those evoked by the FEAR system) are not prioritized in activation.

In contemporary media experience, this affective system of expectancy, which in itself constitutes a key resource for survival and fuels more intellectual or creative human activities, may develop into a source of vulnerability. It is actually difficult to manage, as it intervenes in maintaining subjects' ability to be spontaneously responsive, engaged, and available – namely, open to the anticipation of "something new" – independently of any other regulatory or focusing activity. Experimental evidence inspired by affective neuroscience confirms that excessive technological usage involves the activation of subcortical primary affective circuits and occurs independently of the subjects' conscious intentions and control abilities (Montag et al.). Contemporary media culture, from this perspective, is not only a culture of empathy or anger; it is also a "seeking" culture, characterized by a widespread prolonged alertness and fueled by a pleasurable feeling of anticipation of "opportunities" that are implicitly assumed to be located "elsewhere".

This pleasurable mixture of alertness, expectation, and exploration is fueled by the activation of emotional primary-process systems, whose pre-cognitive affective levels differ and are autonomous from both generalized arousal and cognitively mediated emotions. Its effects do not fall outside the realm of awareness (indeed, they exist precisely to affect and dispose the subject toward the environment), but nonetheless, they lie below the level of consciousness (in the fullest sense of the term), as they are non-specific and anoetic affective impulses. Their intense but neither voluntary nor sophisticated character makes primary-process emotional affects particularly suited to orienting behaviors and, when repetitive, to generating habitual behavioral patterns – or, as we are going to see, dispositions to affective responses that may be labeled as affective habits.

Digital systems, habits, and the affective mind

Primary-process emotional affects correspond to action tendencies, and their activation further helps explain how gestures and behaviors are part of processes of

embodiment that may lead to the creation of habits. It is therefore important to highlight the enactive, rather than merely reactive, dimension of emotions – which are not so much simple reactions to stimuli, but rather manifest spontaneous inclinations of our organism to make sense through interaction with the environment (Ellis), independently of conscious deliberation and prior to any other cognitive intervention. As mentioned above, emotional affects, constitute a significant part of such pre- or peri-conscious impulses, and it is therefore possible to postulate a basic spontaneous, affective, pre-propositional and pre-individual intentionality at the core of our conscious mental life (Colombetti). Panksepp frequently speaks of pre-reflective "intentions-in-action", which differ from reflective and thought-related "intentions to act", as they manifest an affective intentionality and awareness that fosters a non-voluntary and pre-reflective primary form of sense-making, and concerns the entire organism's relationship with environmental affordances, in a continuous cycle of anticipations and reactions.

In this regard, it is also particularly valuable to refer to theoretical frames that consider the human mind not only as enactive and embodied, but also as intrinsically affective, that is, widely and variously energized by primary process impulses. In the neuropsychoanalytic view of Mark Solms (*The Hidden Spring*), for example, the source of human consciousness reveals itself to be so ancient that it cannot be identified with intelligence. In his view, in line with the affective neuroscience framework, the core of subjective experience and self is unlikely to be generated in the cerebral cortex, as it is primarily subcortical and in itself shared by mammals.

Similarly, according to Antonio Alcaro, it is important to emphasize the distinction between reflective consciousness and pre-cognitive and pre-reflective affectivity, which is immediate but affectively aware and not automatic. Feelings such as euphoric anticipation, as we have seen, are not automatisms; they are dispositions that attribute value and directedness

to the relationship between organism and environment, and that "influence attitudes and thoughts as they constitute the primary vectors of subjective intentionality". This awareness can be described as "a primordial sensibility, [...] a condition of openness to the surrounding environment without attentional focus or deliberate will" (Alcaro 89-90; my translation). Again, affects lie below the more evolved functions of the human mind but above unaware automatisms: affective life may correspond to the level that Wilfred Bion named "protomental", which is distinct from, but typically harmoniously intertwined with, both reflective awareness and unconscious automatisms. [6] This harmony appears to be compromised in mental disorders and addictions of various kinds, as well as in problematic or excessive uses of the internet and smartphones.

