

INSTAGRAMMATIZATION

Considering the hypomnesic milieu facilitated
by a hybrid social media platform



Daniel Everts, July 2021
Utrecht University

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...ABSTRACT...

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In March of 2021, Facebook Inc. announced plans to develop an advertisement-free version of social media platform Instagram. The plans have been met with strong criticism, which is only the latest in a long line of critique on social media. The field of new media studies, however, is rife with seemingly contradictory appraisals of social media platforms. While some understand them as cash-grabbing monoliths responsible for divisions in society, others see them as merely reflecting societal problems, while yet others understand them as boons to humanity that contribute towards countering those problems.

In part, these contradictory statements can be explained as caused by a general understanding of human society and technology as two separate elements, and a repeated focus on only individual aspects of technology – the way individual technologies function, the possibilities they afford, the way they are used and configured, or the way they operate within constellations of economic power. This thesis presents the philosophy of Bernard Stiegler on memory and technics as a way to overcome the binary opposition between society and technology; the French philosopher understands humanity and technics – tools human beings use to exteriorize memories and carry over experience to future generations – as locked in a perpetual process of mutual becoming.

Stiegler's philosophical project is explicitly politically engaged. It is aimed at how specific configurations of technics may cause a form of psychological harm that the French philosopher refers to as *symbolic misery*. According to Stiegler, this symbolic misery first emerged from 20th century mass media and fosters xenophobia, fanaticism and forms of resentment. The aim of this thesis is three-fold: to operationalize Stiegler's philosophy, to illustrate, through an analysis of the Instagram social media platform, how his philosophical ideas may indeed be useful in empirical research, and to provide new insights into the role Instagram might play within contemporary Western society, especially in regard to its alleged polarization.

After the introduction of some theoretical additions to Stiegler's philosophy in order to attune it to our contemporary 21st century media landscape, a three-pronged analytical approach is developed that takes together discursive interface analysis with a consideration of Instagram's selection and ordering algorithms and a consideration of Facebook Inc.'s business model. Based on the analysis, it is found that, due to way Instagram's current configuration is aimed towards generating advertising revenue, it fosters an environment from which symbolic misery and polarizing tendencies might emerge, while it simultaneously also offers precisely the means necessary to combat these tendencies.

To an extent, these findings nuance Stiegler's philosophy, which originally states that technics can work *either* towards or against symbolic misery. The thesis concludes on the thought that, while on paper, an advertisement-free children's version of Instagram might perhaps not be such a bad idea, it might nevertheless be subjected to the same drawbacks its adult version is subjected too; after all, from a methodological perspective, the discursive interface analysis reveals broader tendencies within contemporary Western society. In any case, as a society, we will have to consider the balance between social media platform's boons and the drawbacks caused by their subjection to market forces, which might foster symbolic misery, but at the same time do promote the existence of social media platforms in the first place.

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INSTAGRAMMATIZATION

**Considering the hypomnesic milieu facilitated
by a hybrid social media platform**

Dedicated to C.C. and F.C.B.

PART ONE...

...OF SOCIAL MEDIA PLATFORMS AND FRENCH PHILOSOPHERS

In March of 2021, American based social media company Facebook Inc. announced their plans to start developing an advertisement-free version of their smartphone-based social media platform *Instagram* aimed at children under the age of thirteen (Mac and Silverman 2021; Kaye 2021). With about 1.074 billion users (Mohsin 2021), Instagram currently ranks as the fourth most-used social medium worldwide (Walsh 2021) and is on a steady course to surpass other platforms such as Facebook in terms of daily user activity (Hutchinson 2021; Barnhart 2021). Facebook Inc. has stated their aim in developing this ‘kid-friendly’ version of Instagram is to prevent children from going onto social media websites that lack parental supervision (Osborne 2021). Nevertheless, the company’s plans with their immensely popular social media platform, the ‘adult’ version of which has a thirteen and up age restriction (Mac and Silverman 2021; Kaye 2021), were immediately met with critique from health professionals around the globe, who warned of the “powerful influence” such an application might have over young children and of the “great risk” it might constitute to their mental health (Heilweil 2021).

This is only the latest in a long line of critique on social media platforms, which, while being recognized for their ability to make possible forms of self-expression, have also been criticized for creating anxiety, causing a decrease in sleep quality, creating negative body images, facilitating online bullying and even causing depression among its users (MacMillan 2017). Other criticisms focus on social media platforms’ fostering of narcissism (McCain and Campbell 2018), the overload of surface-level information they cause that thwarts deep thinking (Chappet 2021), their conditioning of users to frame everyday existence as potential moments to capture and share, thereby rendering their actual experiences less memorable (Dow 2015, 132–133), and their supposed ability to cause polarization within contemporary Western society (Molla 2020; Lubach 2020; Carothers and O’Donohue 2019).

I. The current state of the debate

A lack of consensus

Unsurprisingly given the sheer amount of criticism social media platforms such as Instagram have received from throughout society, social media have been written about quite

extensively within the interdisciplinary field of new media studies. Yet, there is a clear lack of consensus in regard to how to think of these social media platforms that increasingly pervade our day-to-day lives. Broadly speaking, authors tend to gravitate toward either an optimistic or pessimistic appreciation of social media platforms.

On the more pessimistic side, some authors focus on the selection and ordering algorithms on which social media platforms run, arguing they create *filter bubbles* that increasingly feed users with information that is already exactly in line with their current worldviews, keeping them away from diverse political perspectives (Parmalee and Roman 2020; *citing* Parmalee and Bichard 2012; Bakshy, Messing, and Adamic 2015; Zhu, Skoric, and Shen 2017) and fostering increasingly polarized societies (Adee 2016).¹ In direct opposition to this line of thinking, other authors argue that these so-called filter bubbles do not actually exist (Bruns 2019a). Instead, issues like polarization are an ailment brought on by contemporary Western society at large, which merely become *reflected* on social media platforms, and we should direct our attention to society *instead* of to technology if we are to ever solve these problems (Bruns 2019b).

Yet other pessimistic authors direct their attention, not so much to the functioning of social media platforms, but rather to the logic *behind* their functioning. In regard to Instagram specifically, authors have discussed the platform in the context of *user-generated content* and *free labour* debates (Macon 2017), criticizing Facebook Inc. for capitalizing the attention of its users by giving them a reason to remain active on the platform and subsequently generating advertisement revenue (Zulli 2018).

Meanwhile, as said, within the broader societal debate, optimists generally praise social media platforms for facilitating forms of self-expression (MacMillan 2017). In relation to Instagram specifically, media scholars have written on how the social media smartphone application allows its users to create auto-biographies of sorts by uploading photographs and videos to the platform (Fallon 2014), and have also delved into how it lends itself well to forms of activism by virtue of its potentially enormous public reach (Davidjants and Tiidenberg 2021).

Two problems

Thus, when it comes to social media platforms, at a glance, the field of new media studies is rife with statements that seemingly contradict one another. From the preceding, on one side, we might understand social media platforms as mean-spirited cash-grabbing monoliths responsible for divisions in society, while on the other side, we might simply see them as the newest home for societal issues already pervading society. Alternatively, we might even

¹ Here, I define polarization as the division of society in groups with more or less opposing opinions on all sorts of manners of political and societal relevance (“Polarization” n.d.).

understand them as boons to humanity that contribute toward *countering* these problems by providing users with the ability to express themselves and reach out to others.

We might identify two related reasons as to why these seemingly contradictory statements co-exist. The first is that most research on which these views are based focuses solely on separate aspects of social media platforms – aspects that are then often only explored from one perspective, either an optimistic or pessimistic one. Again, authors focus on the negative consequences of the algorithms on which social media platforms run (Parmalee and Roman 2020; Adee 2016); on possibilities for activism afforded to users (Fallon 2014; Davidjants and Tiidenberg 2021); on the negative consequences of revenue models (Macon 2017; Zulli 2018); *or* on how problems in society are reflected in user practices on social media platforms (Bruns 2019b).

Second, these authors tend to consider technology and society as two more or less separate entities. This binary thinking comes most readily to the fore in the contradictory understandings of social media within the pessimistic strand dealing with algorithms: either technology has a negative bearing on societies and the individuals that are part of them (Parmalee and Roman 2020; Adee 2016), or societies have certain issues that subsequently migrate to and further play out on social media platforms (Bruns 2019b).

In other words, it seemingly depends on *where* one looks whether one develops a more optimistic or pessimistic view of social media. Take all these seemingly contradictory accounts together, however, and from a preliminary standpoint it does not seem so far-fetched to believe that social media platforms may be partly responsible for and further reinforce some of the societal issues discussed, while *also* providing means with which to solve them. In the very least, taking the aforementioned contradictory statements together, we find reason to believe the relation between society and technology is much more complex than some earlier critical work on social media platforms have had us believe.

II. Introducing a French philosopher of technology

Recently, some work within new media studies has endeavored to develop a more nuanced understanding of the role social media platforms play in contemporary society. Sociologist and media studies scholar Rebecca Coleman, for instance, has been considering the experience of social media users through in-depth interviews. She has shown that, in their lived experience, users sometimes feel pressured to endlessly and mindlessly keep scrolling through content presented to them through social media platforms in general and Instagram specifically (Coleman 2020, 66), but at the same time often also feel empowered to shape

their own identities through social media (Everts & Coleman 2021).² Thus she highlights how the boons and dangers of social media platforms separately identified by other authors do in fact coexist in the experience of individual users.

In this thesis, I aim to contribute to this newly developing strand of more nuanced, holistic inquiry into social media platforms by introducing the work of French philosopher of technology Bernard Stiegler. In his philosophical work on memory and *technics* – tools that humans use, of which technology is a part (Roberts 2007, 26) – Stiegler considers society, the individuals that live in it *and* technics as mutually implicated in the same process of perpetual becoming (Stiegler 2011a, 74; Crogan 2013, 116),³ maintaining that human culture and humanity altogether are in a way *defined by* technics (Stiegler 1998b, 49).

Political engagement

Stiegler understands technics as tools that human beings can use to exteriorize and retain their *memories*. According to Stiegler, it is through these memory functions that technics give shape to human consciousness, experience and processes of identity formation (Stiegler 1998b, 49; Roberts 2007, 26; James 2010, 210). What makes the French philosopher's thinking stand out in particular is its explicit politically engaged character and the way it considers numerous different aspects of technology media studies scholars previously discussed tend to approach separately. Stiegler's philosophy touches upon the way individual technologies function, the possibilities these technologies afford, the way these possibilities are actually put to use, *and* the way these technologies operate within constellations of economic power.

In particular, Stiegler's politically engaged philosophical thinking is aimed at explaining how, due to specific configurations of technics – specific utilizations of technical possibilities and the embedding of technics within constellations of power – that appeared toward the end of the 20th century and have since persisted in various forms of mass media, a form of psychological harm has emerged that Stiegler refers to as *symbolic misery*. Following the French philosopher's train of thought, it is this symbolic misery that is one of the main sources of polarization within Western society, as it presumably causes xenophobia, fanaticism and various forms of resentment (Stiegler and During 2017a, 71, 76).

Notably, Stiegler also explains how this symbolic misery may be combatted through the utilization of recent technological developments in the field of digitally networked

² The source cited here is a podcast I recorded with Rebecca Coleman. In it, amongst other things, Coleman discusses how, in engaging with her respondents, she has found users of social media feel simultaneously caught up in a continuous flow of scrolling, and enabled to give shape to their own sense of self by expressing themselves through social media.

³ Of course, such an understanding is not unique to Stiegler's work. In fact, it might be seen as a staple of post-humanist thinking. Karen Barad's post-anthropocentric contention that *everything* is always in a state of becoming through the "mutual constitution of entangled agencies" (Barad 2003, 803) readily comes to mind as a prime example of this type of thinking about the relation between humanity and its surroundings.

(communication) technology. That is, *if* the new possibilities these technological developments afford are handled in the right way and not, for instance, only put to use in service of generating economic profit (Stiegler and Hansen 2010, 84).

As I argue in this thesis, Stiegler's politically engaged philosophical thinking about technics as mnemonic tools offers us a way to move beyond the aforementioned binary opposition of society and technology often present within new media studies. I will allow us to do so in meaningful ways that may provide us with nuanced insights into how social media platforms operate within – or, indeed, as intricate part of – contemporary Western society, especially in relation to questions of polarization. It will help us to more elaborately theorize on both social media's boons *and* dangers in general and allow us to paint a nuanced picture of social media platforms' place in today's society – how they might impact the way we remember, forget and make use of our memories for better or for worse; or both.

Demonstrating Stiegler's usefulness

Sadly, Stiegler passed away in August of 2020. Given the time it takes to write and publish books – and translate them – he understandably did not manage to write extensively about the social media we use today – in any case, no such work exists today in English. As such, he was unable to consider his philosophical ideas in light of the social media landscape as we know it today, at the start of the 2020's (Rizzo and Berger Soraruff 2020). While Stiegler's thinking has been picked up within new media studies, actual empirical research based on his philosophy remains rather scarce, with most work on Stiegler aimed at explaining his philosophical concepts, elaborating on their origins and relating his ideas to those of other philosophers (Beardsworth 2010; Crogan 2013; Fitzpatrick 2014; Fuggle 2013; Howells and Moore 2013; Hughes 2014; James 2010; Johnson 2013; Roberts 2012; 2007).

Thus far, few authors have actually attempted to put Stiegler's thinking to use in considering contemporary social media platforms. Even when they do, they too ultimately focus primarily on singular aspects, most notably on the algorithms that select and order memories on social media platforms (Prey and Smit 2018) and the way the operation of these algorithms is largely unfathomable to human beings (Hansen 2015). Processes that precede the selection and ordering of memories, such as the technical manner of their creation – one of the most crucial aspects of Stiegler's politically engaged philosophy – are seemingly ignored in work that adopts Stiegler's thinking.⁴

The aim of this thesis, then, is three-fold. The first is to develop a way to make productive use of Stiegler's philosophy. The second aim follows from the first and is to illustrate, through an elaborate analysis of how Instagram's technical configuration steers

⁴ To be clear, this is not an attempt to devalue these authors' works. In fact, in their endeavors to adapt Stiegler's work to the hypermediated context of our contemporary digitally networked society, in some respect these authors even expand on Stiegler's thinking. I shall come back to this toward the end of the next part of this thesis.

users in exteriorizing and subsequently handling their memories, how Stiegler's philosophical ideas may actually be useful in empirical research. In turn, the third aim flows from the second aim and is to provide new insights into the role the immensely popular social media platform Instagram might play within contemporary Western society, especially in regard to its alleged polarization (Molla 2020; Lubach 2020; Carothers and O'Donohue 2019).⁵

In what follows, I will first elaborate on Stiegler's philosophy on memory and technics. Then, I will relate his thinking to some ideas circulating within new media studies and, based on this, introduce a number of theoretical additions I believe will help attune his philosophy to our contemporary media landscape. Based on this 'updated' iteration of Stiegler's philosophy, I will introduce and add to Mel Stanfill's (2015) *discursive interface analysis* approach as a way to productively engage with Instagram as a mnemotechnical platform and proceed to explore this platform at length. This, then, will be an exploration that does justice to the essence of Stiegler's thinking about the relation between humanity, technology and memory and illustrates its worth in scrutinizing the social media platforms that dominate our media landscape – and much of our social lives – today.

⁵ For clarity's sake, my focus in this thesis is mainly on the technical operation of Instagram – the way it affords the exteriorization and subsequent handling of memory – and, following Stiegler's thinking, how this *might* foster polarizing tendencies within Western society. I am *not* occupied with considering how different groups in society might currently be using Instagram, or with the role the social media platform might currently play in concrete political struggles. In other words, this is mainly an empirically grounded, philosophical consideration of Instagram.

PART TWO...

...STIEGLER'S PHILOSOPHICAL PROJECT ON MEMORY AND TECHNICS

Bernard Stiegler's thinking can best be characterized as an understanding of technics as tools for the retention of memory and the shaping of human consciousness, experience and individual identity. In order to properly understand how *symbolic misery* emerges from particular configurations of technics we must first go back to the very essence of his philosophical thinking and from there move toward an appreciation of his critique of 20th century mass media technologies.

After I have done so, I will recount Stiegler's optimistic albeit largely prophetic appraisal of 21st century media and briefly consider how a more empirically grounded understanding of memory (Van Dijck 2004) can add to Stiegler's philosophical perspective. I end with a short account of how previous adoptions of Stiegler's work in considerations of social media and networked communication technologies supplement Stiegler's philosophy with a broad understanding of algorithms (Hansen 2015; Prey and Smit 2018), and how Stiegler's thinking might benefit from an understanding of digitally networked media as media hybrids (Manovich 2013).

I. Permanent co-dependent human and technical becoming

At the core of Stiegler's entire philosophical thinking about the relation between humanity and technology are the notions of *individuation*, *epiphylogenesis* and *mnemotechnics*. The French philosopher first introduces these notions in the first volume of his renowned *Technics and Time*, 'The Fault of Epimetheus' (Stiegler 1998a) and further elaborates upon them throughout his oeuvre. Stiegler inherits the notion of individuation from the works of French theorist of technology Gilbert Simondon and bases the notion of epiphylogenesis on the work of French paleoanthropologist André Leroi-Gourhan (Roberts 2006, 56). I will discuss the notion of mnemotechnics in the second chapter of this theoretical section.

Transindividuation and permanent becoming

For Stiegler, individuals and human collectives are involved in a process of permanent

becoming (Stiegler and During 2017a, 65) – an idea which he bases on Simondon’s notion of *individuation* (Verberne 2018, 30–31). According to Simondon, who was in turn inspired by the Swiss psychologist Carl Gustav Jung who coined the term, human beings are not definitive entities, but rather processes of becoming. In these processes, both internal and external forces act as powers that work to transform the individual in *perpetual* motion (Simondon 1992 [1964], 305).⁶ Here, internal forces can be understood as *psychic* processes in which one comes to understand oneself as a ‘indivisible unity’ or ‘whole’ (Jung 1980, 275, *cited in* Verberne 2018, 31; Schlamm 2014, 866–867). External forces can be understood as societies, cultures and smaller social groups, all with their own traditions and social conventions, *in relation to* which individuals can come to understand themselves as individual members (Simondon 1992, 302–205, *cited in* Verberne 2018, 31).

Given that the individual perpetually emerges through external forces and internal forces – the latter which are in turn informed by these external forces – always preceding the individual’s becoming is what Simondon refers to as the *pre-individual* (Simondon 1992, 302, *cited in* Verberne 2018, 31). As such, Stiegler states, “the psychic individual can only individuate itself with and relative to a collective” (Stiegler 2011a, 74). However, since collectives are ultimately made up of and by individuals, collectives and individuals are actually involved in a *mutual* process of psychic and collective individuation; *transindividuation* if you will (Ibid.; Crogan 2013, 116).

Epiphylogenesis and the exteriorization of memory

For Stiegler, Simondon’s account of this process of individuation falls short in that the role of *technics* is left out of consideration.⁷ This is problematic to Stiegler, for he sees technics, which can be defined as “encompassing everything from primitive tools through systems of writing to modern telecommunications” (Roberts 2007, 26) or, more straightforward, as “organized inorganic matter” (Stiegler 1998b, 49) and its relation to humans as the very thing that defines humankind and drives its evolution.

Stiegler designates this understanding of human evolution as indistinguishable from the evolution of technics as *epiphylogenesis* and bases this view on the paleoanthropological work of Leroi-Gourhan.⁸ As Stiegler tells it, Leroi-Gourhan posits that what distinguishes

⁶ As Simondon has it, the individual never reaches any sort of ‘permanent’ or ‘final’ psychic form, but only ever stops ‘individuating’ – transforming because of internal and external forces – at the moment of death (Simondon 1992, 302–205, *cited in* Verberne 2018, 31).

⁷ A short note on grammar: in the English translations of his (original French) work, when Stiegler speaks about ‘technics’, he generally uses the term as a singular noun similar to how, colloquially, we nowadays often talk about ‘technology’. However, the term can also be used to refer to multiple instances of (the singular) technics. The same is true for Stiegler’s notion of ‘mnemotechnics’ and, of course, ‘mnemotechnology’.

⁸ One might alternatively characterize this view as *technogenetic*, from the notion of *technogenesis*, which, as postmodern literature scholar N. Katherine Hayles puts it, comes down to “the idea that humans and technics have coevolved together” (Hayles 2012, 10).

human beings from other animals is the *exteriorization* of their memories – including their know-how based on prior (collective and individual) experiences – through the use of tools, which essentially function as a supplementary system of *transmission* and *inheritance* (Stiegler and During 2017b, 50–51; Stiegler 2011c, 53, *cited in* O’Dwyer 2015, 44; Vaccari and Barnet 2009, 13).

Following Leroi-Gourhan, Stiegler explains that most animals only have access to *epigenetic memory* – the type of interiorized, embodied and individual experiences and memories that are lost when the organism containing them perishes – and *genetic memory* – the species-specific traits that develop through biological evolution and natural selection. It is through these strands of memory that most animals are able to preserve obtained knowledge of their species over subsequent generations. In contrast, human beings have unique access to an additional, *epiphylogenetic* type of memory. Exteriorized into the technical artefacts Stiegler calls technics, memories and experiences – information in general – can be transmitted *beyond* the human being’s natural lifespan, through both time and space (Stiegler 2009, 97; 2011b, 76, *cited in* Verberne 2018; Stiegler and During 2017b, 50–51).

To illustrate this in simpler terms: to create a spear or to create cave paintings representing deer hunts is to essentially transmit (part of) the ‘experience’ or ‘memory’ of how to hunt deer to future generations. It is this exteriorization of memory in the broad sense that defines humanity in Stiegler’s eyes (Stiegler and During 2017b, 50–51). After all, the entirety of human culture – its traditions, habits, (collective) experiences or, more generally, its ways of being in and acting upon the world – exists only because human motor functions or ‘gestures’, as well as human social behavior, thought and spirit can be preserved through the exteriorization of human memory into technical artefacts (Stiegler and During 2017a, 58). To Stiegler, then, technics acts as a *prosthesis* for finite human memory – when considering different forms technics can take, Stiegler even speaks of ‘external memory supports’ or, after Michel Foucault (1997), *hypomnémata* (Stiegler and Hansen 2010, 68). Thus, in essence, from the creation of the first tool, human evolution has really been synonymous with the evolution of its technical supports (Roberts 2007, 26).

A process of ‘transductive’ becoming of humanity and technics

It is through this notion of epiphylogenesis that Stiegler critiques Simondon’s notion of individuation. If the collective always precedes the individual in the process of psycho-collective individuation, then, surely, technics in a sense precedes both of them. After all, human culture exists only by virtue of humankind’s ability to exteriorize memory into technical artefacts. As such, Stiegler maintains, technical objects constitute the *pre-individual milieu* or *fund* or *epiphylogenetic stratum* that facilitate processes of psychic and collective individuation (Stiegler 2009a, 9; O’Dwyer 2015, 44; Stiegler and During 2017a, 63).

In brief, then, technics' role within the process of individuation is this: it is on the basis of the technically exteriorized body of human experience and knowledge, accumulated over time and passed down through generations, that collectives can be formed. Subsequently, individuals can individuate themselves as "independent, cognisant beings" apart from other members of those collectives in the way Simondon originally described (O'Dwyer 2015, 44). It is because of its fulfillment of this crucial role within the process of psycho-collective individuation that Stiegler can argue that "the evolution of the 'prosthesis', not itself living, [...] constitutes the reality of the human's evolution" and as such defines the human, in its state of permanent becoming, as a living being (Stiegler 1998b, 50 *cited in* Roberts 2012, 12).

At this point, it should be noted that, while it has been critiqued as such, Stiegler's understanding of human culture and technics is not as technological deterministic as it might seem. While Stiegler refers to technics in terms of the pre-individual milieu that precedes both psychic and collective individuation, he in fact sees technics and culture as *inseparable*. As British philosopher of technology Ben Roberts explains, Stiegler understands culture and society as materialized *through* technics (Roberts 2012, 13–14): "[f]or Stiegler it is because of the exteriorization of the human into technics, artefacts or inorganic organized matter, that culture and society constitute themselves contingently" (Roberts 2007, 27). Put succinctly: "technics is the *condition* [emphasis added] of culture that permits its transmission" (Stiegler and During 2017a, 59).

What is more, just as collectives and individuals are impacted upon by technics, the reverse is equally true. It is through their adoption of the pre-individual fund that individuals ensure its survival, but also, as new technics are invented by individuals embedded within collectives, effectuate transformations in its configuration (O'Dwyer, 44). To Stiegler, the individual, the collective *and* technical are therefore co-constitutive of one another, existing in a *transductive* relation (Crogan 2006, 40) that has *no deterministic direction*, but can best be described as accidentally (Roberts 2012, 13). In short, despite his use of the prefix 'pre-' in 'pre-individual', Stiegler understands the individual, the collective and the technical as all caught up in the same process of perpetual, mutual becoming.

II. Historicizing individuation through exteriorized memory

While Stiegler maintains that technics in general constitute a "milieu of epiphylogenetic memory", most of his work is concerned with a particular subset of technics he refers to as *mnemotechnics*. Unlike other technics that "spontaneously" happen to be "vector[s] of memory", mnemotechnics have as their explicit purpose to retain memory (Stiegler and

During 2017a, 58). It is in relation to a particular type of mnemotechnics that Stiegler refers to as *orthothetic* that the French philosopher expands upon the dynamic between technics and psychic and collective individuation.

Epochs of grammatization

Before I elaborate on this, I should stress the *historical* aspect of memory in Stiegler's project, since memory is perhaps not necessarily a self-evident historical phenomenon. As philosopher of technology Mark Hansen writes in a general introduction to an excerpt of Stiegler's work, it is the "technical contamination of memory that allows the latter to be historicized" (Stiegler and Hansen 2010, 66). As technics develop, so does the *manner in which* humanity comes to remember their collective and individual pasts and thus the way in which the aforementioned process of transindividuation occurs.

Stiegler divides the exteriorization of memory into distinct *epochs of grammatization*, the latter of which he defines as "the process whereby the currents and continuities shaping our lives become discrete elements" (Stiegler and Hansen 2010, 70). Essentially, every epoch of grammatization signifies a profound change in the dominant ways a particular human society exteriorizes memory and gives shape to its *hypomnesic milieu* – a term Stiegler uses to refer to that part of the pre-individual, epiphylogenetic fund that consists of mnemotechnics (Ibid., 66) – which in turn bears upon the permanent becoming of individuals and collectives.

Early orthothetic mnemotechnics

To properly understand Stiegler's critique of 20th century mnemotechnics – to understand what, according to Stiegler, has changed in the hypomnesic milieu of humanity – we must first delve further into some of the earlier mnemotechnics and their role in the process of individuation. Stiegler uses the example of the alphabet to elaborate on this role – a move that I shall echo here.⁹

According to Stiegler, technics first emerged about two million years ago, after which – "probably" still thousands of years ago – *mnemotechnics* appeared with practices such as cave art (Stiegler and During 2017a, 58, 65). A profound change in human life occurred – that is, a new epiphylogenetic epoch emerged – when the alphabet, the first *orthothetic* mnemotechnic, was invented. 'Orthothetic' is a neologism coined by Stiegler, derived from the Greek words 'orthotès' (exactitude) and 'thesis' (position) (Ibid., 61). Stiegler uses the term to refer to mnemotechnics capable of recording memories, that is, retaining the past "in exact spatial form" and thereby "transmit[ting], exactly, an element of the past" (Stiegler and Hansen 2010, 75–76). In the case of the alphabet, these memories take the form of concrete

⁹ Stiegler provides an elaborate account of mnemotechnics and its bearing on individual and collective human becoming on several occasions. Here, I draw mainly from a pre-recorded radio interview with French philosopher Elie During, which was transcribed, translated to English and published, together with other conversations between During and Stiegler, under the title 'Philosophising by Accident' (Stiegler and During 2017a).

thoughts put into words, shaped in exact spatial forms that refer *precisely* to those words.¹⁰ In this sense, according to Stiegler, orthothetic mnemotechnics provide a literal *trace* of the past by “fixing an element of the past or a perception on to a material medium” (Stiegler and During 2017a, 64).

Thus, Stiegler explains, when we encounter an orthothetic mnemotechnical artefact, in a way we literally *re-actualize* or *reactivate* specific memories and, as such, are in *immediate relation* to them. It is by virtue of the exteriorization of memory that they can be transmitted through time and space and that we are enabled to “continue the dialogue with [their creators] in [their] absence” (Stiegler and During 2017a, 61).¹¹ As such, as Stiegler puts eloquently, orthothetic mnemotechnics constitute a “literal synthesis of memory” and allow for “the material retention of time, the preservation of the past in *reactivable form* [emphasis added], using the characteristics intrinsic to each mnemotechnics” (Ibid., 62–64).

Orthothetic mnemotechnics and collective individuation

It is by virtue of their orthothetic character that orthothetic mnemotechnics have a particularly large role to play in the transductive process of individuation, both in relation to collective *and* psychic individuation. To understand how orthothetic mnemotechnics facilitate collective individuation, it is probably easiest to think of codes of law – at least, this is the example Stiegler provides and which I think is most clear. Codes of law are essentially laws “externalized and objectivized in the form of a written text” and generally accessible to all members of the society on which it has any bearing (Stiegler and During 2017a, 59–60).¹²

In their fixed and reproducible form – as is the virtue of the alphabetical system, words can literally be copied *to the letter* – a whole society of readers can ‘reactivate’ the exact same exteriorized memories that are the laws themselves. This, according to Stiegler, in turn gives rise to a *collective consciousness*; conditioned by mnemotechnics, such a collective may come to understand – or, indeed, individuate – itself as separate from other collectives

¹⁰ To elaborate: the exactness of the alphabet as a mnemotechnic lies in the fact that, unlike non-orthothetic mnemotechnics such as cave painting, the literal spatial form **A** always refers to the letter ‘A’ or, better put, the letter ‘A’ can always be exteriorized in alphabetical writing using the spatial form **A**. More broadly speaking, in every language, there are *exact* spatial forms for the exteriorization of every word one can think of. Understanding writing as the exteriorization of thought in this manner, this means that for all who have a command over the alphabet, the concrete, formulated and *exteriorized* thoughts are literally “readable *to the letter*” (Stiegler and During 2017a, 61). It is important here to understand that Stiegler is talking about the exactness of the *exteriorization* of, in the case of writing, conscious thought and not, in fact, of pure thought itself. This is what makes the alphabet different from cave paintings, as they do not refer to an exact memory – the ‘exact memory’ in this case referring to concrete thought put into words. As we shall see, later in human history, other orthothetic mnemotechnics start to emerge that likewise, albeit in vastly different ways, retain an *exact imprint* of the past they record.

¹¹ Stiegler originally explains this dynamic between the exteriorized past and the present when he considers what occurs when he reads the written works of Greek philosopher Plato. According to Stiegler, these works are essentially an exteriorization of Plato’s concretely formulated thoughts put down in written form, which Stiegler reactivates when reading them. As such, Stiegler is placed in immediate relation to Plato and is indeed enabled “to continue the dialogue with him in his absence” (Stiegler and During 2017a, 61).

¹² Provided, of course, that one has learned to read, which, according to Stiegler, is relatively easy given that alphabet’s fixed nature and relatively small amount of spatial forms (Stiegler and During 2017a, 59–62).

that, in this example, abide to different laws (Stiegler and During 2017a, 62).

Orthothetic mnemotechnics and psychic individuation

To understand how orthothetic mnemotechnics may facilitate the process of psychic individuation, it is important to note – and Stiegler stresses this explicitly – that “meaning is not the same thing as signification” (Stiegler and During 2017a, 61). To remain with the example of the alphabet, while its spatial forms always refer to the same alphabetical letters, whatever meaning is ascribed to any particular sequence of those letters – words, sentences or even whole texts – might differ tremendously, not only *between different individuals*, but also within the *same individuals over time*, all throughout their lives (Ibid., 60).¹³

It is through this potentially ever-changing interpretation that psychic individuation occurs. As Stiegler puts in ‘Disorientation’, the second volume of *Technics and Time*:

[...] in losing the identity of the same text when [individuals] read and repeat it in different contexts, it is their own identity that is placed in crisis. [...] At the moment when they discover that the same text varies and derives indefinitely in the dissemination that is all contextualisation, the reader[s] [...] discover themselves to be textual, themselves to be tissued by past statements, already-there, their own, those that they have themselves lived, as well as those which they have inherited and which must be unceasingly interpreted (Stiegler 2009b, 72).

In simple terms, here Stiegler explains that individuals may come to interpret orthothetic mnemotechnical objects in repeatedly different ways from other individuals, as well as from their *past selves*, because they are informed by all experiences they have obtained *prior* to their encounter with that particular mnemotechnic.¹⁴ These prior experiences include previous encounters with the particular *unchanged* mnemotechnical artefact at hand, as well as previous encounters with other exteriorized memories.¹⁵ Do note Stiegler’s user of the word ‘discover’ in the preceding citation (Stiegler 2009b, 72). The process is not necessarily a consciously active process; rather, it is more or less thrust upon the individual – it simply occurs during encounters with orthothetic mnemotechnical objects.

Ultimately, it is in being confronted with the exact same mnemotechnical object referring to the same exact moment in the past multiple times, yet in different contexts, that

¹³ The spatial form **LOVE**, for instance, always signifies the word ‘love’ in the English written language, but the *meaning* ascribed to the word ‘love’ – the associations one has with the word – may change over time.

¹⁴ Elsewhere in the same interview with During, Stiegler elaborates further on how his encounters with other mnemotechnical objects have shaped him as an individual. As Stiegler explains, he, as an individual, is not just the past that his own consciousness has lived, but also “in a way, all this past [...] that lives in [him], haunts [him], possesses [him] as a spirit.” This past is part of Stiegler, because he has “re-actualised it through the accumulated traces [he has] inherited in the form of ‘culture’” (Stiegler and During 2017a, 62–63).

¹⁵ This line of thinking is closely related to Stiegler’s notion of *tertiary retention* (Stiegler and During 2017a, 66), which I shall come back to in a moment.

the individual is made to *reflect*, as it were, on its changed interpretation and through this engages in the permanent process psychic individuation. Thus we find that orthothetic mnemotechnics in fact constitute a large and important part of the epiphylogenetic stratum that “makes the transmission of knowledge possible” and facilitates both processes of collective and psychic individuation (Stiegler and During 2017a, 63).

III. Crisis in the epoch of technology

Like the alphabet, orthothetic mnemotechnics that emerge during the 19th and 20th centuries also constitute a synthesis of memory. However, they do so in an entirely new way that, for Stiegler, ushers in an entirely new epiphylogenetic epoch of grammatization: the epoch of *technology*. For Stiegler, this epoch starts with the emergence of the *analogue* orthothetic mnemotechnics of photography and phonography. From there, it continues well into the age of the radio, the cinema and television and even extends into the age of digitization that would follow in the 21st century (Stiegler and During 2017a, 64). It is in relation to the increasingly industrialized production of these analogue and later digital orthothetic mnemotechnics, the roots of which lay in the early 20th century, that the political character of Stiegler’s work comes most clearly to the fore.

Mechanized memory exteriorization

According to Stiegler, what characterizes the mnemotechnic of the alphabet is the *symbolic*, convention based relation that exists between the spatial forms it utilizes – written letters – and those objects they signify – the actual letters as they are pronounced when spoken.¹⁶ As Stiegler maintains, since one has to learn how to utilize those symbols, it is in fact impossible for someone to read without also knowing how to write (Stiegler and During 2017a, 64). In other words, those capable of consuming memories through the mnemotechnics of the alphabet are always capable of producing them as well.

In contrast, newer techniques for the exteriorization of memory emerging in the 19th and 20th century, such as the recording of sound with phonography and the recording of visual impressions with photography have what one might understand as more of an *indexical* (Peirce 2006) relation to the past. That is, as Stiegler has it, by virtue of the technical and machinic nature of their production, phonographs and photographs have a very direct physical

¹⁶ Being the French philosopher that he is, Stiegler puts this much more eloquently by describing the alphabet as a mnemotechnic concerned with oral statements, reconstructed through orthographic symbols, that indicate the “diacriticality of the phonemes of language and, through them, the meaning of [...] the luminous and sonorous frequencies produced by an object of perception” (Stiegler and During 2017a, 64). In essence, though, this comes down to a symbolic relation between the exact spatial forms of the alphabet and pronounced words. Of course, here I mean symbolic in the way Charles Sanders Peirce (2006), one of the founders of the field of semiotics, used the term: again, the spatial form **LOVE** always signifies the word ‘love’ in the English written language, but it is only does so, because that it the *convention*.

relation to the past they capture (Stiegler and During 2017a, 64). When discussing the recording of sound, Stiegler even refers to phonographs as literal *analogies* of those moments in the past they record. To him, they are direct and exact *imprints* or *traces*, as sound waves come to rest on tape that will “keep it in the form of a trace whose variations correspond analogically” with the sound emitted at the time of recording (Ibid.).¹⁷

Important to note here – and this is the profound change in the production of mnemotechnics that compels Stiegler announce a new epoch – is that, unlike with alphabetical writing, it is not the writer that encodes an orthothetic recording, but, in this case, the phonographic apparatus. Whereas with the alphabet the inscription of the trace was a conscious human effort based on a learned ability to read and write, with the development of analogue orthothetic mnemotechnics such as phonography and photography, inscription has become an increasingly machinic process (Stiegler and During 2017a, 74).

As such, the association between consumption and production present in the use of the alphabet is not necessarily present with analogue orthothetic mnemotechnics: while one needs technical knowledge to operate a camera, for instance, one does not need similar knowledge in order to watch a photograph and watching a photograph does not mean one necessarily has the capacity to produce one. Thus, with the emergence of analogue orthothetic mnemotechnics, it has become possible “for someone to receive an audiovisual image without having the skills to produce one.” It is this separation of production and consumption that allows for the industrialization – the mass production by the few and the consumption by the many – of orthothetic memory (Stiegler and During 2017a, 74).

Stiegler uses the term *mnemotechnology* to refer to orthothetic mnemotechnics that have this specific industrial character to it. Whereas older mnemotechnics can be seen as the “*individual* [emphasis added] exteriorization of memory functions”, these newer mnemotechnologies constitute large-scale technological systems or networks that “*systematically* order memories *according to their own logics* [emphases added]” (Stiegler and Hansen 2010, 65–67). It is this mnemotechnological mass production and consumption that bears the brunt of Stiegler’s critique, but while this industrialization obviously leads to an unequal division of power in the production of mnemotechnics is certainly part of that critique, this in itself is not what makes the mnemotechnologies emerging during the 20th century most problematic in Stiegler’s eyes.

¹⁷ Again, Stiegler words this in a much more eloquent way, which I would be remiss not to share here. His explanation is as follows: “I speak to you in this microphone and through it an analogic and orthothetic sonorous image of my voice comes to rest on the magnetic film of the tape recorder, in the form of a slight modification of the electromagnetic state of this medium, which will keep it in the form of a trace [*empreinte*] whose variations correspond analogically to the variations of the frequencies of the streaming of my voice” (Stiegler and During 2017a, 64).

Temporal objects

Stiegler does not aim his critique of 20th century mnemotechnics to all mnemotechnologies. Instead, the industrialized production of mnemotechnics only becomes problematic to Stiegler when it comes to those that may be understood as temporal objects, a term originally coined by German philosopher and phenomenologist Edmund Husserl, with whom Stiegler critically engages. As Stiegler explains, temporal objects are constituted by their temporal flow in the sense that they ‘unfold’ over time (Stiegler and During 2017a, 66). In simpler terms, they literally “take time to be constituted and cannot be apprehended immediately as a recognizable, unified phenomenon” (Crogan 2013, 107).

As we already established, previous encounters with orthothetic mnemotechnical artefacts influence how individuals experience subsequent encounters with either the same or other orthothetic mnemotechnical artefacts (Stiegler 2009b, 72). However, in order to understand why Stiegler deems the specifically *industrialized* production of temporal objects problematic, we will have to delve deeper into *how* this influence exerts itself. That is, deeper into the relation between human consciousness, experience and mnemotechnics. Stiegler explains this relation through the concept of *tertiary retention*, which he introduces in a critical reading of Husserl’s work (Stiegler and During 2017a, 70).

The influence of secondary retentions over primary retentions

As Stiegler explains, according to Husserl, there are *two* types of retention that play a role when an individual encounters a temporal object – or *any* object for that matter, although Husserl and Stiegler both develop their arguments in relation to temporal objects (Crogan 2013, 109). The first of these is *primary retention*, which is the retention of the (very) near past that one needs in order to comprehend, for instance, a musical melody.¹⁸ It is a particular type of memory that stems directly from the *perception* of temporal objects in the present (Stiegler and During 2017a, 68).¹⁹

The second type of retention Husserl identifies is *secondary retention*, which is what we colloquially tend to call ‘memory’. As Stiegler explains, it is Husserl’s conceit that secondary retention is rooted in the past and belongs to the human capacity to *imagine* – after all, events remembered do not actually appear in reality at the moment of remembrance (Stiegler and During 2017a, 68).

According to Husserl, primary retentions – what is perceived – lead to secondary

¹⁸ Husserl finds that one can only comprehend a melody by relating every new note heard to those notes just preceding it. Thus, to Husserl, the human being’s conscious experience of temporal objects is intimately related to humanity’s capacity to retain the past (Stiegler and During 2017a, 68). Here we can at once see Stiegler’s own interest in Husserl’s work.