Even in entertaining situations, we cannot avoid engaging with environmental stimuli (Alcaro and Panksepp), thus becoming potentially vulnerable. Being part of a shared instinctual and pre-individual structure of the species, our ancient "anoetic affective field" allows digital devices to interact with collectivities of users, almost independently of the individual attitudes that emerge at higher levels of consciousness. If they were to provoke exclusively generalized arousal or non-conscious automatisms, digital systems would not be capable of intercepting the subjective needs and concerns that are typically useful for their functioning. The effective functioning of platforms makes it necessary to facilitate affective activations without reducing them to non-conscious automatisms, which would deprive the interaction of relevance and thus soon disappear from subjective awareness.

[6] Following Alcaro, the protomental level corresponds to an affective mind characterised by a specific anoetic sensibility and intentionality, devoid of content or representations of objects, which, nonetheless, continuously interact with higher forms of consciousness, respectively "ideative" or "noetic" – that is, cognitive-imaginative, characterized by representations that process raw impressions – and "autonoetic" – that is, self-conscious, concerning for example the capacity of perceiving oneself as the subject of an experience (Alcaro 16). This protomental level is not "unconscious" in a cognitivist sense; rather, it corresponds to an affective awareness, with its own instinctuality and rigidity, that is not "automatic" in its functioning. For this reason, various phenomena that psychoanalysis have described as "unconscious" can be ascribed to it. Albeit we do not experience in its pure state the affective anoetic absence of thought, we can often feel the effects of the autonomous emergence of the affective proto-mind – for example, in imbalanced, pathological, or dysfunctional behaviors.

Essentially for these reasons, I considered it more appropriate to focus on this affective, protomental level for a theoretical contribution to how digital systems condition users' behavior, making them eager for salient stimuli and continually projected toward an immediate future. To achieve this, as we have seen, digital platforms must create media environments that are perceived as familiar and not disorienting or undesirable, but that are at the same time filled with situations that generate subtle uncertainty and trigger rapid arousals of pleasurable anticipatory or exploratory activity. In fact, possible unknowns or objectual resistances could involve in the process higher levels of consciousness, which would intervene to articulate differently the more immediate and flowing interactions between users and digital contents, platforms, or devices.

One last observation. If affects are dispositions to interact with the environment, it should also be kept in mind that habits support and orient affectivity, and that the environment plays a role in both fostering habits and shaping feelings. Laura Candiotto and Roberta Dreon have regarded habits' positive role in supporting and orienting human sensibility as relatively flexible instruments of feeling that shape conduct and behavior – specifically, as "ways of selecting stimuli, identifying salient features, moving toward an object of interest, moving away from or toward someone else". From this perspective, their pragmatist notion of "affective habit" emphasizes how affects are "propulsive in involving and favoring relatively regular transactions between agents and their natural as well as culturally shared environments" and how affectivity "gives rise and nourishes more or less standardized practices" or "consolidated ways of facing circumstances" (Candiotto and Dreon).

Impatience may be regarded as a disposition of this type. It is an affective habit that structures the way we react to impediments to the achievement of expected outcomes in ongoing interactions, especially in digital contexts that design experience so as to minimize

impediments and slowdowns. The ways in which we behave in our natural and cultural environments mostly occur affectively/habitually, and this essential, spontaneous interdependence between subject and environment may also contribute to understanding some of the reasons behind technological "excessive uses" or addictions. In other respects, affectivity is not only scaffolded by habits "but it also scaffolds habits". From this perspective, habits are not regarded as "impermeable to cognition", as they are instead modifiable and adaptable according to the situation. In other respects, it is also necessary to note that actions and interactions are typically already embedded in "a specific affective context of practices and meanings that shapes them" (Candiotto and Dreon).

Coda: De-facticizing environments

In these pages, I have focused on some ideas about how digital media make users eager for immediate rewards and, over the longer term, inclined toward impatience. A first step involves content that generates experiences that are in themselves harmless and seemingly unimportant – certainly not dangerous or in need of monitoring, as explicit or fake content can be. However, the most interesting feature of the TikTok experience, based on the functionality of an AI algorithm and enjoyed by scrolling and tapping on smartphones, lies in the fact that it is characterized by a continuous, accident-free experiential flow, fueled by constant small instant gratifications. In the optimal version of such an experience, nothing should obstruct the flow, as any kind of obstacle may become, for users, a hindrance that prevents the prosecution of the interaction, thus undermining the resulting implicit sense of agency – which may easily cause the subject to become frustrated or angry.