¹⁹ As Australian digital cultures scholar Patrick Crogan, who discusses Stiegler’s critical re-reading of Husserl’s phenomenology, puts more eloquently, “primary retention works to extend the present moment of intentional consciousness over the duration of the temporal object by retaining in each ensuing moment of its duration a trace of the preceding moment” (Crogan 2013, 108).

retentions – what is remembered – and occur wholly separate from those secondary retentions (Crogan 2013, 109). This is where Stiegler’s critique of Husserl’s phenomenology comes into play, as Stiegler maintains that secondary retentions actually exact quite a large influence over primary retentions.²⁰ While this is true for *all* primary retentions, it only becomes obvious when considering orthothetic temporal objects – that is, temporal objects that exist in permanent form through inscription onto a technical medium (Crogan 2013, 109). To Stiegler, the fact that he can repeatedly listen to the same recorded musical performance, but every time experience a new phenomenon – he can hear, as it were, new melodies or even whole new instruments – can only mean two things (Stiegler and During 2017a, 69–70).

First, one’s consciousness is “*active* in the listening of a [recorded] melody” in that it “*selects* among all possible primary retentions and does not retain everything”. Second, since the temporal object itself has *not* changed,²¹ this changed selection in fact *has* to be influenced by “secondary retentions accumulated by our past experiences”, which according to Stiegler constitute “*horizons of expectations*” or *protentions* (Stiegler and During 2017a, 69–70). Put succinctly, our “reworkings of prior experiences are always at work in the present”, with our secondary retentions acting as “selection criteria in the primary retentions” (Crogan 2013, 107–108) that, as Stiegler puts it himself, essentially “overdetermine” our experience of temporal objects (Stiegler and During 2017a, 70).

Mnemotechnics as tertiary retentions

As Stiegler argues, there is a *third* type of retention – one that Husserl missed – at work in this dynamic between primary and secondary retention, which is this technical inscription of temporal objects, in this case in the form of a phonographic recording. In the context of his critique on Husserl, Stiegler refers to this type of retention as *tertiary retention* (Stiegler and During 2017a, 70), but they are in fact nothing other than the orthothetic mnemotechnical objects we have already been discussing.²²

Thinking about mnemotechnics as tertiary retentions allows Stiegler to pinpoint how they inform human conscious experience – and thus impact processes of psychic individuation. While secondary retentions influence primary retentions, both can only occur because a temporal object has been inscribed onto a technical artefact. As scholar of contemporary French literature and philosophy Ian James explains, in line with his notion of the pre-individual fund, “[...] the crucial point for Stiegler is that [the] structure of protention and retention, constitutive of time, always passes through, engages, and is engaged by an

²⁰ In his interview with During, Stiegler elaborates on what leads Husserl to “radically oppose primary and secondary retention” in this manner (Stiegler and During 2017a, 69), but it is beyond the scope of this thesis to go into depth about it here.

²¹ As Stiegler puts it, “different *phenomena* are each time produced by the same *object*. The object is the melody and each time it is the same object.” (Stiegler and During 2017a, 69).

²² When giving examples of *orthothetic* tertiary retentions, Stiegler specifically refers to them as “phonographic, photographic, cinematographic, alphabetic [or] diasthematic” (Stiegler and During 2017a, 70).

exteriority of technical objects and technical prosthetics” (James 2010, 210).

The industrialized coinciding of consciousnesses

Thus, as Stiegler has it, this dynamic between mnemotechnics and human conscious experience – between primary, secondary and tertiary retentions – is always present (James 2010, 210). However, when it comes to temporal objects, this dynamic shifts. As Stiegler explains, when one is conscious of a temporal object’s ‘flowing’ – the process by which it ‘unfolds’ over time – that flowing “coincides entirely [...] with the flowing of [one’s] own consciousness” (Stiegler and During 2017a, 67). In this sense, temporal objects are different from exterior objects such as books or paintings, which, as Australian digital cultures scholar Patrick Crogan puts eloquently, “play no intrinsic role in forming the temporal quality of phenomenality” (Crogan 2013, 109).

To Stiegler, the appearance of *orthothetic* temporal objects in a way increases, as Crogan puts it, “the role of exterior mnemotechnical forms in the production of experience”, since individuals no longer rely solely on their own reflections – informed by previous experiences – in making sense of mnemotechnical artefacts, but are in fact *repeatedly* guided by the unfolding of the temporal objects they witness. We see this most clearly with cinema, which, as the well-known *Kuleshov effect* illustrates, is capable of more or less determining how users come to understand the mnemotechnical objects it produces by arranging – here we see at once cinematography’s mnemotechnological character – audio-visual sequences in specific ways (Crogan 2013, 109–110).²³

To Stiegler, the emergence of cinema, however, also signifies a *radicalization* of this role of exterior mnemotechnological forms (Crogan 2013, 109). According to Stiegler, as cinema developed, so did the *industrialization* of the production of mnemotechnics; to hitherto unprecedented levels, a small amount of people were responsible for producing temporal objects consumed by the many, who, as per the *analogue* nature of cinematography, did not require the capability of producing them in order to consume them be (Stiegler and During 2017a, 73).

While Stiegler does allow that some ‘counter-tendencies’ exist – one only has to think of amateur filmmakers, for instance – he believes the dominant tendency in the 20th century to be one in which the “generalization of industrial production of temporal objects leads to the tendency of generalized synchronization” (Stiegler and During 2017a, 73). That is, synchronization in the sense that consciousnesses tend to “adopt the same temporalities”

²³ In this respect, Stiegler sees cinema as the quintessential example of a “singularly powerful mnemotechnical form for entraining the spectator’s consciousness to the unfolding of its duration” (Crogan 2013, 106). He thinks of cinema in this way, because cinema, as the well-known Kuleshov effect demonstrates, corresponds “in a hitherto unprecedented way with the psychic mechanism of present perception”, thus in a way replacing the individual’s own *imagination* in the dynamic that normally exists between primary and secondary retentions (Ibid., 110).

by directing themselves to the unfolding of industrialized and thus homogenized temporal objects on an increasingly large scale (Ibid., 77).

Short-circuit

Given its ability to “entrain [...] the spectator’s consciousness to the unfolding of its duration” (Croghan 2013, 106), as American philosopher and translator of continental philosophical works Robert Hughes puts it, for Stiegler, the industrialization of cinema – and the forms of mass produced and mass broadcasted audio-visual media that followed it – essentially equals a “loss of liberty for idiosyncratic thought” (2014, 47). Relating this more directly to Stiegler’s thought on processes of transindividuation, it is a situation in which individuals are effectively exposed to an increasingly homogenized pre-individual fund, the constitution of which they have little control over and which, consisting in large part of temporal objects, increasingly informs how they make sense of that pre-individual fund in the process of psychic – and, subsequently, collective – individuation.

Indeed, Stiegler argues, the emergence of the industry of cinema in the 20th century constitutes nothing less than a *short-circuiting* of the transductive processes of psychic, collective and technical individuation (O’Dwyer 2015, 48). In Stiegler’s words, the processes of “psychic and collective individuation requires [...] permanent interlocution, that is, the participation of everyone in its becoming” and in the age of cinema, such is simply not the case (Stiegler and Hansen 2010, 82).

Dissociated hypomnesic milieus

The core issue of the epoch of technology that Stiegler’s work seeks to address, then, is this: the short-circuiting of individuation spurred on by the mass-consumption of exteriorized memories produced by the few or, in Stiegler’s words, ‘the powers’ that be (Stiegler and During 2017a, 76). Important to note, however, is that for Stiegler, the crux of the problem does not lie in the orthothetic, machinic nature of 20th and 21st century mnemotechnics per se. Rather, it is the way these technics are *utilized* in the contemporary age – the way the contemporary human being gives shape to its hypomnesic milieu – that is truly to blame for the short-circuiting of individuation (Stiegler and Hansen 2010, 66). It is here, then, that we truly see emerge the explicit political character of Stiegler’s philosophical thinking about the exteriorization of memory.²⁴

As Hansen explains, for Stiegler, everything hinges on how *anamnesis* – “the embodied act of remembering” – articulates with the technical exteriorization of memory that

²⁴ As Stiegler stresses, “exteriorized, memory becomes the object of sociopolitical and biopolitical channels of control”, since what is remembered and forgotten can increasingly be decided by the few (Stiegler and During 2017a, 71).

is *hypomnesis*. In Stiegler's mind, hypomnesic milieus can either be 'associated' with anamnesis, or 'dissociated'. When the former is the case, Hansen continues, "hypomnēmata facilitate the deployment of memory in the constitution of meaningful symbolic practices and communal formation" (Stiegler and Hansen 2010, 66). In other words, an associated hypomnesic milieu is one in which the exteriorization of memory helps facilitate the transductive process of individuation in which individuals can individuate themselves in meaningful ways. In contrast, dissociated hypomnesic milieus work more or less actively against this process in the way described above (Ibid.).

For Stiegler, Hansen explains, the hypomnesic milieu in the epoch of technology is severely dissociated, because the mnemotechnologies that dominate the contemporary media landscape – or at least as it existed during the 20th century and at the start of the 21st century – are "controlled by [culture] industries intent on exploiting our desire for their gain" (Stiegler and Hansen 2010, 66). Ultimately, the process of creating memory and subsequently selecting what is actually remembered and what is forgotten – and *how* – is subjected to market forces that are only geared toward symbolic practices and communal formation in as much as and only in such a way that they ultimately yield profit (Stiegler and During 2017a, 76).

Symbolic misery

According to Stiegler, it is this 'commodification of memory' (Stiegler and During 2017a, 71) – the fact that the culture industries rely on 'standardized commodities' – and the division between production and consumption of those commodities that cause the orthothetic mnemotechnologies that have emerged since the 20th century to be configured in such a way that they lead to a loss of individuation. As Stiegler explains:

Generally speaking, the service economy, of which the media are the main sector, deprives the psychical individual of all opportunity of participation in collective individuation. Because it is rooted in the short-circuiting of its users' knowledge by way of industrial hypomneses, the service economy effectively stunts the development of the individual's life milieu (Stiegler and Hansen 2010, 83).

It is this stunted development of the individual's life milieu, brought on by mass-produced temporal objects that, according to Stiegler, leads to a form of contemporary suffering or hardship that he refers to as *symbolic misery*. It is the "the seizure of the symbolic by industrial technology" (Stiegler 2014, back cover), brought on by the "liquidation of the [...] processes of psychic and collective individuation" (Stiegler and During 2017a, 71) through the exclusion of collectives in the *creation* of their mnemotechnical surroundings and the subsequent increased standardization of those

surroundings. For Stiegler, it is this symbolic misery that is the root of all evil in today's society (Ibid.).²⁵

As Stiegler puts succinctly in 'Symbolic Misery: The Hyperindustrial Epoch', where his arguments take on a more or less psychoanalytical stance, individuation is essentially an individual's ability to differentiate (Stiegler 2014, 20). According to Stiegler, now that this ability has diminished – because one's past is increasingly made up of the same mnemotechnical objects as those of others – individuals lose their *singularity*, or, put differently, lose themselves *as* a singularity (Fitzpatrick 2014, 123, *citing* Stiegler 2014, 20). In turn, there is an associated loss in individuals' ability to form meaningful attachments to other singularities, or, indeed individuals (Stiegler 2014, 5).

Although Stiegler does not spell it out in this manner, arguably, this loss of the ability to form meaningful, personal attachments to other individuals makes sense: lose the ability to see one self and others as individuals, and all that remains are larger groups that one is either a part of or not. In any case, Stiegler explains, as a consequence of symbolic misery, "[a] multitude of extremely reactionary temptations are emerging, such as xenophobia, diverse fanaticisms [...] and all possible forms of *ressentiment* [resentment, *my translation*]" (Stiegler and During 2017a, 71). It is here that we might recognize much of the psychological harm and the polarization of contemporary Western society some attribute to social media platforms (Molla 2020; Lubach 2020; Carothers and O'Donohue 2019).

Thus, to summarize Stiegler's critique of the utilization of modern-day mnemotechnics, we inhabitants of Western society have been living in a world where our tertiary retentions, subjected to market forces, have become homogenized, thus eroding the hypomnesic milieu we utilize to distinguish ourselves from others and simultaneously form social collectives. It is a world where all within our shared hypomnesic milieus are increasingly 'steered' toward the same trains of thought, thereby obstructing idiosyncratic thought and allowing xenophobic and otherwise resentful outlooks on life commonly understood as stemming from a thinking in terms of 'us versus them' to increasingly take hold of Western society.

IV. Stiegler's optimism

Given the separation of consumption and production Stiegler understands as inherent to the industrialization of memory, for Stiegler, the contemporary situation in which the

²⁵ As other authors writing on Stiegler put it, symbolic misery comes down to the exclusion of (most) individuals and therefore, ultimately, of collectives in giving shape to most of their symbolic or, indeed, mnemotechnical surroundings that is therefore increasingly becoming homogenized (O'Dwyer 2015, 48; Fuggle 2013, 205).

processes of individuation are short-circuited as described above is almost inescapable. That is, until quite recently.

Pharmacological potential

Evidently, Stiegler is quite negative about the mnemotechnologies of the 20th century. However, this negativity should not be confused with pessimism. As Hansen explains, in line with his understanding that it is not mnemotechnology itself, but rather the way it is used that may be harmful, Stiegler in fact believes that “these same memory aids hold the promise of expanding our capacity to produce meaning and to form communities open to the future [...]” (Stiegler and Hansen 2010, 66).

In this sense, Stiegler’s thinking has a strong *pharmacological* aspect to it – after the Greek term *pharmakon*, which refers to both a poison and its remedy – in that he believes that the mnemotechnologies that act as a ‘poison’ to the process of individuation and to the formation of idiosyncratic thought which ultimately bog down Western society into resentment, also have the potential to ‘cure’ Western society of its symbolic misery. In fact, according to Stiegler, *all* technics have a pharmacological nature to them (Hansen 2015, 50).²⁶

As Stiegler explains himself, the coming of the Internet – effectively a shift from analogue mass media to ubiquitous digitally networked media (Fuggle 2013, 205) – at the end of the 20th century “has profoundly modified the situation” (Stiegler and Hansen 2010, 83). According to Stiegler, what characterizes the Internet is that it makes possible “a typical participative economy of free software and cooperative technologies” that places receivers of mnemotechnical objects into the position of senders. As such, the producer/consumer opposition Stiegler regards a characteristic of the early 20th century hypomnesic milieu is no longer imposed (Ibid.).

To Stiegler, the Internet essentially integrates older mnemotechnics and newer mnemotechnologies into digitized global networks. This integration allows for ‘the masses’ to not only produce mnemotechnical objects, but to also *transmit* them with relative ease. Stiegler speaks of the potential for a new age of grammatization that can be characterized as a literal *escape* from the technical milieus separating the functions of producers and consumers, where, at last, the capacity of individuals to participate in “the socialization of the world through its transformation” can be restored (Stiegler and Hansen 2010, 83).

The care of the self

To Stiegler, the suspension of the producer/consumer opposition is essentially a

²⁶ Even the invention of writing, while increasing humanity’s capacity to retain more memories, inadvertently also diminished its ability to remember information by heart (Hansen 2015, 50).

‘demassification’ of mnemotechnics, one in which it is once again possible to deploy hypomnesic memory in the constitution of symbolic practices that are meaningful to the individual, instead of being subjected to market forces (Stiegler and Hansen 2010, 84). Stiegler describes the type of deployment of hypomnesic memory that has become possible with this demassification of mnemotechnics as a form of *self-care*. It is this self-care in particular that he understands as the cure to the symbolic misery that plagues our contemporary age (Fuggle 2013, 206).

As scholar of new media Sophie Fuggle explains, for Stiegler, the right socio-economic circumstances can open up renewed forms of individuation in that mnemotechnologies may facilitate a form of self-care similar to what Michel Foucault, whom Stiegler critically engages with, refers to as *self-writing*. To Foucault, Fuggle explicates, self-writing is a form of writing whereby one continuously engages in and provides commentary on and through *correspondence* with others, reflects critically on the self and on these interactions with others and, through this self-reflective correspondence, “manifests oneself ‘to oneself and to others’” (Foucault 1997, 216 cited in Fuggle 2013, 205). It is the constitution or the positioning of the self “via the act of producing commentary on the self” in relation to the self and the other, whilst being subjected to the very gaze of that other (Fuggle 2013, 205–206).

In Stieglerian terms, it is through correspondence between individuals using digitally networked mnemotechnics – technics that all individuals with access to computers can use to both exteriorize and share memories – that the transductive processes of individuation can once again occur. Stiegler, who writes about the Internet of about a decade ago, characterizes this care of the self as occurring in critical spaces outside mainstream mass media, for instance through blogs and online forums; spaces that have been made possible by the advent of digitally networked media that suspend the producer/consumer opposition and that have the capacity to facilitate meaningful symbolic practice free of market forces (Fuggle 2013, 206).

A possibility, but not a certainty

To be clear, Stiegler speaks mainly in terms of *potential*, stressing that, while “cooperative digital technologies can be placed in the service of individuation”, this will only actually be realized if “the industrial politics of hypomnesis are implemented in the service of a new age of anamnesis” (Stiegler and Hansen 2010, 84). Put simply: only if the mnemotechnics we nowadays use are actually oriented toward facilitating symbolic practices meaningful to individuals. This is to say that, while contemporary digitally networked mnemotechnics have a great deal of potential, there is a danger to be recognized in them as well – here we see again Stiegler’s pharmacological thinking in

terms of media as both cures and poisons.

For instance, in her discussion of Stiegler's work, Fuggle notes that our newfound ability "to offer running commentary on the banal activities of our family, friends and colleagues demonstrates the minutiae that circumvent sustained reflection and action" (Fuggle 2013, 206). According to Fuggle, many of these newer mnemotechnics "undertake commentary on our behalf" by sending automated responses and inviting users to "self-define in terms of what [they] 'like'". As such, she identifies a real possibility of the process of cutting and pasting web links "without a moment's thought" superseding the reflective, individuating process of self-writing that, according to Stiegler, might remedy symbolic misery (Ibid., 205–206).

In short, then, the digitally networked technologies of the 21st century *may* reinvigorate the dynamic of individuation by allowing us to once again become involved in the creation of exteriorized memories that actually become a part of the pre-individual fund that we can all access. Thus, these technologies have the potential to combat symbolic misery and the dissociated hypomnesic milieu their progenitors have fostered, but it ultimately wholly depends on how we utilize them whether this reinvigoration will actually occur. It is through an exploration of how and to what extent Instagram, as a social media smartphone application, lives up to this potential that I will illustrate the value of Stiegler's politically engaged philosophical thinking.

V. Stiegler_update_2021.exe

Through Stiegler's work, we have now gained a rich philosophical perspective on the relation between society and modern, digitally networked technology as intertwined in a mutual and perpetual process of becoming. That is, a process that may foster either an associated hypomnesic milieu in which symbolic misery is combatted, or a dissociated hypomnesic milieu in which it is enforced, depending on to what extent the technology is or is not configured in service of meaningful symbolic practices. Before I explore Instagram, however, there are a few additions I should make in order to attune Stiegler's thinking – which, as I will show, is firmly rooted in the 20th century – to our current age and to overcome certain 'blind spots' in his philosophy.

A different order

Although Stiegler's account of individual and collective becoming through exteriorized memories is largely philosophical in nature, ideas similar to his do come to the fore in more empirically-grounded new media research. Here, I would like to draw attention to the work of Dutch scholar of digital media José van Dijck, because she not only puts

forth similar ideas from a different perspective, but also provides valuable insight into memory functions Stiegler's philosophy does consider, but does not focus on as much.

If we look closely at Stiegler's writing, we can interpret his description of mnemotechnologies as technics that order memories according to their own logic (Stiegler and Hansen 2010, 65) in two ways. There is ordering in a *technical* sense, which Stiegler uses when he explains how mnemotechnologies such as photography and cinematography, being the analogue technics that they are, dictate the inscription of memory traces (Ibid., 65–67). There is also ordering of memory in a much more *literal* sense: the selection and ordering of mnemotechnical artefacts, that in the 20th century is said to be subjected to market forces (Stiegler and During 2017a, 76).

Since Stiegler's project is aimed toward criticizing the division between those that can consume and those that can produce – because they have the *technical means* required to do so – his main focus is on the technical ordering of memory in the process of memory exteriorization. Stiegler does not dwell *as much* on the literal ordering of memories *after* they have been exteriorized, or, for that matter, on what happens during the exteriorization of memory *besides* the technical. This seems to somewhat blind him to processes of psychic individuation that, as other, more empirically-grounded scholars such as Van Dijck (2004) have theorized, may occur both *during* the exteriorization of memory, as well as in the act of literally ordering of exteriorized memories *in general*.

Psychic individuation in creation and ordering

Van Dijck considers the act of exteriorizing and ordering memories from the perspective of the individual caught up in the *performative* act of memory exteriorization. She argues that, when writing diary entries, posing for photos, ordering photos in the form of photo albums or creating other tangible memory objects, individuals are essentially engaged in a more or less *conscious* process of 'self-composition'. It is through the process of choosing precisely which memories to exteriorize and constructing a narrative using those exteriorized memories that they make sense of their own identity (Van Dijck 2004) – it is as much an act of creation as it is an act of selection and ordering.

According to Van Dijck, individuals may also engage in the act of "re-composing the self"²⁷ when they re-encounter these exteriorized memories; they can make use of these mnemonic objects to literally reflect on their past selves (Van Dijck 2004). Van Dijck's notion of re-composing the self by re-encountering exteriorized memories coincides with Stiegler's understanding of mnemotechnics and psychic individuation.²⁷

²⁷ Of course, in Stiegler's account, this process of making sense of the self *also* occurs when individuals encounter mnemotechnical content made by *others* (Stiegler and During 2017a, 63).

In that sense, although Van Dijck and Stiegler base their work on vastly different perspectives and neither references the other – Van Dijck does *not* speak in terms of *exteriorized* memories herself – Van Dijck’s work does lend some credence to Stiegler’s philosophical ideas.²⁸

Van Dijck’s more performative understanding of memory, however, can also be seen as addressing elements in the process of memory exteriorization Stiegler has turned a blind eye to due to his focus on the technical production of memory. Van Dijck’s work makes us more readily aware of the fact that the process of psychic individuation, where individuals are made to reflect on their own identities, might take place even *before* any repeated encounters with mnemotechnical artefacts occur; in the very *creation* of mnemotechnical artefacts, and in a more or less active and purposeful manner.²⁹

Algorithmically ordering memories

While Van Dijck (2004) operates independently from the French philosopher’s work, there are other scholars who have expanded on the more literal ordering of memory in relation to Stiegler’s philosophy. As I briefly mentioned in the introduction of this thesis, Stiegler’s philosophical thinking has mainly been brought to bear on the 21st century media landscape in work dedicated to questions regarding the algorithmic selection and literal ordering of memories on social media platforms (Prey and Smit 2018) and the way such computational processes are for the most part unfathomable to human beings (Hansen 2015).³⁰

According to Mark Hansen, who adopts Stiegler’s understanding of the notion of

²⁸ The same can be said for Stiegler’s philosophical ideas regarding collective individuation. For instance, German historian Jan Assmann explores the role of historical artefacts – films, books and monuments – in the constitution of *cultural identity*. Expanding on French sociologist Maurice Halbwachs’s notion of *collective memory*, which designates the reconstruction of the past that takes shape through interpersonal interactions between individuals within specific social groups (Halbwachs 1992, 38–40, 51), Assmann argues that physical objects allow for memories to survive beyond the live span of the humans that make them (Assmann 1995, 126–127). This is essentially same argument Stiegler makes, although Stiegler’s argument is broader in the sense that it can encompass *all* types of human experience (Stiegler and During 2017b, 50–51; Stiegler 2011c, 53, *cited in* O’Dwyer 2015, 44; Vaccari and Barnet 2009, 13). As Assmann has it, it is by virtue of being able to relate to the same objects that individuals belonging to a specific society can shape what Assmann refers to as *cultural identity* (Assmann 1995, 128). As the historian states, “cultural memory comprises that body of reusable texts, images, and rituals specific to each society in each epoch, whose ‘cultivation’ serves to stabilize and convey that society’s self-image” (Ibid., 132). Here, then, Assmann describes precisely the processes that Stiegler refers to as psychic and collective individuation through the use of (mnemo)technics, albeit without taking into account the technical specificity of the objects utilized in this process.

²⁹ In my analysis of the Instagram platform, I shall not be considering how the performative process memory exteriorization is impacted by the presence of others on a psychological level, since, in line with Stiegler’s philosophical project and my attempt to showcase its worth, my focus remains on the technicality of the Instagram platform itself. Although I will not consider it further, I do content that, given its status as a *social* media platform, the presence of others will doubtless play a role in Instagram’s utilization on a very personal, psychological level.

³⁰ Stiegler *has* actually, albeit very recently, published some work – in English – on the role of algorithms in contemporary society, in which he does acknowledge that we now live in an era “in which calculation prevails over every other criteria of decision-making, and where algorithmic [...] becoming is concretized and materialized as logical automation and automatism” (Stiegler 2018, 130). In this work, Stiegler does not touch upon his understanding of mnemotechnics and mnemotechnologies. Instead, here Stiegler takes up position within biopolitical debates, occupying himself with *algorithmic governmentality*, or the notion that algorithms can be utilized in the governing of societies and even human bodies (Ibid., 139). In any case, Stiegler does not explore the relation between algorithms and mnemotechnologies.

pharmacology for his own philosophical project,³¹ the relatively recent computer network-driven “massive expansion in the interaction of machines with other machines” has facilitated continuous connectivity between individuals, allowing them to ceaselessly interact with one another online (Hansen 2015, 39). This interaction between machines, however, happens on what Hansen refers to as a *microtemporal scale* that operates peripheral to human consciousness due to its sheer speed. Thus, the pharmacological exchange for this increased connectivity comes down to a loss of control over our own media environment (Ibid., 50–51).

Media scholars Robert Prey and Rik Smit show how this loss of control is present in the ordering of exteriorized memories by digitally networked mnemotechnologies. Adopting Stiegler’s notion of mnemotechnology and focusing on the literal ordering of memory that Van Dijck (2004) focuses on – they explicitly reference both Stiegler’s and Van Dijck’s work – they argue that what is often overlooked in this understanding of ordering memory is the role technology plays in “composing our selves *for us*” (Ibid., 209–210).

In their work, Prey and Smit consider Facebook’s ‘On This Day’-feature, which algorithmically selects from the totality of all (audio-)visual content users have uploaded to the social media platform on that exact same day in a previous year and feeds it back to them (Prey and Smit 2018, 213). Prey and Smit are rather critical of the feature, because, according to them, it essentially takes control over what is remembered and what is forgotten away from the Facebook user (Ibid., 220), only to use that control in order to remind users almost exclusively of joyous occasions in their past. As Prey and Smit explain, this entire process serves to keep users engaged with the platform, so that Facebook Inc. can generate profit from advertisement revenue (Ibid., 214).

Thus, Hansen (2015) and Prey and Smit (2018) make us readily aware of the possibility that the process of literally selecting and ordering exteriorized memories, handed over to algorithms, may become subjected to market forces. Considering that, in order for processes of psychic individuation as Stiegler describes them to occur, one does need to actually encounter (or re-encounter) exteriorized memories, what these authors bring to the table is insight into how specific configurations of mnemotechnologies can be geared toward the facilitation of a dissociated hypomnesic milieu in a way Stiegler does not dwell on; not through exclusion of individuals in the creation of mnemotechnical artefacts, but in the algorithmic ordering of their memories.

³¹ Hansen’s (2015) reason for adopting Stiegler’s understanding of pharmacology is to give shape to his own understanding of how 21st century communication technologies impact human consciousness, which is beyond the scope of this thesis to fully do justice to. Hansen’s work, like Stiegler’s, is largely philosophical in nature; it is also aimed at communication technologies *in general* and does not reflect on the role technics play as tools for the retention of memory – hence my earlier comments that, despite his use of Stiegler’s work, he does not *empirically* engage with social media in a way that does justice to Stiegler’s full understanding of technics.

Hybrid social media platforms

Now, as mentioned earlier, Stiegler's work is often adopted only in small parts and often in relation to only specific aspects of social media platforms. Indeed, we just saw Prey and Smit (2018) only adopting Stiegler's notion of mnemotechnology to focus on the algorithms that govern Facebook. Arguably, this singular focus is reminiscent of the late 20th century media landscape in the context of which Stiegler developed his philosophy.³²

While Stiegler does mention that the Internet integrates several older mnemotechnics and newer mnemotechnologies into digitized global networks (Stiegler and Hansen 2010, 83), his work remains primarily focused on the technical possibilities for tracing moments in time onto technical artefacts. As such, it is nevertheless primarily oriented toward individual technologies of inscription. Stiegler's philosophy, then, is not so much oriented toward considering multiple media technologies simultaneously and therefore not particularly attuned to the hyper-mediated, computerized and digitally networked media landscape in which media technologies interact with increasing intensity and frequency that we are familiar with today (Hansen 2015, 37).³³

To account for this, I suggest one final, simple addition to Stiegler's philosophy: an explicitly formulated understanding of our contemporary media landscape as constituted by digitized hybrid *media platforms*. As theorist of digital culture Lev Manovich explains, digitally simulated media – digital text, photographs and videos – as well as new digital media types – such as hypertext and navigable digital spaces – have now come to function as “building blocks for many new media combinations” (Manovich 2013, 163). Often, these different media do not simply “appear *next to each other*”, but actually “merge together to offer a coherent new experience different from experiencing all the elements separately” (Ibid., 167).³⁴ As such, they constitute what Manovich refers to as *hybrid media* (Ibid., 166) or *media platforms*, in which these different media forms can no longer be seen as wholly separate elements (Ibid., 182).³⁵

I argue that such an understanding of hybrid media platforms as consisting of

³² The first volume of ‘Technics and Time’ (in French), for instance, was originally published in 1994 (Stiegler 1994).

³³ The fact that Stiegler refers only to blogs and forums in explaining the potential of the Internet (Fuggle 2013, 206) and fails to mention many other, newer sites that similar allow for symbolic exchange between individuals – Google LLC's YouTube video-sharing platform would be a prime example of this – shows us as much. Of course, Stiegler's blind spot to the algorithmic ordering of memory is further evidence that his thinking is somewhat ‘behind with the times’.

³⁴ To elaborate further: according to Manovich, the computer can be understood as a *metamedium*, in which “the unique properties and techniques of different media have become software elements that can be combined together in previously impossible ways” (Manovich 2013, 176).

³⁵ Manovich's notion of media platforms is applicable to computer software on many levels. He refers to smartphone operating systems iOS and Android as media platforms that incorporate numerous media technologies – they can of course function as telephones, but also make photographs, act as GPSes et cetera. He also refers to the World Wide Web and other virtual spaces as media platforms. For Manovich, it is not so much a matter of how exactly multiple digitized media are combined, but rather that, at one point, specific combinations and mergers of certain elements become “so important and influential that it seems no longer appropriate to think of them as just elements. Instead, they may be more appropriately called new *media platforms*” (Manovich 2013, 182).

intertwined building blocks constituting coherent media experiences is especially relevant to an exploration of social media smartphone applications through a Stieglerian lens. After all, one never truly encounters mnemotechnical artefacts such as digital photographs or videos by themselves; as Manovich stresses, one always encounters them “through particular software applications” that each have their own interfaces and particular functionalities, depending on what their designers want those applications to achieve (Manovich 2013, 198).

Put succinctly, through Manovich’s (2013) notion of *hybrid media platforms*, we are made acutely aware of the fact that the age of memory exteriorization with singular (mnemo)technics is in the past; technics are now increasingly intertwined. Thus, if we are to properly consider how Instagram, as a hybrid mnemotechnical platform, lives up to its potential to facilitate an associated hypomnesic milieu, not only must we peel away the layers of the (mnemo)technics that constitute it in order to find how memory is exteriorized on the platform and how this might facilitate processes of psychic and collective individuation, but we must also look at how these media technologies – algorithms and all – combine into over-arching technological configurations.

PART THREE...

...A THREE-PRONGED APPROACH

How, then, to make productive use of Stiegler's philosophy? If, in considering how and to what extent social media platforms like Instagram facilitate associated hypomnesic milieus, we are to do justice to Stiegler's (updated) philosophical thinking, we will have to consider *multiple* aspects. As we have seen, Stiegler stresses that what makes a hypomnesic milieu associated or dissociated depends, not solely on the technical specificity of mnemotechnics, but also on how that technical specificity is put to *use*.

In the context of social media platforms, 'use' can be understood in two different, albeit related ways. There is the way developers use technical capabilities to constitute social media platforms, of which the utilization of algorithms in the selection and ordering of memory is a part, and there is the way users subsequently make use of those platforms in the actual exteriorization of individual memories and the subsequent handling of those memories.

Thus, we must consider technical configuration, including selection and ordering algorithms, as well as types of use facilitated by that configuration. Finally, in keeping with Stiegler's explicit political focus, we must also consider motives *behind* the social media platforms we take under scrutiny. After all, according to Stiegler, hypomnesic milieus become dissociated due to their subjugation to market forces and economic exploitation (Stiegler and Hansen 2010, 66).³⁶ In order to account for all these aspects, I suggest a three-pronged approach, the usefulness of which I illustrate in the next part of this thesis through my own exploration of the Instagram smartphone application.³⁷

I. Discursive interface analysis

First, in order to scrutinize how technical possibilities are geared toward the exteriorization of memory, and what types of use – what possibilities for memory exteriorization – are subsequently available to users, I suggest conducting *discursive interface analyses*. This analytical approach was originally developed by new media scholar Mel Stanfill to the

³⁶ Since my aim in this analysis is to explore the extent to which the Instagram platform might facilitate an associated hypomnesic milieu, the focus in my analysis is on processes of psychic and collective individuation. That does not mean that the process of technical individuation does not play a role. In fact, focusing on *why* Instagram is shaped the way it is accounts exactly for the technical becoming and the way it is intertwined with human becoming, which in this case takes shape in the form of the social media conglomerate that is the Facebook corporation.

³⁷ Instagram also has a web browser version, but the social media application was originally conceived for smartphones. The web version is generally considered more as an extra way to access *some* functionalities of the smartphone version: one cannot, for instance, upload any new content using the website (Martin 2020).

purpose of scrutinize websites' digital interfaces – an interface being the literal screen users get to see and navigate. However, he encourages other scholars to apply it to other digital technologies – anything that has an interface – as well (Stanfill 2015, 1071).

The power to make normative claims

Stanfill's discursive interface analysis approach is based on Michel Foucault's notion of *discourse* and his understanding of power as *productive*, regulatory and normalizing (Stanfill 2015, 1061). In Foucault's thinking, discourse designates the way people and more abstract matters are understood and subsequently talked about as well as treated within a particular society – in that sense, discourse is not just talking, but is part of all human acting in general. These understandings of people and more abstract matters are in turn informed *by* the way they are talked about and treated; in that sense, discourse is both constitutive of and constituted by human behavior (Foucault 2007 [1976], 161; 1978, 48; Hall 1992, 291).

Within a society, obviously there are some groups that can 'speak louder', as it were, than others; there exists a certain *hierarchy* of power, with those at the top holding more sway over the direction discourses circulating within society take (Hall 2013, 29). However, there is no *absolute* power: there is always room for resistance in the form of other discourses – other ways to think of, talk about and treat people and abstract matters (Pickett 1996, 458). In that sense, discourse is a constant struggle, although with enough repetition, dominating discourses can become *normalized*, meaning that they are met with fewer and fewer opposition (Hall 2013, 32).

Adopting Foucault's understanding of power as productive, Stanfill explains that those with the power to design interfaces cannot *determine* how applications are used, but they *can* produce certain *norms* for how to use such applications. As Stanfill puts it, "[t]he interface makes a normative claim", both in terms of how that particular interface is to be used, as in how users and usage in general should be viewed (Stanfill 2015, 1061). Stanfill's discursive interface analysis seeks to unearth these normative claims by considering an interface's *affordances*: that which an interface "offers the user, what it *provides* or *furnishes*" through its technical and visual design (Ibid., 1062, *citing* Hartson 2003, 316). Thus, the discursive interface analysis can help us unearth both aforementioned forms of use: the technical application of technological possibilities in constituting social media platforms and the subsequent *intended* use of those platforms their technical configuration steer toward (Stanfill 2015, 1062).

Considering affordances

Stanfill identifies three types of affordances applicable to user interfaces, the first of which are *functional affordances*: literal functionalities a digital application has. To uncover them, the researcher explores what users can literally do with the application, and, equally

important, which actions are impossible to do, either by default or entirely (Stanfill 2015, 1063).³⁸ In my own analysis, I determined this in large part by simply using the Instagram application myself, but there were also certain functionalities that I did not have access to – some functionalities only become available, for instance, when a user has a large enough following. Thus, in addition in scrutinizing Instagram through my own use of the application, I also explored various tech blogs and websites detailing these other types of use.

As Stanfill explains, “[d]iscursive interface analysis goes beyond function, examining affordances broadly – the features, but also what is foregrounded, how it is explained, and how technically *possible* uses become more or less *normative* through productive constraint” (Stanfill 2015, 1062). The other two affordances Stanfill identifies are *cognitive* and *sensory*. These affordances manifest themselves *visually* in the form of “menu labels, the ease of understanding and distinguishing features”, as well as in how certain aspects of the interface are made “more or less noticeable” (Ibid., 1064, *citing* Hartson 2003, 322).

Cognitive affordances are about allowing users to “choose an action”. The naming and labeling of certain features and how they are described matter, because they define to users what they actually do by selecting that particular feature or option; cognitive affordances literally frame the understanding of features (Stanfill 2015, 1063). As Stanfill explains, through cognitive affordances, interfaces also ‘hail’ certain users – those that subscribe to the intended use – at the expense of others – those that actually want to use the functions afforded by the interface in a different manner (Ibid., 1064).³⁹

Sensory affordances are about which functions – which types of use – the interface are prioritized at the expense of others, by making them more visible, legible or audible. Aspects to take into account here are aspects such as the use of color and sound, the size of fonts and buttons, and where functions appear on the interface. To elaborate on the latter: for English-language interfaces, what appears at the top-left of interfaces is deemed more visible than what appears at the bottom-right, since English is read from top-left to bottom-right. Of course, also relevant is whether functions appear as soon as users access an interface, or whether they have to navigate through the interface in order to find it (Stanfill 2015, 1064).

Now, Stanfill bases his understanding of affordances on the work of computer scientist Rex Hartson, according to whom there are also *physical affordances*: the “physical characteristics of a device or interface that allow its operation” (Hartson 2003, 316). Stanfill considers these affordances inapplicable to digital interfaces on account of them lacking physical form (2015, 1063). Given the large role the technical aspect of memory

³⁸ Stanfill is adamant that even these affordances do not wholly determine use. After all, there is always the possibility to ‘crack’ the interface and use it in different ways (Stanfill 2015, 1063), although, of course, especially as these technologies develop, not nearly everyone will have the capacity to do so.

³⁹ Stanfill gives the example of interfaces giving users an option to define themselves as either male or female, thereby “cognitively affording an understanding that [those] particular genders belong” (Stanfill 2015, 1064).

exteriorization plays in Stiegler's philosophy and the fact that, as a smartphone application, the actual smartphone device is at the basis of all use of and access to the Instagram platform, I suggest taking these physical aspects into account nonetheless – at least those aspects that play a direct role in the use of the Instagram smartphone application. Although not technically physical, I will consider operating system software as belonging to this category of affordances as well; after all, it is the combination of hardware and software that allows smartphones to function.

A perfect fit

Stanfill's discursive interface analysis lends itself particularly well to an exploration of Instagram through a Stieglerian lens for several reasons. First of all, it takes seriously the unequal distribution of power between those that develop web applications and those that can only use them without being able to exact any influence over their configuration (Stanfill 2015, 1062). Here we find Stanfill taking up a position that in a way echoes Stiegler's critique of unequal power divisions in the 20th century. Second, by understanding interfaces as producing norms, discursive interface analysis takes on a decisively non-technological deterministic stance (Ibid., 1063). Indeed, as Stanfill states, “[d]eploying [this] theoretical and methodological framework [...] will greatly improve our understanding of how people and technology are mutually constitutive” (Ibid., 1071).⁴⁰

It is this explicit understanding of technologies and human cultures as mutually constitutive, coupled with the understanding that this process is rife with unequal power divisions, that make the discursive interface analysis a perfect fit for Stiegler's philosophy. It is via the interface analysis that we gain insight into afforded uses of the Instagram application. It is in subsequently contemplating those insights with Stiegler's philosophy in mind that we gain an in-depth understanding, both of Instagram's functioning as a mnemotechnological platform, as well as of the extent to which it seems capable of facilitating an associated hypomnesic milieu for its users.

Furthermore, following the approach's methodological understanding that what is unearthed in scrutinizing an interface's affordances is both *normalized* and *normalizing* discourse, in adopting Stanfill's discursive approach, our findings can also be said to reveal tendencies within contemporary society *at large*. Thus, in combining Stiegler's philosophy with Stanfill's discursive interface analysis, we may gain a nuanced insight into what forms of memory exteriorization and subsequent handling of these exteriorized memories are

⁴⁰ Again, discursive interface analysis examines how the configuration of an interface *steers* users into certain direction, with the underlying understanding that this will reveal the “cultural common sense” about what users generally do and should do – an understanding of what users *are* according to cultural norms – that is circulating within society *and* that is simultaneously established *by* the interface (Stanfill 2015, 1061).

encouraged and normalized in our contemporary epoch of grammatization.