In such a context, impatience can be regarded as a disposition to instinctively react to frustration due to accidents or complications that curtail the impulse to act freely. It is characterized by an urge to seek elsewhere, accompanied by subtle discomfort, and it may result in a shifting of attention and a tendency to shorten, or a will to interrupt, what is

perceived as downtime. One can also regard contemporary widespread impatience as a consequence of the increasing availability of the media environments with which we habitually interact – for example in digital entertainment, which beforehand and primarily manifests its character through the design and organization of accident-free experiences, more than through specific genres or types of content.

A philosophical problematization of such a vision of entertainment was proposed by Byung-Chul Han, to whom I will refer to in the conclusion. No longer based on the modernist opposition between work and leisure time, entertainment is nowadays increasingly pervasive and chronic. As such, according to Han, it can be regarded as a paradigmatic structure that aims to alter the way we experience the world by abolishing all superfluous kinds of cognitive effort and, with them, all environmental material and contingent resistance. From this perspective, digital media control feelings by designing experiential patterns that users absorb through physical and psychic channels of pleasure.

Underlying this process, according to a Heideggerian perspective, lies a feeling of "unburdening" that pleasantly distracts, nullifies the intensity of passions, and allows the subject to feel "*at home* […] in the *present* world" (Han, *Good Entertainment* 74, italics in the original). It would be lengthy to discuss in detail this paradoxical ability to connect without passion, or to create belonging without situational rootedness. It is enough to point out that, thus understood, contemporary entertainment is an interactive mechanism that makes subjects, also and especially in their "offline" lives, reluctant to deal with the *facticity* of non-entertaining environments, that is, with the experiential quality that "appears primarily through *gravity*, through the *resistance* of things" (Han, *Good Entertainment* 83, italics in the original), and that media platforms and technologies increasingly tend to weaken in the design of "online" experiences.

Although Han's conclusions are not always entirely convincing, it is important to highlight his idea of entertainment as characterized by relief and the loss of facticity. It seems that the world's facticity, which is necessarily experienced in everyday practices, has increasingly become perceived as an unnecessary obstacle that hinders freedom of action and doesn't make one feel comfortable while interacting with his or her environment. From this perspective, devices are increasingly becoming *informatons*, namely, "informations-processing *actors*" (Han, *Non-Things* 3), capable of acting and reacting by relieving existence of all care and contingencies, thus "de-facticizing" environments. The smartphone is an informaton that makes the world available and easily accessible through the construction of small mediatic niches; it "deprives reality of its character as resistant" (Han, *Non-Things* 22), and it therefore resembles a "narcissistic" or "autistic" object more than a relational one.

Big platforms, TikTok included, take full advantage of, and reinforce, the repetitiveness and compulsion that "characterize our relationship to the smartphone" (Han, *Non-Things* 27); and all this, as we have seen, also impacts how subjects interact with the world in their offline experiences. This is a crucial point in comprehending impatience: "Heidegger's idea of 'facticity' expresses the fact that human existence is based on the non-available. […] The digital order […] does not tolerate any non-available ground of being" (Han, *Non-Things* 4). Within such a Heideggerian phenomenology, the affective root of impatience can be described as the frustrating feeling of the non-availability of the world that follows the habitual availability of things and opportunities made possible in digital entertaining experiences. This, in turn, makes subjects, even when they are not "users", progressively unavailable for interactions with resistant environments. In this regard, impatience involves unavailability.

Whenever an environment (medial or not) exhibits traits of resistance to our intentions, needs, or concerns, we may become impatient, and presumably every accident will

be able to generate frustration, much more so as we have been habituated to experiential processes that flow facilitated by a generalized accessibility of resources and ease of interaction. TikTok's "satisfying" videos can be regarded as paradigmatic products of such a condition precisely because, regardless of the relaxing function they seem to provide, they are emblematic of the smoothness, continuity, repetitiveness, addictiveness, effectiveness, and immediate pleasantness that characterize the digital entertaining experience of de-facticized environments. If this is true, it seems that the "ideology of ease" (Dilger) is still dominant, that the smartphone may still be regarded as "the signature artifact of our age" (A. Greenfield 13), as it establishes the order of what is habitual and desirable, and that its malleability may be well summarized in the notion of "perpetual opportunism" (Miller et al. 103-132).