II & III. Algorithms and business models

In spite of all the aspects of the interface Stanfill's (2015) discursive interface analysis takes into account, it will not help us in considering the algorithms that govern social media platforms, nor does it help us with unearthing any motives behind the way they are configured. After all, Stanfill's approach is aimed toward unearthing options for use made available to users, not at unearthing what precedes these affordances or what lies beyond the functions users can literally access. The second and third steps of my three-pronged approach, then, are aimed at exploring the governing algorithms of and business models behind the Instagram platform respectively.

Algorithm "auditing"

If, in an exploration of social media platforms through a Stieglerian lens, one is to gain any insight into the algorithms that govern them, one might perhaps readily think of *algorithm auditing*. In an algorithm audit, one typically varies information put into a system governed by algorithms. One then examines and compares the corresponding output, so as to deduce how those algorithms function in a broad sense and what underlying assumptions of the software designers – or, indeed, of the company whose software is under scrutiny – are built into them in regard to what information is most relevant to provide based on those particular types of input (Seaver 2017, 105).

It would be beyond the scope of this thesis, however, to conduct an entire algorithm audit of Instagram.⁴¹ Yet, as I have been arguing, uncovering how information is selected and ordered *should* be a key aspect of any exploration of social media platforms through a Stieglerian lens. To the purpose of illustrating how Stiegler's philosophical thinking might contribute to our understanding of social media platforms, perhaps a full-blown algorithm audit is not necessary in the first place. While Facebook Inc. has not divulged the intricacies of the algorithms it uses, there *is* an affluence of information available – both from Facebook Inc. itself as well as from *multiple* other sources – on how the algorithms that govern Instagram *roughly* function in terms of selecting and ordering information. It is through this

⁴¹ One might wonder whether conducting an algorithm audit on social media platform would be feasible in the first place. After all, one cannot, for instance, *force* the popularity of a particular user account – popularity, as we shall see in the analysis that follows shortly, often being an integral part of social media platform's functioning – so one would not be able to consider how popularity factors into the algorithmic selection and ordering of information by varying information provided to the algorithmic system. Since, as I argue, it is perhaps not necessary to conduct an all-out algorithm audit in the first place, I will leave the question of how to conduct a proper algorithm audit of social media platforms to others.

information that we may yet gain insight into the algorithms that select and order our exteriorized memories *for* us.

Scouring the Internet for economic motives

That leaves us with one aspect to consider: the underlying motives companies such as Facebook Inc. might have in configuring their social media platforms the way they do. Of course, we cannot say *for sure* why Facebook Inc. has shaped Instagram in the way that it has. However, I contend that relating our findings to Instagram's business model does offer us a way to contextualize them – 'explain them away', as it were – and consider to what extent Instagram's configuration is indeed subject to market forces. To deduce Facebook Inc.'s business model behind Instagram, I have consulted Facebook Inc.'s website aimed at partnerships with businesses, as well as several other websites dedicated to online marketing and first-hand accounts of individuals that have engaged in partnerships with other business *through* the Instagram platform.⁴²

This final part of my three-pronged approach takes us beyond the interface and functionalities of social media application themselves, and puts our newfound understanding about them in light of a broader socio-economical context. It is through this move that we, more or less implicitly, also move beyond considering processes of psychic and collective individuation through the exteriorization of memory and subsequent use of exteriorized memories, and consider technical individuation as spurred on by human actors.

⁴² In the analysis that will follow shortly, when I draw from these sources, I will reference them directly. The same is true for any other online sources I have consulted in order to unearth Instagram's governing algorithms, or to uncover aspects of the interface that I would not uncover through my own use of the application.

PART FOUR...

...INSTAGRAM'S HYPOMNESIC MILIEU

As a social media *platform*, Instagram is built up of multiple hybrid media forms. This analysis is structured around four chapters dedicated to considering how Instagram affords and structures the exteriorization of memory as well as the subsequent use of those exteriorized memories, and how, in doing so, shows potential to facilitate processes of individuation. Thus, I explore the extent to which the Instagram application forms an associated hypomnesic milieu in which the production and consumption of mnemotechnical objects is a meaningful to individual users.

The structure of these chapters is inspired by Manovich' aforementioned understanding of media platforms as constituted by specific combinations of hybrid media forms that are in turn constituted by individual media technologies or 'building blocks' (Manovich 2013, 181). I shall begin with an exploration of the most basic building blocks of digital photography and cinematography in the first chapter, where I briefly consider the smartphone's physical affordances relevant to the Instagram application. From there, I work 'up' to consider increasingly complex hybrid media forms, until I arrive at the over-arching structure of the Instagram platform.

Starting with the second chapter, I explore the Instagram interface itself, beginning with a consideration of how it allows and encourages users to produce what I understand to be Instagram's primary hybrid media forms: *posts*, *stories* and *reels*. I will be referring to these hybrid exteriorizations of memory as *mnemotechnical content*. In the third chapter, I consider how, after being created, pieces of mnemotechnical content can be consumed – that is, viewed by, as well as actively used in correspondence with others – as they appear in what I refer to as secondary hybrid media forms: Instagram's *direct messaging* system and its *feeds*. The third chapter ends with a brief reflection on the role that the pre-individual fund in the form of content created by other users plays in processes of psychic individuation as facilitated by the Instagram application.

While the first three chapters only reflect the results of the discursive interface analysis I have conducted, in the fourth chapter, I also take into account the algorithms that govern the over-arching structure of the Instagram platform, as well as the business model that we may recognize behind the its configuration. In this final chapter, I consider which aspects of the Instagram platform may have detrimental effects on processes of individuation,

and to what extent these negative aspects are part of an inevitable pharmacological exchange, or rather the result of Facebook Inc.'s objective of generating advertising revenue.

I. Instagram's mnemotechnical building blocks

Let us begin, then, with the most basic mnemotechnical building blocks of the Instagram platform. Instagram is first and foremost a visually and, to a lesser extent, an audibly oriented medium, focusing heavily on the use of photographs and videos – or, as Stiegler would say, on the use of the mnemotechnics of photography and cinematography. Typed alphabetic texts, user-made drawings, graphic illustrations and separate audio recordings are present as well, but these rather act as supports and additions to these photographs and videos. While the use of most mnemotechnics in the creation of Instagram's posts, reels and stories is optional, at least one photograph or video is *always* present in every piece of content.

Since Instagram is primarily a smartphone application, the photographs and videos on which it so heavily relies are (almost) always created digitally via its users' smartphone cameras. As such, photography and cinematography in their *digital* iterations can be seen as the most basic mnemotechnical building blocks of the Instagram platform. In this chapter, I would like to briefly stress a few characteristics of the very basic technical process of memory exteriorization through digital photography and cinematography. These characteristics, which ultimately underlie all memory exteriorization on the Instagram platform, are *producibility*, *editability* and *shareability*.

Easily produced

First off, in order to run the Instagram application, a smartphone is required, almost all of which are equipped nowadays with at least two cameras: one in the back and one in the front that is sometimes colloquially referred to as the 'selfie camera' (Sharma 2021).⁴³ Moreover, smartphones come with pre-installed software that automates its cameras' shutter speed, depth of field and image processing, as well as the very basic procedure of storing and retrieving captured content (Berry 2021). Thus, every smartphone owner is readily equipped and enabled to produce photographs and videos with relative ease.

Consider the fact that one requires a smartphone in order to run the Instagram application, combined with the fact that smartphones are readily equipped with easy-to-use cameras. It essentially means that every person able to *consume* content on Instagram because they own a smartphone is automatically able to *produce* it, *also* because they own a

⁴³ Some smartphones exist without a camera, but these are built for a niche of users that cannot bring cameras into their workplace (Todorov 2014) – these are the exception that proves the rule.

smartphone. This is not dissimilar to how someone who can read alphabetical texts also knows how to produce texts using the alphabet (Stiegler and During 2017a, 59–60). Put succinctly, Instagram users are potential producers of mnemotechnical content as much as they are consumers; access to the mnemotechnical content on Instagram also means the ability to produce it.⁴⁴

Editing after capturing

While photographs and videos have always been editable – even in their original analogue form – now that the means of their production have been digitized and literally brought into every smartphone owners’ hands, their editability is greatly increased. With analogue photography and cinematography, editing requires considerable knowledge, specialized equipment and effort (Yeoh 2017; Lievaart 2019). In contrast, by virtue of their digital nature, photographs have become easy to crop, while cutting the length of videos or changing the look of captured images by adjusting brightness, contrast, sharpness and saturation can all be achieved with the simple press of a single button by virtually *everyone* (Chaney 2009).

Easily shared

To briefly reiterate Mark Hansen’s view on 21st century communication technologies: smartphones can be seen as part of the “massive expansion in the interaction of machines with other machines” that facilitates continuous connectivity between people – through digital networks accessed by their devices, that is (Hansen 2015, 39). In relation to photographs and videos created with smartphone cameras, this means that, more easily than ever before, these types of (audio-)visual content can be shared by anyone to anyone. That is, provided that both have access to a digital network that affords such sharing – the Internet, for instance, which by definition every smartphone has the ability to connect to (Christensson 2010) – and are actually able to find one another’s content through said network.

Of course, the precise way the use of these networks is actually structured is beyond the mnemotechnics of digital photography and cinematography – this will be the subject of the next chapters. For now, suffice it to say that the digital nature of these mnemotechnics makes them especially receptive to being shared with large groups of other individuals.

Stiegler’s optimistic predictions

This takes me to the point of this first brief chapter. Not only has it obviously become easier to record, edit and share photographs and videos as photography and cinematography have migrated to a digitally mediated online context, but they have become easier to record, edit

⁴⁴ It is possible to create an Instagram account via the Instagram website, which then also provides access to mnemotechnical content. In this case, it is actually possible to consume content without the ability to produce it. However, in the case of the Instagram application that is the focus of this analysis, access to mnemotechnical content and the presence of the means to produce mnemotechnical content generally go hand in hand.

and share for a great many people; in theory for *all* smartphone users.⁴⁵ This is, indeed, a long way away from 20th century cinematography that was criticized by Stiegler (Fuggle 2013, 205; O’Dwyer 2015, 48; Stiegler and During 2017a, 71).

Since cinematography’s migration to the digital environment of the smartphone, it seems that we have had a situation in which individuals have indeed gained access to the technical means required to not only give shape to the multitudes of (temporal) mnemotechnical objects they consume, but also to the technical means required to actually share these exteriorized memories with one another. In this, we can indeed recognize the possibility of increased correspondence between individuals afforded by 21st century technology that Stiegler understood as the cure for the disrupted processes of individuation and the symbolic misery that plagues us today (Stiegler and During 2017a, 71).⁴⁶

That is, at least in terms of technical possibility. While the photographic and cinematographical mnemotechnical building blocks of Instagram certainly hold promise, the question remains to what extent Instagram actually lives up to this promise. If we are to gain insight in the way the Instagram platform facilitates correspondence between users – or, for that matter, any other types of use that might have users engage in processes of (psychic) individuation – we must move beyond the platform’s individual building blocks. Instead, we must consider how these individual photographic and cinematographic building blocks take up position within the hybrid media forms that ultimately constitute the Instagram platform.

II. Producing Instagram’s mnemotechnical content

There are several ways in which Instagram’s interface affords types of use that has users engage in processes of psychic individuation. Which form of psychic individuation might emerge from Instagram’s affordances depends on whether a user is currently engaged with the production of mnemotechnical content or rather with its consumption. Utilizing digital photography and cinematography’s promise of easy producibility, editability and shareability, *most* content on Instagram is produced by its users. It is in the production of individual pieces of mnemotechnical content that the potential for users to engage in processes psychic individuation first emerges – although, as will become clear later, this production is often informed by the consumption of mnemotechnical content produced at an earlier as well.

In this analysis, I focus on Instagram’s three main hybrid media forms: *posts*, *reels*

⁴⁵ Of course, not *everybody* in Western society actually has access to smartphones and (stable) Internet connections, but that is an entirely different discussion.

⁴⁶ While Stiegler did not identify photography as particularly problematic, we can say that the mnemotechnic of photography, migrated to the digitally networked online context, also grants ‘the masses’ better access to the means to create, edit and especially share the exteriorizations of memory it helps produce.

and *stories*, whose different production processes, as shaped by Instagram's affordances, facilitate psychic individuation in different ways.⁴⁷ These are not the only hybrid media forms on Instagram: there are also profile pages, feeds and private chat environments that make use of videos and photographs, often in combination with accompanying text messages. In the context of this analysis, I will be referring to these hybrid mnemotechnical media forms as *secondary*: videos and photographs used in these environments rarely appear in their original digital form, but rather as part of *previously* constructed posts, stories or reels, which I will thus refer to as *primary* hybrid media forms.⁴⁸

Modes of memory exteriorization

Before I consider how Instagram facilitates the process of psychic individuation in the production of mnemotechnical content, I should first briefly reflect on how memory exteriorization in general might occur. In creating posts, reels and stories, broadly speaking, users have two options in regard to how they want to exteriorize their memories into digital artefacts; two *modes* of memory exteriorization, if you will. One of these is where pre-existing (audio-)visual content – that is, previously exteriorized memories in the form of photographs or videos – are selected and used in new contexts, constituting a kind of reproduction or re-contextualization of memory. The other mode of memory exteriorization consists of the creation of new material, created at the moment in which the hybrid media content is produced. In this mode, memories are actually produced *through* or *with* the Instagram interface; essentially, these exteriorized memories do not precede the Instagram application in any way.

These modes of memory exteriorization are not mutually exclusive. While the Instagram interface sometimes prioritizes one mode over the other, both modes are always available to all users. In some cases, these modes of memory exteriorization can even be characterized as intertwined or merged. Obviously, the exact way in which these modes of memory exteriorization become manifest within Instagram's production environments informs their potential for facilitating psychic individuation. I will illustrate this at length in my exploration of the production processes for posts, reels and stories that follows.

⁴⁷ There are actually five different ways in which Instagram allows its users to make use of photographs and videos, thus constituting five different types of (audio-)visual content, or, indeed, five hybrid media forms: *posts*, *stories*, *reels*, *live streams* and *IGTV*. While live streams can be saved and uploaded afterwards (as posts), as their name suggests, their focus is on *live* broadcast and not on retention. As for the IGTV-feature, which allows users to upload videos with a runtime of up to 15 minutes, Facebook Inc. has decided to remove most access to the function, because not enough users were actually using it (Tech Desk 2020). While users can still upload longer videos, there are no editing options available and otherwise they act just the same as posts.

⁴⁸ User can share individual photographs and videos with other users via Instagram's dedicated direct message system, which I come back to in the third chapter of this analysis, but everywhere else, photographs and videos only appear as parts of Instagram's primary hybrid media forms.

❖ Concerning posts ❖

In all three of Instagram's primary hybrid media forms under scrutiny in this analysis, we might recognize the process of psychic individuation Stiegler characterizes as individuals being confronted with previously encountered orthothetic mnemotechnical content and, in finding their interpretation of that content has changed, in a more or less passive sense giving shape to their sense of self (Stiegler 2009b, 72). On Instagram, in the *production* of mnemotechnical content, this occurs in large part in relation to content users have made *themselves*. This comes clearly to the fore when we consider the production process for posts.

Passive psychic individuation with one's own content

Posts generally consist of up to ten photographs or short videos – with a maximum length of 60 seconds – with an added caption. When multiple pieces of content are selected, they are arranged as part of a 'carousel': an interactive type of post that allows users watching to swipe the screen to go from one photograph or video to the next. While both aforementioned modes of memory exteriorization are available to users creating posts – although not simultaneously – the Instagram application encourages users to choose in favour of pre-existing content.

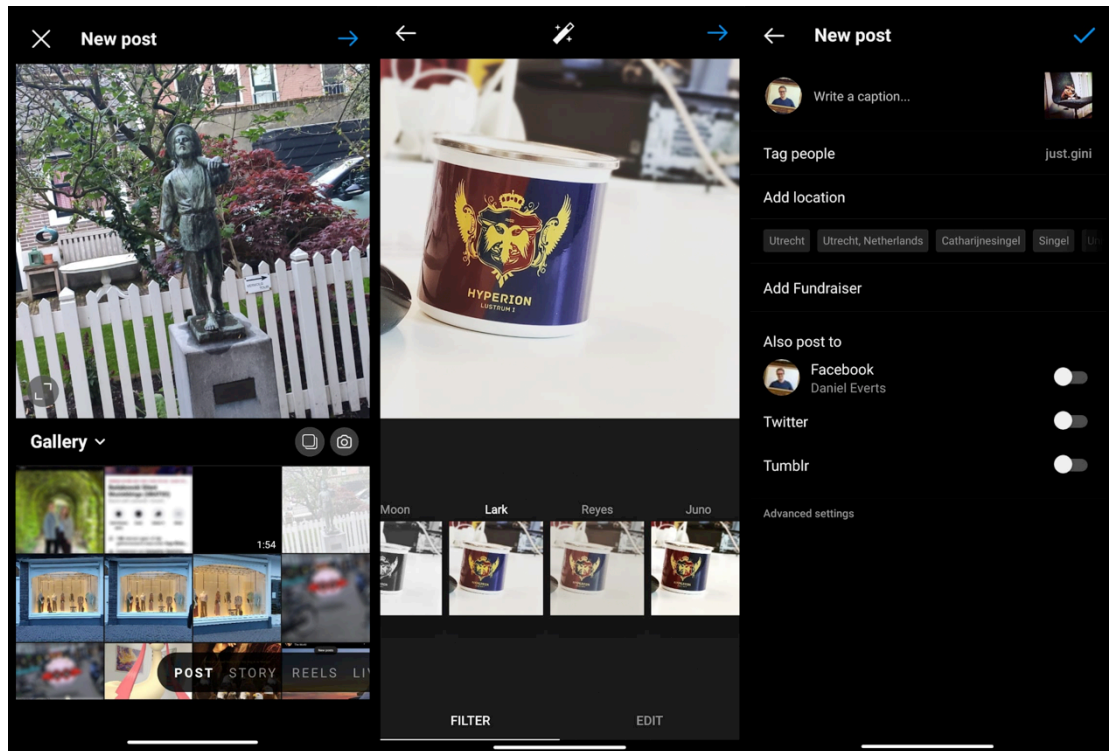
To elaborate: by default, the bottom half of the first screen users encounter when producing posts displays the *Gallery* (see Figure I).⁴⁹ This Gallery contains a list of thumbnail pictures, representing all photographs and videos currently stored on the user's smartphone in reverse chronological order from top-left to bottom-right. Instagram automatically selects the most recent piece of content, but users can scroll through the list and press other thumbnails to select different or additional pieces of content. While most of the screen is visually dedicated to this Gallery, with the top half of the screen showing which piece of content is currently selected, the option to make use of newly captured content using the user's smartphone camera is rendered much less visible: there is only a relatively small icon resembling an analogue photo camera on the right of the screen.

Thus, the production interface for Instagram posts actively encourages users to revisit orthothetic mnemotechnical artefacts they created previously. This then enables precisely the more passive process of psychic individuation through the re-interpretation of previously encountered orthothetic mnemotechnical objects Stiegler described (Stiegler 2009b, 72). However, in the production steps users have to take after this initial confrontation, the Instagram application affords a much more active re-interpretation of such content as well.

⁴⁹ To be clear: when I use the term 'screen', I am referring to specific environments within the Instagram application that users can navigate, unless I explicitly indicate otherwise.

Figure I.

The production process for Instagram's posts, chronologically displayed from left to right.



Active psychic individuation through self-commentary

This more active form of re-interpretation becomes most evident when we consider how users can incorporate multiple pieces of content into their posts in order to create posts carousels. First, when creating post carousels, users have to choose which individual pieces of content are to be incorporated, putting them in a position in which they consciously have to consider how these individual previously exteriorized memories relate to one another in general. Second, they will also have to decide in which order these individual pieces of content should appear as part of the post carousel, thus effectively giving shape to a visual narrative of sorts: it is quite literally the retelling of a past by putting photographs and videos – themselves orthothetic traces of that past – in a specific order.

While users can decide which aspect ratio the selected content should take on using a button on the bottom-left corner of the selected image, Instagram encourages users to shape their posts in a 1:1 aspect ratio; it is the default size a photograph or video selected from the Gallery takes on when selected. Once users are satisfied with their choice, they can proceed to the next production screen (see Figure I), where they are given numerous options to visually

alter the images they have selected.⁵⁰ We might understand this as users giving further shape or meaning to their visual narrative; one might imagine, for instance, a user adding darker tones to images when attempting to create a post carousel about a topic they deem heavy.

At the end of the post's production, before the post can be uploaded, users have to navigate a final screen that allows them to provide a caption to go along with the visual narrative they have just created. The interface actively encourages users to do so through a text prompt displayed at the top of the screen that reads: "Write a caption..." (see Figure I), which can be as long as 2200 characters – although, when later appearing throughout the Instagram application, these captions will generally be truncated after the first 125 characters.

Taking all the options afforded to users in actively sequencing, visually altering and captioning their previously exteriorized memories together, we find the Instagram interface encouraging users to essentially treat posts as visually and alphabetically based, *consciously* constructed commentaries on their own past. Thus, instead of only the more passive encountering of one's own past in the form of orthothetic mnemotechnical artefacts and the subsequent re-interpretation and constitution of the self that occurs through it, in the creation of posts, users are also led to *actively* interpret their past – or, indeed, re-interpret orthothetic mnemotechnical artefacts previously encountered when they were actually being created.⁵¹ In this sense, in just the production process for posts, we can already see quite some potential for Instagram in facilitating an associated hypomnesic milieu that fosters meaningful interaction with exteriorized memories.

Encouraging the initiation of correspondence in the production process

At this point in the 'life' of a post, correspondence between users that Stiegler deems characteristic of 21st century mnemotechnics (Fuggle 2013, 205) hardly plays a role. After all, in creating posts, users are encouraged to make use of their *own* previously created photographs and videos. In that sense, the production of posts and the processes of psychic individuation that it engenders occur in *relative* isolation.

That is, the final steps in the production process for posts do encourage the initiation of correspondence between users. This is most readily evident in the way the interface makes users explicitly aware of the option to "Tag people" via a text prompt displayed right beneath the prompt to write a caption (see Figure I). The tagging option allows users to apply labels referring to the post's images that, when pressed, show the tagged users' account names and act as gateways to those users' profile pages. Tagged users receive a notification, which, in ways I will come back to in the next chapter, might lead to sustained correspondence between

⁵⁰ Users can add certain photographic filters, or adjust elements such as brightness, sharpness, saturation and contrast, either manually or by selecting pre-programmed combinations of options.

⁵¹ Essentially, this is more or less a combination of the type of psychic individuation that occurs in the form of self-composition through the literal ordering of memory (Van Dijck 2004) and the type of psychic individuation that occurs through becoming exposed to previously encountered orthothetic mnemotechnical objects (Stiegler 2009b, 72).

them and the post's creator.

Additionally, post creators can *@mention* other users in their captions by typing the @-symbol and adding the first letters of those other users' account names. When they do so, a pop-up appears displaying suggestions for account names starting with or containing those letters, which can then be selected with a single touch. Those that are *@mentioned* likewise receive a notification, and their account names also become direct links to their profile pages. While tagging is unique to the production of posts and reels, users can *@mention* others in almost any situation in which they can type text – some of which I will come back to later – meaning that *@mention*-tags are more or less ubiquitous on the Instagram platform. In that sense, while the production interface for posts does not explicitly encourage users to *@mention* others, through encouraging users to write a caption, it nonetheless affords the act of *@mentioning*, even though it does so to a somewhat lesser degree than it affords the tagging of others.

In any case, this referencing to others encouraged by the posts production interface leads me to the second reason I characterize the creation of posts as a *relatively* isolated endeavor. Tagging or *@mentioning* someone can essentially be seen as a conscious endeavor that places one's own past – in the form of photographs and videos selected as part of the post carousel – in direct relation to others, as it requires users to consider *who* they are tagging or *@mentioning* and *why*. Thus, not only are users actively encouraged to re-interpret their own past, they are also encouraged to position that past in relation to other Instagram users. In other words, the presence of others in a way fulfills the role of the *collective* with which and against which, as Stiegler explains (2011a, 74), the individual can individuate.

❖ **Concerning reels** ❖

While this presence of others plays a relatively small and passive role in the creation of posts – tagging occurs only after users have already sequenced their exteriorized memories and visually finished up their posts – on many occasions, this collective can and actually often does play a much more active role in the production of mnemotechnical content. When it does, it does so, either in the form of content pre-selected by Facebook Inc., or in the form of content – audio clips, but also posts and reels – made by other users. Once uploaded, both types of content become part of what could be characterized as a pre-individual fund accessible and utilizable to anyone – to varying degrees, which I will get to in the third and fourth chapters of this analysis – to base their own production of mnemotechnical content and accompanying commentary on the self on. This active role that the pre-individual fund might play in the production of self-commentary comes most readily to the fore when we consider the production process for Instagram's reels.

Encouraging the capturing of new cinematographic content

Reels, Instagram's newest feature, launched toward the end of 2020 and is commonly understood as Facebook Inc.'s attempt to compete with China-based ByteDance Ltd.'s *TikTok*, which revolves mainly around the creation of short *musical* video clips starring the application's users (Southern 2020; Nguyen 2020). Reels appear in the form of videos that cover the entire smartphone screen, with a maximum running length of either 15 or 30 seconds, depending on user preference.⁵² Like with the production of posts, users creating a reel have to navigate several production screens (see Figure II), the first of which is essentially a video recorder, a clip editor and an image adjuster in one that asks users to choose where to place separate pre-existing and newly captured pieces of content on a timeline. Every piece of content added to the reel is automatically placed at the far end of the established timeline, until either 15 or 30 seconds of run time are filled, after which no new content can be added.

The production process for reels is mainly oriented toward the use of newly captured cinematographical content in what could be characterized as a *response to* pre-existing audio. When users navigate to the first reels production screen, Instagram automatically activates their smartphone cameras. They are then greeted with an interface whose background consists of a 'live' image of what their smartphone cameras are currently 'seeing'. Overlaid on top of this 'live' background are several buttons through which users can access the possibilities the reels feature affords, most notably a large white circle at the bottom-middle of the screen that can be used to initiate the recording of a new video clip to be added to the reel.

This orientation toward the capturing of new content becomes even more evident when we consider the various visual effects users can add to their (audio-)visual content. These effects have to be selected *before* filming begins; they cannot be applied to content after they have been added to the timeline and are thus not available when users incorporate self-made pre-existing (audio-)visual content.⁵³

Audible guides

While users can capture and edit video clips completely freely – or at least until the 15 or 30 seconds are filled – the Instagram application very clearly steers users in another direction, which is to base their video recording and montage on audio files made by others. These audio files will generally be short musical tracks, although there are other possibilities. Adding music is not a requirement, but the interface's functional affordances do very strongly encourage users to do so. The most obvious way the interface does this is through one of the

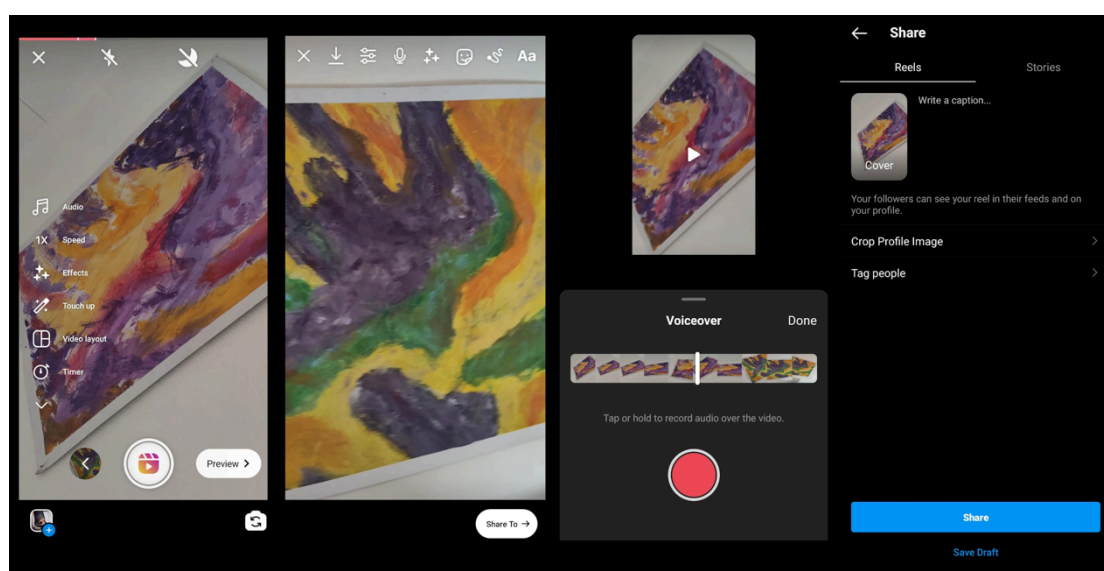
⁵² Users can make shorter reels, but new content can only be added until those 15 or 30 seconds have been taken up; the interface also encourages users to completely fill up those 15 or 30 seconds by continuously showing a progression bar on the top of the screen.

⁵³ Just to name a few, there are effects that make every image the smartphone camera captures look like a drawn sketch, effects that add heart shaped animations to the fringes of the video recording, and effects that simply add some film grain.

very first buttons displayed on the reels production screen, which resembles a musical note (see Figure II). Pressing this button leads to a separate selection screen that displays a list of musical tracks selected by Facebook Inc., made by more or less well-known musicians.

Figure II.

The production process for Instagram's reels, chronologically displayed from left to right.



At this moment, it is impossible to directly upload one's own music in the process of creating reels, although later in the production process, users can record original audio, which other users encountering those reels can subsequently use in their own reels. To elaborate: when watching other reels with incorporated pre-selected musical tracks, the name of that track is displayed in a box in the bottom-left corner of the screen. Pressing this box will take users to a page where *all reels* that use the same audio file are displayed and where users can save the audio track for use in their own reels. When users create their own reels, audio fragments saved this way are the first to appear in the audio selection menu. This same option is available for *custom* audio recorded by users, which, as I will elaborate on presently, is an option available to users *after* creating the reel. As long as a reel using custom-made audio is shared publicly (Nguyen 2020), that audio recording becomes part of Instagram's pre-individual fund, available for others to use in their reels *in its entirety*, much in the same way that music tracks pre-selected by Facebook Inc. can be used.

The way musical tracks and original audio made by other users inform the production of reels once they are selected further shows how the reels production process is primarily oriented toward the incorporation of pre-existing audio. Once added, not only does the selected audio track become part of the reel, but it also automatically plays along while new video clips are being recorded; in that sense, the audio track effectively acts as an audible

guide for users as they create new video recordings and neatly intertwine them with the audio of their choosing. This encouraged intertwinement of pre-existing audio and newly captured video clips becomes even clearer when we consider the fact that users can choose to record their video clips either in slow or fast motion. When users do this, any audio that has been added to the reel is sped up (when recording in slow motion) or slowed down (when recording in fast motion) during the recording. In this way, the Instagram interface affords users the ability to precisely time their newly recorded high speed or slow motion performance to whatever audio track they are using.

Actively produced commentary

In the production of reels, then, we can recognize a process in which users are first made to relate to the pre-individual fund in the form of orthothetic mnemotechnical content made by others by consciously selecting one specific piece of content and then interacting with and relating to that content by *reacting to* it. This reaction takes the form of the aforementioned newly created video clips, but the process actually encompasses more than that.

Once users are finished video editing their reels, they can press the ‘preview’-button at the bottom-right of the screen to be taken to a second production screen (see Figure II) – a screen that they *must* navigate in order to proceed. Here, users are given options to provide commentary on the reel they have just created and, in extension, on the pre-existing musical content they have likely selected at the start of the reels production process. This commentary can manifest itself in several ways, some more explicit than others.⁵⁴

Most notable in this regard, however, is an option unique to the reels feature, which allows users to record additional audio to go along with the *finished* video montage. This option is accessible via an icon resembling a microphone at the top of the second reels production screen and it is explicitly presented as meant for the recording of voice-over commentary. Pressing the microphone icon takes users to a separate “Voiceover” screen – as indicated by text in the middle of the screen – where the reel is played back on the top half, while the bottom half shows the timeline of the reel and a button that can be pressed to start the audio recording.⁵⁵ Thus, in the production of reels, the Instagram interface encourages users to actively react to pre-existing orthothetic mnemotechnical content made by others, and often do so in the form of explicit commentary.

Active, embodied self-commentary

In the case of users incorporating audio tracks created by other Instagram users, we might

⁵⁴ For instance, users can superimpose animated, stylized typed texts and drawn lines on top of their reel, as well as add *aesthetic* stickers, which I come back to when discussing Instagram stories.

⁵⁵ Note how this possibility to add custom-recorded audio is only possible *after* the entire reel has already been recorded and structured. As such, the option to add custom-recorded audio is very clearly presented as a final *addition*, not something to base one’s reel on – although, of course, such a thing would technically be possible with some planning.

even characterize the creation of reels as a form of commentary through correspondence between users,⁵⁶ although, at this point, it remains somewhat one-sided. The true potential of the production process of reels in facilitating the process of psychic individuation, however, emerges when we further consider how the individual is actually implicated in this active and conscious reflective engagement with the pre-individual fund. To properly understand this, we must go back to the recording of video clips, as many of the tools made available to users in that process are geared toward the recording of oneself.

The first reels production screen (see Figure II) offers an option to pre-determine how many seconds Instagram will record and how many seconds the application will wait before it starts doing so, thereby facilitating the appearance of users in their own reels, who can now press the record button and then position themselves within the frame before recording commences. Furthermore, once a first video clip has been filmed, the interface allows users to temporarily overlay the final frame of the previous clip on top of the ‘live’ image the smartphone camera is ‘seeing’. This function is generally understood as helping users to more easily create seamless transitions by aligning different video clips (Kase 2021). Considering this option in combination with the timer option – they can be used simultaneously – we might readily understand that these options cater especially to users wishing to incorporate their own likeness into their reels.⁵⁷

Arguably, then, it is in these first few steps in the production process of reels that relating to the pre-individual fund in the form of audible content made by others takes on its most active form, seen as it involves a continuous effort of the physical self *and* a continuous consideration of how to position one’s physical self in relation to said audible content. The true extent of the process of psychic individuation afforded by the reels production process becomes clear when we consider again how, toward the end of the reels production process, users are enabled to provide commentary on the audible content made by others by adding explicit commentary to their own reels.

Suddenly we find that this explicit commentary added at the end of the production process is not *just* commentary on content made by others, but in fact also commentary on one’s own – in this case very active and *embodied* – relation *to* that content. Thus, the production process of reels affords a very involved, active process of producing commentary on the self *as* it relates to the other – or, indeed, to the collective – in the form of content taken up as part of the pre-individual fund. It is quite literally the manifestation of the self, both in commenting on the other *and* on the self in relation to the other by actively engaging with the pre-individual fund that for a large part consist of the content made by others.

⁵⁶ We might perhaps characterize this as the nothing other than continuation of dialogue with others in their absence, spurred on by the presence of orthothetic mnemotechnics that Stiegler spoke of (Stiegler and During 2017a, 61).

⁵⁷ Indeed, based on my own experience in perusing the Instagram platform, in practice, reels generally take the shape dance performances in reaction to pre-existing musical tracks.

Obviously, there are certain limitations to this process, which I come back to toward the end of this chapter, but the potential to facilitate psychic individuation is clearly evident.

On a final note, like with posts, at the end of the reels production process, users are given the option to @mention others in captions added. Likewise, a text prompt explicitly encourages them to tag others too. As such, the potential for correspondence is an inherent part of the reels production process as well.

❖ **Concerning stories** ❖

That leaves us with one final feature to consider in this chapter: Instagram's stories. Out of the three types of primary hybrid media forms under scrutiny in this chapter, the production process for stories is the most complex. It provides users with the opportunity to relate to their own past via the use of self-made orthothetic mnemotechnical artefacts, as well as to the pre-individual fund that consists of orthothetic mnemotechnical artefacts made by others. Most notably, however, is the fact that, whereas posts and reels are clearly oriented either toward (reflecting on) the relation between the present self and the *past* self or the relation between the present self and the other respectively, the production process for stories actually affords a mixture between these two. As I will illustrate, the stories production process actively encourages users to relate *both* their past and present selves to others, while also facilitating the first steps of correspondence between that self and others. In that sense, in a way, Instagram's story feature represents all Instagram has to offer in terms of psychic individuation in the *production* of mnemotechnical content.

The core of the story is the story of the core

Stories exist in the form of so-called 'slides', of which users can create and upload as much as they want, although a maximum of a hundred slides can be shown at any one time (Wong 2017) – when this number is exceeded, the oldest slides will make way for the newest slides (Rodriguez 2021). These slides are always shown in the order in which they were created in several places and automatically disappear from most of these places after 24 hours, thus making room for new slides – I come back to this fleeting appearance of stories, as well as ways to make them more permanent in the third chapter of this analysis. Similar to reels, stories fill up the entirety of the user's smartphone screen, both when they are produced as well as when they are viewed.

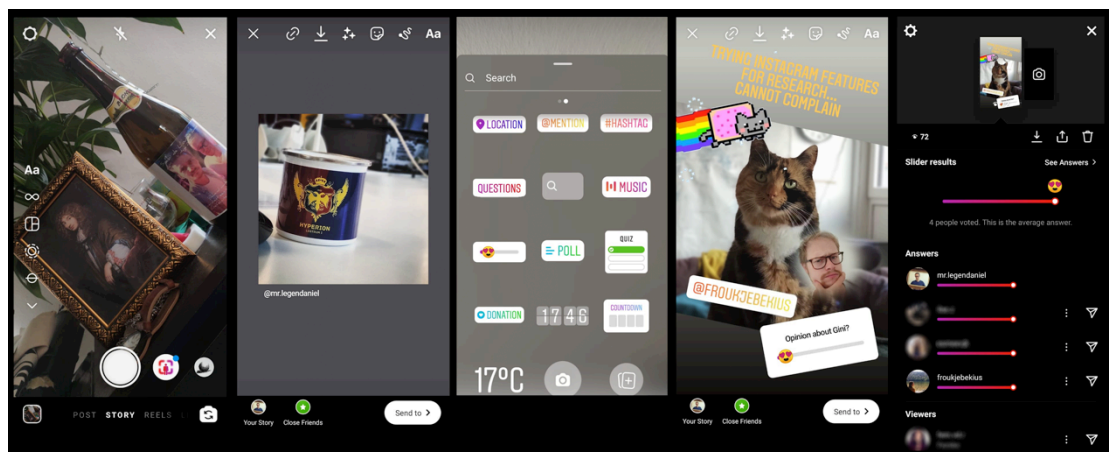
Like with the creation of posts and reels, in order to produce a story slide, users have to navigate several screens (see Figure III), the first of which is dedicated to capturing or selecting either a separate new or pre-existing photograph or video, or a previously

constructed post or reel. In any case, the image chosen here is not just the starting point for the new story slide, but actually what I would call the ‘basis or ‘core’ of the story, as it cannot ever be removed from the story.⁵⁸ However, it is not necessarily to be considered the *only* part of the story slide either.

To elaborate: stories on the Instagram platform are always displayed vertically and have a pre-determined aspect ratio that corresponds exactly with the size of the Instagram interface – that is, they always fill the user’s smartphone’s entire physical screen. However, in *all* cases in which content has been selected as the core of the story slide instead of newly captured, the selected content will *not* appear fully covering the entire screen; this is even so when users incorporate reels, which, as established, also always take on the size of the user’s entire smartphone screen. Instead, when such content is selected, it is placed in the middle of the screen – in the case of reels smaller than they were originally – leaving empty space all around it (see Figure III).

Figure III.

Selecting or capturing the core content of story slides and adding commentary.



The first pane (from the left) displays the default screen first of the stories production process. The second pane displays the incorporation of a post, while the fourth pane displays the incorporation and positioning of a pre-existing photograph taken from the user’s Gallery, with elements such as aesthetic and interactive stickers and stylized typed text added to it. The third button from the right at the top of the second and fourth pane opens up the sticker menu, which is displayed in the middle pane. The first two buttons from the top-right on the second and fourth pane allow users to draw lines and add texts. The right-most pane displays user responses to the interactive sticker added to the bottom-right of the story slide displayed in the fourth pane. This pane can be accessed when revisiting the story slide at a later time and users can directly respond to these reactions using Instagram DM-system, which shall be discussed in the next chapter.

Thus, the production interface makes users actively aware of the fact that the core of the story slide should only be considered as the ‘*main* ingredient’ of what can best be described as a collage. A collage, that is, in which the core piece of (audio-)visual content functions as a

⁵⁸ If users decide not to use that particular image after all, they will have to discard the story slide altogether and start anew.

definitive object that can be *manipulated* to fit into a whole that without additional ingredients remains rather unfinished.⁵⁹ Now, the second screen users have to navigate when constructing story slides offers them several different ways of ‘adding flavour’ to the core ingredient in the form of visual content, which I shall come back to in a moment. For now, though, suffice it to say that, since they have one piece of impossible to remove (audio)-visual content as their core, with additional content thus always existing in relation to that core, story slides can essentially be understood as literal stories *about* – or commentary *on* – that particular piece of core content.

Aesthetically sticky commentary

This commentary can take on many visual forms. Users may apply filters to the core image, as well as add drawn lines, stylized typed texts – the most explicitly formulated form of commentary available to users – and ‘stickers’ anywhere on the story slide. All of these ‘flavoring ingredients’ can be added to the story collage via a menu bar prominently placed at the top of the second stories production screen – thus the interface encourages users to make use of the possibility to include them. When selected, they are superimposed on top of the mnemotechnical content selected as the core of the story slide (see Figure III). While all of these options are equally visible on the interface, here I will focus on the *stickers*, since they have some additional functionality the other flavoring ingredients lack.