It is challenging to determine or imagine what can be done to dishabituate or contain the habitual responses that can emerge from this state of affairs. Again drawing on Han's ideas (*The Crisis of Narration*), smartphones, AI technologies, and platforms offer experiences that are non-narratively structured – as typical features of contemporary entertainment instead consist of additivity, accumulation, immediacy, and progression, which outline experiential structures that are devoid of articulation and conclusion. From this perspective, narrative practices, if recursively and extensively experienced, can habituate our affective minds in different ways. If this were the case, exposing oneself to narrative experiences, whether literary or audiovisual, could function as a kind of rebalancing practice. This would also imply a need to expand, refocus, and re-habituate one's emotional repertoire, and learn to connect and hierarchize events that are not all located on the same level of significance, that evolve over time, and that in being articulated become differently charged with value. Finally, it would mean reorganizing crucial features of identity by intervening in the digital constitution of self (see Elliott 78-105), and by rebalancing the weight and meaning of affectivity so as to regulate its effects and dispose us differently toward the

environment we interact with, thus making our pre-reflective emotional life a source of experiential worth and density instead of merely impoverishment and vulnerability.

Furthermore, narratives are not merely logical-causal structures that organize and hierarchize series of events. They should also be considered emotional modulators and facilitators of empathy, and as such, they can serve as antidotes to the contemporary widespread inclination toward self-centered experiences. There is no need to demonize the nonvoluntary, noncontrollable, and "mindless" affective dimensions of our mental life, although it is important to be aware of the logics of their functioning. Affective life shapes habits, but the other way around is also true. As they are not unconscious automatisms, affects are sufficiently adaptive. It is especially necessary to prevent their rigidification in practices that tend to become automatisms, and this can be accomplished through developing good habits.

Works Cited

Alcaro, Antonio. *La Mente Affettiva*. Astrolabio, 2023.

Alcaro, Antonio, and Jaak Panksepp. "The SEEKING Mind: Primal Neuro-Affective Substrates for Appetitive Incentive States and Their Pathological Dynamics in Addictions and Depression." *Neuroscience and Biobehavioral Reviews*, vol. 35, no. 9, 2011, pp. 1805-1820.

Alcaro, Antonio, et al. "The SEEKING Drive and Its Fixation: A Neuro-Psycho-Evolutionary Approach to the Pathology of Addiction." *Frontiers in Human Neuroscience*, vol. 15, 2021, pp. 1-12.

Alderman, Liz. "TikTok Is Subject of E.U. Inquiry Over 'Addictive Design'." *The New York Times*, 19 February 2024, https://www.nytimes.com/2024/02/19/business/tiktok-european-commission-children.html

Bruun, Hanne. “The Delay Economy of ‘Continuity’ and the Emerging Impatience Culture of the Digital Era.” *Nordic Journal of Media Studies*, vol. 1, no. 1, 2019, pp. 85-101.

Candiotto, Laura, and Roberta Dreon. “Affective Scaffoldings as Habits: A Pragmatist Approach.” *Frontiers in Psychology*, vol. 12, 2021, https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.629046/full

Carr, Nicholas. “Patience is a Network Effect.” *Rough Type*, 11 November 2012, https://www.roughtype.com/?p=2069

Caruana, Fausto, and Italo Testa, editors. *Habits: Pragmatist Approaches from Cognitive Science, Neuroscience, and Social Theory*. Cambridge University Press, 2020.

Chamorro-Premuzic Tomas. *I, Human: AI, Automation, and the Quest to Reclaim What Makes Us Unique*. Harvard Business Review Press, 2023.

Chen, Xiaowei, et al. “Do Persuasive Designs Make Smartphones More Addictive? A Mixed-Methods Study on Chinese University Students.” *Computers in Human Behavior Reports*, vol. 10, 2023, pp. 1-12.

Citton, Yves, editor. *L’Économie de l’Attention. Nouvel Horizon du Capitalisme?* La Découverte, 2014.

City of New York. “Mayor Adams Announces Lawsuit Against Social Media Companies Fueling Nationwide Youth Mental Health Crisis.” NYC, 14 February 2024, https://www.nyc.gov/office-of-the-mayor/news/125-24/mayor-adams-lawsuit-against-social-media-companies-fueling-nationwide-youth-mental-health#/0

Colombetti, Giovanna. *The Feeling Body: Affective Science Meets the Enactive Mind*. The MIT Press, 2014.

Colombetti, Giovanna, and Joel Krueger. “Scaffoldings of the Affective Mind.” *Philosophical Psychology*, vol. 28, no. 8, 2015, pp. 1157-1176.

Cooley, Heidi Rae. *Finding Augusta: Habits of Mobility and Governance in the Digital Era*, The University of Chicago Press, 2014.

Crary, Jonathan. *Suspensions of Perception: Attention, Spectacle, and Modern Culture*. The MIT Press, 1999.

Dilger, Bradley. "The Ideology of Ease." *Journal of Electronic Publishing*, vol. 6, no. 1, 2000, https://quod.lib.umich.edu/j/jep/3336451.0006.104?view=text;rgn=main

Elliott, Anthony. *The Culture of AI: Everyday Life and the Digital Revolution*. Routledge, 2019.

Ellis, Ralph D. *Curious Emotions: Roots of Consciousness and Personality in Motivated Action*, John Benjamins, 2005.

Essau, Cecilia A., and Paul Delfabbro, *Adolescent Addiction: Epidemiology, Assessment, and Treatment*, 2nd ed., Elsevier, 2020.

Eugeni, Ruggero. *Capitale Algoritmico. Cinque Dispositivi Postmediali (Più Uno)*. Morcelliana, 2021.

Evans, Elizabeth. "The Economics of Free: Freemium Games, Branding and the Impatience Economy." *Convergence: The International Journal of Research into New Media Technologies*, vol. 22, no. 6, 2016, pp. 563-580.

Everitt, Barry J, and Trevor W. Robbins. "Neural Systems of Reinforcement for Drug Addiction: From Actions to Habits to Compulsion." *Nature Neuroscience*, vol. 8, 2005, pp. 1481-1489.

Fabela II, Augie K. *The Impatience Economy: How Social Retail Marketing Changes Everything*. Redwood Publishing, 2021.

Farzana, Tasnim, et al. "The Overlooked Role of Social Norms in Problematic Smartphone Usage." *The Journal of Social Media in Society*, vol. 12, no. 2, 2023, pp. 22-43.

Gallagher, Shaun, and Jonathan Shear, editors. *Models of the Self*, Imprint Academic, 1999.

Gazzaley, Adam, and Larry D. Rosen. *The Distracted Mind: Ancient Brains in a High-Tech World*. The MIT Press, 2016.

Geoffard, Pierre-Yves, Stéphane and Luchini. "Changing Time and Emotions." *Philosophical Transactions of the Royal Society*, no. 365, 2010, pp. 271-280.

Greenfield, Adam. *Radical Technologies: The Design of Everyday Life*. Verso, 2017.

Greenfield, David N. "Digital Distraction: What Makes the Internet and Smartphone so Addictive?" *Human Capacity in the Attention Economy*, edited by Sean Lane and Paul Atchley, American Psychological Association, 2021, pp. 27-48.

Han, Byung-Chul. *Undinge: Umbrüche der Lebenswelt*. Ullstein, 2021. En. tr. *Non-things: Upheaval in the Lifeworld*. Polity Press, 2022.

---. *Gute Unterhaltung. Eine Dekonstruktion der Abendländischen Passionsgeschichte*. Matthes & Seitz Berlin, 2006. En. tr. *Good Entertainment: A Deconstruction of the Western Passion Narrative*, The MIT Press, 2019.

---. *Die Krise der Narration*. Matthes & Seitz Berlin, 2023. En. tr. *The Crisis of Narration*. Polity Press, 2024.

Hartogsohn, Ido, and Amir Vudka. "Technology and Addiction: What Drugs can Teach Us about Digital Media." *Transcultural Psychiatry*, vol. 60, no. 4, 2022, pp. 651-661.

Hindman, Matthew. *The Internet Trap: How the Digital Economy Builds Monopolies and Undermines Democracy*, Princeton University Press, 2018.

Jargon, Julie. "TikTok Brain Explained: Why Some Kids Seem Hooked on Social Video Feeds." *The Wall Street Journal*, 2 April 2022, https://www.wsj.com/articles/tiktok-brain-explained-why-some-kids-seem-hooked-on-social-video-feeds-11648866192

Lane, Sean, and Paul Atchley, editors. *Human Capacity in the Attention Economy*. American Psychological Association, 2021.