Broadly speaking, there are two kinds of stickers: *aesthetic stickers* and *interactive stickers*. Here, I will focus my attention on the former – I come back to the latter later in this chapter. As the name I have given to them suggests, aesthetic stickers only fulfill an aesthetic function. Some of them consist of moving GIF files or of static images that are selected from a limited database provided by Facebook Inc., while others are created by users themselves as part of the story slide production process.

The option to add self-made aesthetic stickers manifests itself in two ways: one can either capture new photographs, or select pre-existing photographs via a Gallery menu similar to the one we saw with the creation of posts. The interface encourages users to utilize these options rather than using material pre-selected by Facebook Inc. by making them immediately (and equally) visible at the bottom of the sticker menu (see Figure III). In contrast, the option to incorporate aesthetic stickers provided by Facebook Inc. requires users to scroll down in the sticker menu, thereby rendering the option relatively obscure.

Notably, when creating new photographic stickers, users are only allowed to use their

⁵⁹ When users create a photograph or video in the moment using the stories production screen, the content captured does in fact fill the entire screen. However, in this case users can still move around the captured picture and are still afforded all additional options I will come to in a moment. Besides, users only have to use a pre-existing photograph or video *once* in order to discover stories can consist of more than just that photograph or video. Therefore, I maintain that Instagram encourages users to treat all photographs and videos as only *one* part of their story slides, regardless of whether they were pre-existing or newly captured.

front camera. As such, the Instagram application primarily affords the incorporation of ‘selfies’. Similar to what we saw with reels, we find the interface encouraging users to incorporate representations of their physical selves, created in the present – that is, during the construction of the story – into the story itself. Users can incorporate as many of these stickers as they want and position them on the story slide in whatever way they see fit. Thus, they are enabled to relate themselves to the core of their new story slide according to their heart’s desire.

Stories, then, are about orthothetic mnemotechnical objects – some of them new, some of them pre-existing – that, as main ingredients, can be commented on through the incorporation of several additional ingredients. Likewise, some of these additional ingredients are pre-existing orthothetic mnemotechnical objects, while others are exact imprints of the *present*, the latter of which will generally consist of a representation of the user’s physical self. In this last situation, we might recognize the same type of commentary *with* the self we saw in the creation of reels. However, whether this or any other type of story slide is also commentary *on* the self or rather on others – or both, as we saw with reels – depends on what users choose as the core of their story during the first step of the reels production process.

Making sense of the personal present and the personal past

Similar to the first reels production screen, the first stories production screen also consists of a live representation of the image the user’s smartphone camera is currently capturing and a button placed prominently in the bottom-middle of the screen (see Figure III), which can be pressed to make a photograph, or held down to start recording a video that can have a running length up to 15 seconds. Thus, when navigating this screen, users are first and foremost encouraged to create new content as the basis for their new story slide. In this case, previously created self-made content only appears during the second step of the story production process.

Once it does appear, a situation manifests itself in which users are essentially using previously self-made orthothetic mnemotechnical artefacts – their *own* exteriorized memories – in order to comment on whatever it is they have captured in the present and incorporated as the core of their story slide. In this case, it is not so much a matter of *discovering* one’s interpretation of an exteriorized memory has changed, but rather a matter of actively using that exteriorized memory to *create new meanings* that connect one’s present to one’s own past. Once again, we find Instagram encouraging an *active* reinterpretation of the personal past in relation to the present.

Focus on relating to others

The stories feature’s potential in facilitating the process of psychic individuation is arguably

most promising when users opt to incorporate reels or posts as the basis for their story slides. While the first stories production screen clearly prioritizes the use of *new* content as the basis for their stories, arguably, the Instagram interface affords the incorporation of pre-existing posts or reels just as much.⁶⁰ To understand how, we must briefly look ahead to what happens with posts and reels when they are finished.

Once uploaded, one's own posts and reels as well as those of others appear in several locations throughout the Instagram application. Regardless of where they appear, these posts and reels are *always* accompanied by a button resembling a paper airplane known as the *direct messaging* (DM) button (see Figure IV in the next chapter). When users press it, a pop-up screen appears that allows them to incorporate either their own or a *publicly* shared post or reel as the basis for their new story slide. It is based on these ubiquitous DM-buttons, which I will further consider in the next chapter, that I find the Instagram interface encouraging its users to make use of pre-existing mnemotechnical content in the form of posts and reels just as much as it encourages the use of newly created photographs and videos as the basis for their story slides.⁶¹

Arguably, this incorporation of pre-existing posts and reels – especially those made by *others* – is *even more* encouraged. As I will further illustrate at length in the fourth chapter of this analysis, the Instagram application seems to be considerably more oriented toward the consumption of other user's material than it is toward the production of completely new mnemotechnical content. This consumption being a necessary and logical prerequisite for the incorporation of posts and reels made by others, it is this approach to creating story slides that is most often – with *every* public post and reel – and thus most visibly advertised by the Instagram interface.

Merging the past, the present, the self and the other

Now, when users opt to incorporate posts and reels as part of their new story slide, those posts and reels effectively act the same way as pre-existing separate photographs or videos: they are orthothetic mnemotechnical objects for the user to relate to. As such, in the case of one's *own* posts and reels, a process of psychic individuation similar to the process I described earlier is afforded. That is, users are enabled to relate their own past to their own present and/or a different part of their own past – depending on the aesthetic stickers they uses – while commenting *on* this relation, both *with* their own past and/or present and with additional more

⁶⁰ The first stories production screen does *allow* users to utilize previously created self-made content as the basis for their new story slide, but this option is not the encouraged course of action. Users can press a small square at the bottom-left corner of the screen to open up the Gallery, where they can then select a single photograph or video. When they do so, the stories production process allows users to relate both other moments in their past – through photographic stickers made from pre-existing photographs stored on users' smartphones – and moments in the present – through newly created 'selfie' stickers – to one particular moment in their personal past. Thus, a similar process of psychic individuation is facilitated by the Instagram application.

⁶¹ Indeed, when opting for this route, users literally *skip* the first stories production screen that, as I have shown, first and foremost affords the incorporation of newly captured material.

explicitly formulated commentary. In any case, again we see the active re-interpretation of the user's personal past with and in relation to the personal present and the process of psychic individuation that might emerge from this active engagement with one's past afforded by the Instagram platform.

In the case of using *other* user's reels and posts, this process takes on a somewhat different form. Let us say a user is taking another user's content as the basis for a new story slide. To start with, that user already has to consciously consider what post or reel to use, thus already in some way implicitly considering the relation between his or her own present self and (the past of) that other user. More importantly, however, when that user incorporates self-made stickers in the form of pre-existing photographs and newly made 'selfies' – again, options which are encouraged by the Instagram interface – we effectively have a situation in which that user actively and explicitly relates both his or her own past *and* present to the past of another user, while *also* relating his or her own past to his or her own present.

This is different from the production of commentary on content made by others and the *subsequent* production of commentary on one's own relation *to* that content that we saw when discussing the creation of reels.⁶² With the production of stories, we are potentially dealing with the *simultaneous* production of commentary *with* both the past and the present self *on* the past and present self, with the production of commentary *with* both the past and present self *on* the other, *and* with the production of commentary on the *relation* between the past self, the present self *and* the other. To put it in simpler terms: in the creation of stories, the Instagram application facilitates and encourages the simultaneous production of commentary on the past self, on the present self and on the other, using content made by the past self, by the present self *and* by the other, possibly all at the same time. Put more succinctly: through the production process for stories, the Instagram application affords the merger of the past and the present, the self and the pre-individual fund in the form of content created by others, all of which ultimately factor into the manifestation of the self – of psychic individuation – in the present.

Finally, since story slides appear chronologically after they have been produced, the Instagram application affords the creation of narratives that go beyond individual story slides. Here, the potential to merge the past, the present, the self and the other becomes even clearer, as users can continuously switch between incorporating newly created content, pre-existing self-made content and pre-existing content made by others. Thus, in the creation of story slides, *all* of the previously discussed forms in which psychic individuation might emerge – all the different ways the past, the present, the self and the other might be actively related to

⁶² To be clear, when I say 'subsequent', I refer to the fact that, with the production of reels, the explicit commentary in the form of voice-overs, drawn lines and animated texts comes *after* one has already provided commentary on the selected musical track in the form of the video clip montage that, as said, often includes a physical representation of the self.

one another – are facilitated all of the time. Like I said, Instagram’s story feature really does seem to represent all that the social media platform has to offer when it comes to facilitating processes of psychic individuation in the *production* of mnemotechnical content.

From commentary to correspondence

That leaves us with one aspect to discuss in relation to the creation of story slides: correspondence between users. Here, too, the stories feature shows all Instagram has to offer in facilitating the process of psychic individuation. Similar to users reacting to audible content made by others in the production of reels, the commentary users provide on posts and reels made by others can be understood as a form of one-sided correspondence. Again, any proper two-sided correspondence *between* users only occurs *after* production has finished. However, the stories production process affords the *initiation* of correspondence between users to a much higher degree than posts and reels do. For this, we must go back to the stickers users can add to their story slides in the second step of the reels production process.

As I mentioned earlier, beside aesthetic stickers, users can also incorporate interactive stickers. When users open up the sticker menu, it is these interactive stickers that fill up most of the screen (see Figure III). In that sense, of all the options available to users, the option to incorporate these interactive stickers is actually the most visually prominent option – and therefore the most clearly encouraged one – even more so than the aforementioned option to incorporate self-made photographic stickers.

The interactive stickers have various functionalities, some of which take over functions normally reserved to captions, which stories do not have. For instance, there is an @mention-sticker, which functions the same way @mentioning in posts and reels works, only in the case of stories, it is superimposed right on top of the newly created piece of mnemotechnical content, instead of attached to it as part of a caption. More notably there are also stickers, unique to stories, which explicitly ask onlookers to participate. Some allow users to create multiple-choice polls, others to set up a quiz, or to ask onlookers open-ended questions that can be answered with a limited amount of typed text. There is even an interactive sticker resembling a slider with an appreciative emoji that other users can position in order to show their appreciation for the post.

Once onlookers have interacted with these interactive stickers, story creators can access responses when revisiting the story slide for themselves (see Figure III). In the case of typed text responses to open-ended questions, story creators can even make other user’s responses part of a subsequent story slide. As I shall elaborate upon in the next chapter, at any time, this back and forth between users can lead to a more sustained form of correspondence via Instagram’s DM-system. For now, suffice it to say that, in providing users with interactive stickers, the stories production process actively encourages users to take the initial step in

corresponding with others to a degree unlike any of Instagram's other types of mnemotechnical content.

❖ **Steering production of mnemotechnical content** ❖

Thus we find that, when it comes to the production of posts, reels and stories, the Instagram interface affords the production of self-commentary in relation to others – and the processes of psychic individuation that this production engenders – in numerous ways. While, as we have seen, users are given quite some freedom in regard to how they want to shape their exteriorized memories, there are two ways in which the interface seems to steer how users make use of this freedom that I would like to stress.

Focus on the recent past and the present

The first of these instances of steering is the fact that, while Instagram does in various ways focus on the past in the creation of mnemotechnical content, production is generally oriented toward either the *recent* past or the present. The focus on the recent past is most clearly visible in the way Instagram's Gallery (see Figure I), which we first encountered while discussing the production of posts, is structured. As said, the Gallery displays photographs and videos stored on the user's smartphone in *reverse* chronological order, with the few most recently captured pieces of content displayed at the top.

While the selection of (much) older content *is* possible, both the interface's sensory and functional affordances seem to discourage it. The interface automatically selects the most recently captured piece of content, while older content only becomes visible as users scroll down their Gallery. Furthermore, there is no option whatsoever to search by date or to invert the order in which pre-existing content is displayed. Thus, older content is rendered relatively invisible *and* inaccessible. In fact, the further users go back in time, the more inconvenient the Gallery becomes, as they will have to scroll further and further.⁶³

A similar orientation toward the recent past is evident when users incorporate posts and reels in story slides since, as I will come back to, posts and reels are generally displayed in reverse chronological order throughout the Instagram application as well. As for

⁶³ This is nowhere as evident as in the production process for posts. Consider, for instance, that in selecting the ten separate pieces of content that can become part of a post carousel, the order in which these photographs are selected matters for the position they take up in that carousel and that they have to be selected in the order in which they are to appear as part of that carousel. If at any point halfway through selecting ten photographs and videos, users decide that the second photograph they have chosen perhaps does not quite represent fit the narrative they are trying to construct, they would have to manually deselect every photograph and video but the first one, choose a new second photograph or video and then reselect all other previously selected photographs and videos once again. One can imagine it would take quite the effort on account of the user. In contrast, if the user would have chosen to just use photographs and videos made in the past ten days or so, it would have involved much less scrolling and the process of manually deselecting and reselecting would have been much less of a hassle.

Instagram's tendency to focus on the present, we have already seen that many aspects in the production of both reels and stories explicitly encourage the exteriorization of memory *in the moment* through the capturing of new (audio-)visual content.

The trade-off in memory production on Instagram

Now, Instagram's orientation toward the recent past and the present in the production of mnemotechnical content has some implications for the way the process of psychic individuation is most likely to take shape. While users are indeed made to reflect on their own pasts when producing mnemotechnical content, going from the way the interface privileges the recent past and present, one might rightfully wonder how 'deep' this reflective process actually goes. It certainly does not seem as deep as the process of psychic individuation that Stiegler describes, in which individuals are thrust into a process of reflecting on who they were years ago and, "tissued by [a] past [...] they have themselves lived" (Stiegler 2009b, 72), who they have become in the meantime.

Instead, it seems to me that, in the production of mnemotechnical content on Instagram, users are made to reflect on who they were a few days ago at most – or even only on who they are right at the moment of producing content – and how they might understand themselves specifically in relation to other Instagram users whom they are currently in contact with. If, following Stiegler, we were to consider this from a pharmacological perspective, perhaps we might say that we are experiencing somewhat of a loss of the ability to reflect on our own deeper pasts in exchange for the ability to self-actualize in relation to those that occupy our present. In short, the production of mnemotechnical content on Instagram is more about positioning oneself in relation to a collective than it is about personal growth through introspection.

Of course, this in itself is not necessarily a bad thing. Indeed, processes of psychic individuation are still clearly facilitated by Instagram's production interfaces, only *primarily* – not exclusively – in a way that prioritizes self-actualization in relation to others. That said, when we see these implications in light of the broader context of the Instagram platform, a somewhat more pessimistic understanding does emerge. I shall elaborate on this in the fourth chapter of this analysis, where I illustrate how the orientation toward the recent past and the present runs throughout all of the Instagram application, briefly come back to the implications of this temporal focus on the processes of psychic individuation within the production of content on Instagram, and reflect on why Instagram might be configured this way.

Reliance on the pre-individual fund

The second aspect of the production process for mnemotechnical content on Instagram I would like to draw attention to is the extent to which it relies on the pre-individual fund in the

form of content created by other users. We most clearly saw this reliance with the creation of reels in the form of original audio that guided the recording of video clips, as well as with the selection of posts and reels as the first step in the creation of new story slides.

As I suggested previously, we might understand these types of user reactions to the pre-individual fund as a form of one-sided correspondence. However, the pre-individual fund plays an even larger role in *two*-sided correspondence between users. To fully understand how, we will have to move beyond the production of individual pieces of mnemotechnical content, and instead consider their *consumption*, meaning the way posts, reels and stories may become part of Instagram's secondary hybrid media forms and the way both the creators of these mnemotechnical objects as well as other Instagram users can utilize them once they do.

Instances of steering and limiting use

Before I move on to an exploration of the consumption of mnemotechnical content on Instagram, however, it would be prudent to draw attention to some of the other ways the Instagram interface steers or even flat-out limits users in the production of content. We already saw Instagram's tendency to steer users in relating primarily to the *recent* past, thus discouraging them to consider their own deeper past, but there are other ways – some subtler and some more obvious – in which use of the Instagram application is steered or limited.

As the reader might recall, posts can only consist of *up* to ten photographs and videos, the latter of which are limited to a running time 60 seconds, while videos used in stories can only last up to 15 seconds and reels in general can only last up to either 15 or 30 seconds. As said, captions for posts and reels will be truncated after the first 125 characters, thus to an extent discouraging users from reading longer elaborations on the posts and reels they belong to. Then there is also the fact that, in encouraging users to relate to content produced by others, reels rely mainly – although not exclusively – on a limited library of pre-selected musical tracks compiled by Facebook Inc., which seems not unlike the standardized pre-individual fund Stiegler criticized in relation to 20th century industrialized cinematography (Crogan 2013, 108; Stiegler and During 2017a, 73).

Obviously, these instances of steering and limiting use of the Instagram application in the *production* of mnemotechnical content and the constitution of and availability of the pre-individual fund also have implications for the way the Instagram platform actually lives up to its potential to facilitate an associated hypomnesic milieu. Of course, since the Instagram application prohibits users from sharing longer exteriorized memories, it already tends to obstruct any lengthy engagement with the past that might take place once it comes to the consumption of mnemotechnical content. However, these limitations in the production of mnemotechnical content also have further implications for the way users are steered into consuming exteriorized memories on the Instagram platform.

To understand these further implications, we must also understand these instances of steering and limiting use within a broader context. That is, we must understand how Instagram's primary hybrid media forms take up place within its secondary hybrid media forms, as well as how Instagram steers the *consumption* and *use* of these latter forms. As we shall see, the more we consider the Instagram application's overall structure, the more we might recognize aspects that remind us of 20th century cinematography that Stiegler so heavily criticized.

In the following chapter, I will direct my attention to Instagram's secondary hybrid media forms that are Instagram's *direct messaging* (DM) system, its comment system and its feeds, focusing on how the social media application facilitates correspondence between users in several ways. Thus, I will be able to consider Instagram's *full* potential in facilitating an associated hypomnesic milieu, while simultaneously introducing some of the social media platform's elements that are necessary to understand in order to make full sense of the instances of steering and limiting use I have just described.

III. Sustained correspondence on the Instagram platform

Broadly speaking, there are two types of consumption of mnemotechnical content afforded by the Instagram platform: one that takes the form of more or less in-depth, sustained correspondence between users *with* and *about* mnemotechnical content, and one that is more superficial in nature. In this chapter, I will consider how the Instagram interface affords the former – the more superficial type of consumption will be discussed in the fourth chapter.

To fully appreciate how correspondence between users manifests itself on the Instagram platform after stories, reels and posts have been created, we will have to consider several different aspects of the social media application. In what follows, I will first elaborate on Instagram's underlying logic of 'following' and briefly introduce the concept of feeds, as well as some other basic elements of the Instagram interface. Then, I will consider how Instagram's *direct messaging* (DM) system, user profile pages and the application's numerous feeds – Instagram's secondary hybrid media forms – incorporate Instagram's primary hybrid media forms and factor into instances of correspondence between users.

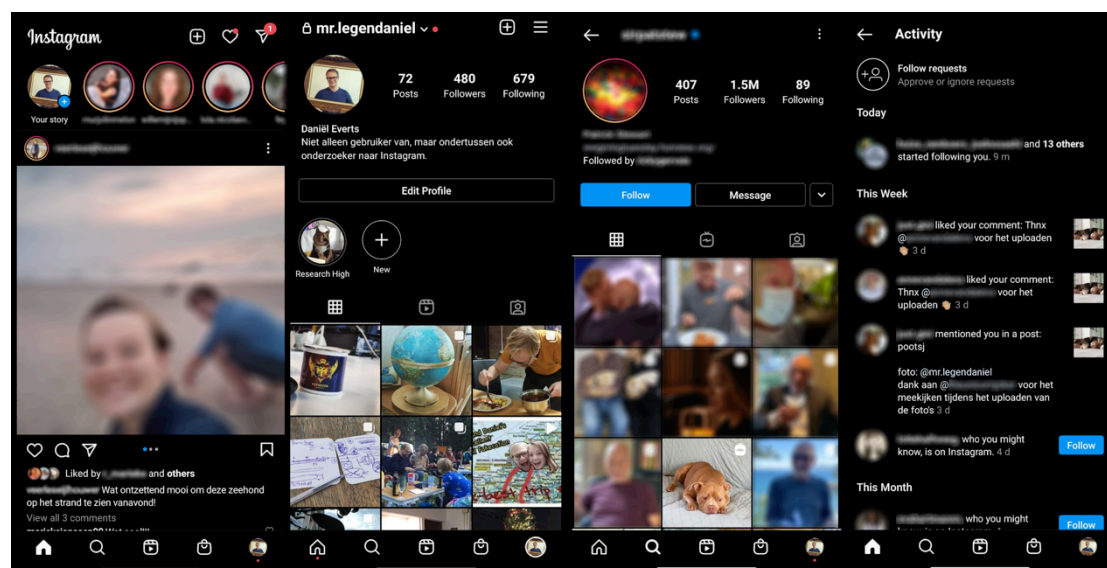
Sustenance for users

In order to use Instagram, users have to create an Instagram account. Every user account has a dedicated profile page (see Figure IV) that displays *some* of the content – posts, reels and 'highlighted' stories, which I come back to later – that particular user has uploaded while logged in to that account. When opened, the profile page showcases stories, posts and reels,

but it also features designated tabs that, when selected, always displays all reels created and publicly shared by the user, as well as any type of content that particular user has been tagged in by other users in posts or reels.