Lane, Sean, et al. “Charting a Way Forward: Navigating the Attention Economy.” *Human Capacity in the Attention Economy*, edited by Sean Lane and Paul Atchley, American Psychological Association, 2021, pp. 189-210.

Larsen, Helle, et al. “Excessive Smartphone Use and Addiction: When Harms Start Outweighing Benefits.” *Addiction*, vol. 118, 2022, pp. 586–588.

Legrenzi, Paolo. *Le Cose Non Sono Come Sembrano. Perché la Vita è Meglio di Come la Immaginiamo*. Solferino, 2023.

León Méndez, Melany, Ivan Padron, Ascensión Fumero, and Rosario J. Marrero. “Effects of Internet and Smartphone Addiction on Cognitive Control in Adolescents and Young Adults: A Systematic Review of fMRI Studies.” *Neuroscience & Biobehavioral Reviews*, vol. 159, 2024, https://www.sciencedirect.com/science/article/pii/S0149763424000411

Levounis, Petros, and James Sherer, editors. *Technological Addictions*. American Psychiatric Association Publishing, 2021.

Leyton, Marco. “The Neurobiology of Desire: Dopamine and the Regulation of Mood and Motivational States in Humans.” *Pleasures of the Brain*, edited by Morten L. Kringelbach, and Kent C. Berridge, Oxford University Press, 2010.

Liebherr, Magnus, Patric Schubert, Stephanie Antons, Christian Montag, and Matthias Brand. “Smartphones and Attention, Curse or Blessing? A Review on the Effects of Smartphone Usage on Attention, Inhibition, and Working Memory.” *Computers in Human Behavior Reports*, vol. 1, 2020, https://www.sciencedirect.com/science/article/pii/S2451958820 300051?via%3Dihub

Lopez-Fernandez, Olatz, editor. *Internet and Smartphone Use-Related Addiction Health Problems: Treatment, Education and Research*. MDPI, 2021.

Marino, Gabriele, and Bruno Surace, editors. *TikTok. Capire le Dinamiche Della Comunicazione Ipersocial*. Hoepli 2023.

Marty-Dugas, Jeremy, and Daniel Smilek. "The Relations between Smartphone Use, Mood, and Flow Experience." *Personality and Individual Differences*, vol. 164, 2020, pp. 1-9.

Meier, Adrian. "Studying Problems, not Problematic Usage: Do Mobile Checking Habits Increase Procrastination and Decrease Well-Being?" *Mobile Media & Communication*, vol. 10, no. 2, 2022, pp. 272-293.

Menon, Vinod. "20 Years of the Default Mode Network: A Review and Synthesis." *Neuron*, vol. 111, no. 16, 2023, https://www.sciencedirect.com/science/article/pii/S0896627323003082

Miller, Daniel, et al. *Global Smartphone: Beyond a Youth Technology*. UCL Press, 2021.

Montag, Christian and Kenneth L. Davis. *Animal Emotions: How They Drive Human Behavior.* Brainstorm Books, 2020.

Montag, Christian, and Martin Reuter, editors. *Internet Addiction: Neuroscientific Approaches and Therapeutical Implications Including Smartphone Addiction*, 2nd ed. Springer, 2017.

Montag, Christian, et al. "An Affective Neuroscience Framework for the Molecular Study of Internet Addiction." *Frontiers in Psychology*, vol. 7, 2016, pp. 1-13.

Nelson-Field, Karen. *The Attention Economy and How Media Works: Simple Truths for Marketers*. Palgrave Macmillan, 2020.

Oulasvirta, Antti, Tye Rattenbury, Lingyi Ma, Eeva Raita. "Habits Make Smartphone Use More Pervasive." *Personal and Ubiquitous Computing*, vol. 16, 2012, pp. 105-114.

Paasonen, Susanna. *Dependent, Distracted, Bored: Affective Formations in Networked Media*. The MIT Press, 2021.

Panksepp, Jaak, and Lucy Biven, *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions*. W.W. Norton & Co., 2012.

Panova, Tayana, and Xavier Carbonell. "Is Smartphone Addiction Really an Addiction?" *Journal of Behavioral Addictions*, vol. 7, no. 2, 2018, pp. 252-259.

Parisi, Francesco. *La Tecnologia Che Siamo*. Codice, 2019.

Pettman, Dominic. *Infinite Distraction: Paying Attention to Social Media*, Polity Press, 2016.

Guerra, Corinna, and Marco Piazza, editors. *Disruption of Habits During the Pandemic*. Mimesis International, 2022.

Ramírez-Vizcaya, Susana, and Tom Froese. "The Enactive Approach to Habits: New Concepts for the Cognitive Science of Bad Habits and Addiction." *Frontiers in Psychology*, vol. 10, 2019, pp. 1-12.

Reuter, Martin, and Christian Montag, editors. *Neuroeconomics*, Springer, 2016.

Rosen, Devan, editor. *The Social Media Debate: Unpacking the Social, Psychological, and Cultural Effects of Social Media*, Routledge, 2022.

Qin, Yao, et al. "The Addiction Behavior of Short-Form Video App TikTok: The Information Quality and System Quality Perspective." *Frontiers in Psychology*, vol. 13, 2022, https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2022.932805/full

Schellewald, Andreas. "Understanding the Popularity and Affordances of TikTok through User Experiences." *Media, Culture & Society*, vol. 45, no. 8, 2023, pp. 1568-1582.

Schnitker, Sarah A. "An Examination of Patience and Well-Being." *The Journal of Positive Psychology*, vol. 7, no. 4, 2012, pp. 263-280.

Sindermann, Cornelia, et al. "Predicting Tendencies towards the Disordered Use of Facebook's Social Media Platforms: On the Role of Personality, Impulsivity, and

Social Anxiety." *Psychiatry Research*, vol. 285, 2020, https://www.sciencedirect.com/science/article/abs/pii/S0165178120300755

Solms, Mark. *The Hidden Spring: A Journey to the Source of Consciousness*. W.W. Norton & Co., 2021.

Spitzer, Manfred. *Die Smartphone-Epidemie. Gefahren für Gesundheit, Bildung und Gesellschaft*. Klett-Cotta, 2018.

Su, Conghui, Hui Zhou, Liangyu Gong, Binyu Teng, Fengji Geng, and Yuzheng Hu. "Viewing Personalized Video Clips Recommended by TikTok Activates Default Mode Network and Ventral Tegmental Area." *NeuroImage*, vol. 237, 2021, https://www.sciencedirect.com/science/article/pii/S1053811921004134?via%3Dihub

Sussman, Steven, "Appetitive Needs and Addiction," *The Cambridge Handbook of Substance and Behavioral Addictions*, edited by Steven Sussman. Cambridge University Press, 2020.

Ting, Chuong Hock, and Yoke Yong Chen. "Smartphone Addiction." *Adolescent Addiction: Epidemiology, Assessment, and Treatment*, edited by Cecilia A. Essau and Paul Delfabbro, 2nd ed., Elsevier, 2020, pp. 215-240.

Vincent, Jane, and Leslie Haddon, editors. *Smartphone Cultures*. Routledge, 2018.

Waterworth, John, and Giuseppe Riva. *Feeling Present in the Physical World and in Computer-Mediated Environments*. Palgrave Macmillan, 2014.

Williams, James. *Stand Out of Our Light: Freedom and Resistance in the Attention Economy*. Cambridge University Press, 2018.

Wilmer, Henry H., and Jason M. Chein. "Mobile Technology Habits: Patterns of Association among Device Usage, Intertemporal Preference, Impulse Control, and Reward Sensitivity." *Psychonomic Bulletin & Review*, vol. 23, 2016, pp. 1607-1614.

Wilmer, Henry H., et al. “Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and Cognitive Functioning.” *Frontiers in Psychology*, vol. 8, 2017, pp. 1-16.

Wright, Jason S., and Jaak Panksepp. “An Evolutionary Framework to Understand Foraging, Wanting, and Desire: The Neuropsychology of the SEEKING System.” *Neuropsychoanalysis*, vol. 14, no. 1, 2012, pp. 5-39.

Zhao, Zhengwei. “Analysis on the ‘Douyin (Tiktok) Mania’ Phenomenon Based on Recommendation Algorithms.” *E3S Web of Conferences*, vol. 235, 2021, pp. 1-10.]