Figure IV.

Instagram's homepage, profile pages and the activities feed.



When starting up the Instagram application, users are always greeted with a homepage (see Figure IV) from which they can navigate to most of Instagram's other production and consumption environments. This homepage also acts as what is commonly referred to as a 'feed' (Hsiao 2019). This term, which outside of the context of social media of course usually designates a pipeline or device of sorts providing farm animals with sustenance, is remarkably appropriate, seeing as the homepage first and foremost acts as a visually oriented gateway to the *continuous* consumption of mnemotechnical content.⁶⁴

Given that it is the first feed users encounter when opening the application and therefore the one they encounter the most, I will be referring to the feed displayed on the homepage as the *general feed*. Content on the general feed mostly takes on one of two forms, the first being active story slides, represented by colorfully circled profile pictures at the top of the page. When these are pressed, the Instagram application will automatically show the active story slides for five seconds – if the story slide has an incorporated video, it may run up to 15 seconds instead. If users have uploaded multiple story slides, pressing the profile pictures in the stories bar will automatically play the entire collection in chronological succession, for as long as each of the story slides remain active.

⁶⁴ As I shall come back to later in this chapter, this homepage also acts as a gateway to the *production* of the types of mnemotechnical content as discussed in the previous chapter.

For the rest, the general feed mostly consist of a long list of more or less reverse chronologically ordered user-created posts that users can scroll through – I come back to the ordering of mnemotechnical content within the Instagram environment in the fourth chapter of this analysis. Occasionally, a row of reels appears in between posts, represented as smaller rectangular tiles that can be pressed in order to view those particular reels in their full form. Finally, users will also continuously encounter advertisements, both as part of the general feed and between story slides.

Instagram also has several other feeds: the reel showcase feed, the profile feed and the *Explore* page. That said, since the general feed also functions as Instagram’s homepage, it is from there that users are mostly likely to encounter mnemotechnical content. Since Instagram’s other feeds largely function in the same manner as the general feed anyway,⁶⁵ I will take the *general* feed as my sole focus in discussing how feeds factor into correspondence between users.

Food for followers

What posts and stories appear on the general feed differs for every user. The selection is largely based on who a particular user ‘follows’, the logic of ‘following’ being the basis for most user interaction on the Instagram platform. Instagram users are continuously encouraged to ‘follow’ other users throughout the application, via ‘follow suggestions’ provided by the interface, and via prominently visible text prompts at the top of profile pages that simply read “follow” (see Figure IV). Once an account is being ‘followed’, its content may start appearing on the follower’s general feed.

Users can access another user’s profile page, either by typing in that user account’s name on Instagram’s Explore page, or by pressing that user’s account name wherever it is displayed – every piece of content uploaded by a particular user is always accompanied by that users’ account name and pressing it takes one straight to the corresponding profile page. By default, accounts – and the profile pages attached to them – are publicly visible. As such, Instagram affords the continuous following of additional accounts.

However, users can choose to make their profiles private via account settings; users wishing to follow them then have to send a ‘follow request’ that, if granted, gives them access. Before this follow request is accepted, the profile page belonging to the private account shows only the corresponding profile picture and, if it has been added, description of the account written its owner; mnemotechnical content uploaded with that account remains

⁶⁵ The only difference between the general feed and the reels and explore feeds is that the latter showcase content uploaded by accounts the user does *not* follow. The way content is ordered, which I further discuss in the fourth chapter of this analysis, otherwise occurs in the same way. The profile feed is simply a list of content uploaded by a particular account made available to the user, displayed as part of the aforementioned profile page. Every function in terms of *using* content for correspondence I discuss in relation to the general feed applies for these other feeds as well.

invisible. While these account setting are hidden behind several text menus – as such, the Instagram interface encourages public profiles over private profiles – users are thus given some form of agency over with whom they share their content.

The homepage interface

Before moving on, I should introduce a few other core elements of the homepage’s interface. While users can scroll through their general feed, the bottom of the screen has a *fixed* menu bar with several buttons (see Figure IV). From left to right, when pressed, these buttons direct the user to the Instagram homepage, to Instagram’s aforementioned Explore page, to Instagram’s reels feed, to Instagram’s shopping environment, and to the user’s own profile page. The menu bar remains present when users navigate to any of these other environments; generally, it only disappears when users engage in the production of posts, reels or stories and the consumption of reels and stories – on account of them covering the entire screen – or when they make use of Instagram’s direct messaging system, which I will get to shortly.

Finally, there are three buttons displayed in the top-right corner of the homepage screen. There is a [+]-button, which directs users to the production environment for posts, reels and stories – users can swipe left and right to change the type of content they want to produce. There is also a heart-shaped button, which directs users to their personal *activity feed*, which consists of a list of every recent instance of being mentioned or tagged, as well as any likes or comments received in the past two days. It is here that users occasionally receive suggestions as to which accounts to follow (see Figure IV). Finally, there is a button resembling a paper airplane, similar to the buttons accompanying all posts, reels and story slides. Pressing this button directs users to their *Direct Message box* (Gulsen 2020), where all their direct message threads with other users are stored (see Figure V) – I will come back to these DM’s shortly.

❖ Shaping the pre-individual fund as a creator ❖

As established in the first chapter of this analysis, users of the Instagram platform are at once consumers *and* producers of content. That said, here I will briefly distinguish between the role of creator and the role of consumer of mnemotechnical content, which I will be referring to as the role of the follower.⁶⁶ Both creators and followers can initiate correspondence using posts,

⁶⁶ My use of the term ‘follower’ serves primarily to maintain a clear distinction between use from the perspective of a user who has just created a piece of mnemotechnical content and from the perspective of a user who encounters it. Since the general feed mostly showcases content uploaded to followed accounts, referring to this consumer role as that of the follower makes the most sense to me. As I come back to, however, when it comes to public accounts, one does not necessarily *have* to be a follower in order to encounter its content.

stories and reels. However, before correspondence can actually be initiated, it is the creator who has to make certain choices in regard to *how* to make mnemotechnical content available and, in some cases, for *how long* to make it available.

Effectively, these are choices as to what content actually becomes part of the pre-individual fund, which, as we shall see, is often crucial for correspondence taking place on the Instagram platform. As we shall see, while Instagram allows users quite some freedom in regard to how they want to share their mnemotechnical content, the interface does steer creators into making their content available indefinitely and to all.

Making posts available as part of the pre-individual fund

The extent to which Instagram allows creators of mnemotechnical content to choose if, how and how long their work becomes available to others depends on the type of content. In terms of sharing and making available posts for consumption, for instance, Instagram has automated the entire process. When uploaded, posts *always* automatically appear on the profile pages of their creators, where both their creators and their followers can actively seek them out.

As established, posts may also automatically appear on general feeds, where they are represented in their full form along with any captions. They may also appear on Instagram's *Explore* page, which, apart from allowing users to actively search for accounts, also showcases content of accounts a user currently does *not* follow. When it comes to posts, then, the only choice creators are afforded in terms of sharing their content with others is whether or not their account *in general* is public or private. As we have already seen, Instagram accounts are public by default. In that sense, the Instagram platform clearly steers users toward sharing content with everyone.

Highlighting stories

The process of sharing and making available reels and stories is a more active endeavor on the creator's part. To begin with the latter: the final stories production screen allows users to share the end result in several ways, the most obvious one being as an actual story slide. When a creator does so, a link to the slide may appear to his or her followers at the top of their general feed (see Figure IV). Followers can also access stories by visiting profile pages, where the presence of one or several active story slides is indicated by similar colorful circles around those users' profile pictures, prominently placed at the top-left of the screen (see Figure IV). As such, the interface encourages followers either visiting specific profile pages or simply browsing their general feed to watch those active story slides and make use of the possibilities for correspondence afforded by the Instagram application that I will come back to in a moment.

While making story slides available to others happens rather automatically, *keeping*

them available to others is a conscious decision on the part of the creator. As mentioned previously, story slides disappear after 24 hours. This is true for story slides, *regardless* of where they appear. In this sense, at least to followers, stories are less permanent than posts (and reels) – of course, posts (and reels) can also be deleted and as such become inaccessible to other users, but with stories, this fleetingness and subsequent inaccessibility is automatic and inevitable. That said, this inaccessibility of story slides is not necessarily permanent – although it can be, depending on their creators’ will.

To elaborate, stories are not erased completely after they disappear. Instagram automatically saves users’ stories to private archives that story creators can access via their profile pages. Instagram actively encourages users to do so through a prompt reading “Story Highlights: Keep your favorite stories on your profile” and a (+)-button displayed underneath it, both placed prominently at the middle of the profile page interface, above the square thumbnails that represent posts (see Figure IV). Via the (+)-button, users are taken to a screen where they can select previously created stories, which they can ‘pin’ to their profile pages, complete with a title and a photograph that acts as a thumbnail. When a story slide is highlighted in this manner, they remain accessible to others *indefinitely*. Again, we see the interface affording more or less permanent additions to the pre-individual fund.

Creators have one other option, and that is sharing story slides via Instagram’s DM-system, which I will get to in a moment. This option is made available on the final stories production screen discussed in the previous chapter. When stories are *only* shared in this way, they do not appear anywhere else and disappear immediately after they have been sent. They are also *not* saved to the creator’s private archive either. The option to share a story slide as a DM appears only after the option to share the story publicly – or with one’s followers, depending on the user’s privacy setting – so while it *is* possible to share story slides *only* as a DM’s, the interface does steer the user toward sharing them publicly.

Additional and alternative options for reels

In terms of publishing reels, creators can press the “share”-button at the bottom of the final reels production screen to upload their reels directly to their profile page. Once shared in this way, reels also become immediately and indefinitely available to anybody with access to the creator’s profile page. The creators’ reels may also appear on their followers’ general feeds, which then appear in a smaller format amongst posts. For those users that do not follow the reels’ creators, as long as those creators have a public account, the reels may become featured on the dedicated reels page and on Instagram’s general Explore page in their original full-screen format (Nguyen 2020).

The ‘share screen’ also provides users with the option to share reels as part of story slides – as described in the previous chapter – or as DM’s. Users are made explicitly aware of

the first option through a “Stories” text prompt at the top-right of the reels share screen, which takes them to a separate screen that gives them the option to share the reel as a DM as well (see Figure II). Note how the interface does not label this screen as one that allows for sharing the reel as a DM. In that sense, while the interface affords both the public sharing and the more direct sharing of reels with others, it privileges the more public type of sharing.

Noticeably, in contrast to the possibility to turn posts into stories or to send them as DM’s to others as an *additional* option that only becomes available once a post has already been published, the possibility to turn reels into stories or DM’s is an *additional* as well as an *alternative* option. That is, when shared only as a DM *or* a story, reels do not appear under the reels tab on the user’s profile page. When they are *only* shared as DM’s, which the interface does *not* encourage, reels simply disappear afterwards, just like story slides shared *only* as DM’s do. When a reel is shared *only* as a story, it acts just like any other story; it disappears after 24 hours, but is added to the story archive, where its creator, encouraged by the interface, can access it at later point in time to add it as a story highlight on his or her profile page. Again, we see Instagram steering creators into sharing their content as publicly and indefinitely as possible.

At times, Instagram will even dedicate a section of the *general* feed to the presentation of reels uploaded by ‘unfollowed’ accounts in the form of ‘suggested content’, which I will come back to in the fourth chapter of this analysis. In any case, once published, these reels – and the same goes for *highlighted* stories and posts – become a more or less permanent part of Instagram’s pre-individual fund, which both creators and followers can access in order to initiate correspondence with other Instagram users.

❖ **Initiating and sustaining correspondence** ❖

Once creators have made the choice to share content, there are two forms of sustained correspondence between users that may ensue: via Instagram’s DM-system or via comments. I shall begin with the former. Instagram’s DM-system facilitates direct text-based communication between individual users and allows them to share mnemotechnical content found elsewhere on Instagram directly with one another in a private online environment or ‘chat’ (see Figure V). Users can send DM’s to individual users, or create ‘group chats’ with up to 50 users. DM’s can be sent to *any* account, even if they are privatized and users are not currently following them.⁶⁷

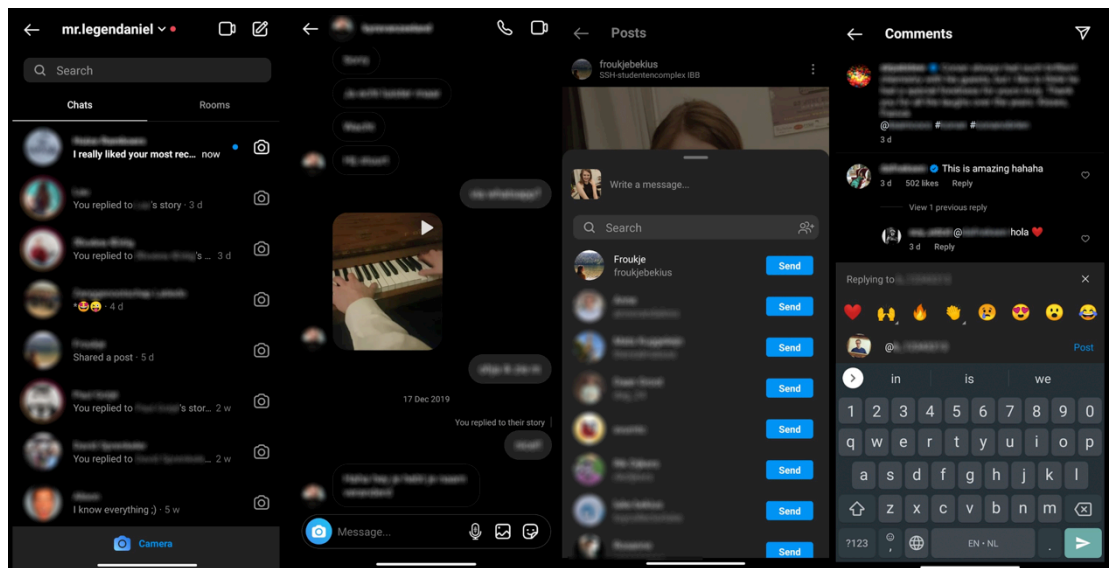
⁶⁷ All that is required is the actual account name of the user one wishes to send a message to, so that this user can either be found via Instagram’s Explore page, or via one of the numerous “search” fields displayed throughout the application.

Ubiquitous DM'ing via the general feed

As I already explained when discussing how creators are encouraged to incorporate posts and reels into their story slides, the DM-buttons appear all throughout the Instagram interface, thus enticing users to make use of the functions that become available when pressed. To take publicly available posts encountered on the general feed as an example, when followers press the accompanying DM-button, they are met with a pop-up screen (see Figure V) that, besides the option to use it as the basis for a new story slide – when it concerns a post shared by a public account – also presents them with two other options.⁶⁸

Figure V.

The DM-box, a DM-thread, forwarding a post as a DM and commenting.



The most prominently featured option is to forward the post as a DM to whomever the user sees fit. The larger part of the pop-up screen is filled with suggestions for accounts to send the post to, accompanied by a text prompt reading “Send”, which of course makes it abundantly clear to users that forwarding the post is indeed an option. The other option is to reply to the post in the form of a DM sent to the post’s creator. Followers are made aware of this option via a text prompt that reads “Write a message...”. This prompt always appears right at the very top of the pop-up screen, thus stressing the existence and encouraging the use of this second option despite the relatively little space it occupies on the interface.

Now, we already saw how the production processes for reels and stories allows

⁶⁸ When it concerns content that is not uploaded by public accounts, sharing posts, reels and stories more or less occurs in the same manner, but the mnemotechnical pieces of content do not immediately become visible to those not currently following the private account. In order to view the shared content, those on the receiving end will first have to send a follow request to the original authors of the mnemotechnical content. This is a relatively easy thing to do, since the name of the original author *is* displayed with the shared content, even if that content itself is rendered invisible.

creators to share their own content in the form of DM's, but the interface of the general feed encourages users to do this with their own posts as well. As soon as creators publish a new post, they are taken back to their general feed at once. There, that new post immediately appears at the top of the page. Just like with any other posts, this new post is accompanied by a DM-button, allowing creators to immediately forward their new post via the DM-system to whomever they see fit.

Thus, by virtue of the DM-buttons' ubiquitous appearance and the way the DM-popup screen makes users explicitly aware of the fact that they can both forward mnemotechnical content and reply to that content in the form of DM's, Instagram encourages users to continuously initiate correspondence with others, both *with* and *about* that content.⁶⁹ This is also true for any of Instagram's other feeds, as well as for content both followers and creators encounter on profile pages, since, as said, the DM-buttons appear with *every* piece of mnemotechnical content on Instagram.

Drawing users into conversation

Now, initiating conversations is one thing; sustaining them is quite another. Whenever a follower or creator shares content in the form of a DM, the user receiving that DM is notified in a somewhat pervasive way. By default, the user's smartphone receives a push-notification, drawing the user back the Instagram application and right toward the newly received message. If the user receiving a DM is already using the Instagram application, the DM-symbol on the homepage screen is accompanied by a number representing the amount of new messages received (see Figure IV). If that user just so happens to not be on the Instagram homepage, a red dot is also added to the house-shaped button at the bottom-left of the (almost) ever-present menu bar, which, as said, leads back to the homepage.

On that note, the same occurs when users are @mentioned or tagged in any type of mnemotechnical content or in the comment sections, or even when someone comments *on* their content – I will come back to this in a moment. In this case, a red dot is added to the heart symbol of the Activities feed (see Figure IV), making users aware of the fact that someone has interacted with them. Thus, whenever any user attempts to initiate or continue correspondence with another user, the Instagram interface draws that user to relevant message thread or piece of mnemotechnical content. As such, the interface – and, given the push-notifications, the smartphone application as a whole – actively affords a *sustained* form of correspondence between sender and receiver.

Re-interpretations of re-interpretations

To come back to DM's, it is at this point, when, spurred on by the social media application's

⁶⁹ Of course, they could also immediately incorporate their new post into a new story slide using this button, as elaborated upon in chapter two of this analysis.

interface, users start and continue to converse, that processes of psychic individuation *after* the production of mnemotechnical content start to commence. Looking at DM-based correspondence through a Stieglerian lens, we might say that, in sharing posts, reels or stories, users are effectively sharing *orthothetic* mnemotechnical objects. As such, what occurs is a conversation between users both *with* that orthothetic mnemotechnical object and *about* it, in which all participants have to explicitly put themselves in relation to content they may have already encountered previously.

Thus, we find again that Instagram affords the active re-interpretation of orthothetic mnemotechnical artefacts, only here, by virtue of its DM-system, this is a process that occurs entirely through correspondence with other users.⁷⁰ Here, then we truly encounter the constitution of the self “via the act of producing commentary on the self” in relation the other and the self that Stiegler maintains is endemic of our contemporary epoch of digitally networked mnemotechnic (Fuggle 2013, 205–206).

Notably, a conversation held via Instagram’s DM-system becomes itself largely orthothetic: individual text messages sent cannot be deleted and many pieces of (audio-)visual content remain part of the DM-thread as well. As such, every time a user sends a DM to one or multiple other users that they have previously engaged with using Instagram’s DM-system, they are potentially thrust in a process of re-interpretation of not just previously shared memories, but also of their previous conversations *about* those memories as well.

True to the logic of hybrid media, then, in Instagram’s DM-system we may recognize an orthothetic mnemotechnical artefact that, as a secondary hybrid media form, incorporates other orthothetic mnemotechnical artefacts in the form of posts, stories and reels. Of course, as primary hybrid media forms, these posts, stories and reels also incorporate orthothetic mnemotechnical artefacts – the photographs and videos discussed in the previous chapter – as well as commentary on those artefacts, which, as said, also entails commentary on the self. It is in this structure of continuous re-interpretation of mnemotechnical content through correspondence with others that we may recognize Instagram’s true potential for engendering processes of psychic individuation, as it fosters situations in which users endlessly have to position themselves, both in relation to their own pasts, as well as in relation to others.

Voluntary semi-orthotheticism

At this point, I should stress that, while *most* of the DM-threads are orthothetic, some mnemotechnical objects do actually disappear after a while. Un-highlighted stories disappear

⁷⁰ One might say that when creators directly share a newly created post, reel or story, what occurs is not so much the re-interpretation of a piece of hybrid mnemotechnical content that has been previously encountered – since it has *just* been made – but rather the re-interpretation of the commentary the creator has provided while producing the post, reel or story; a process that, as established in the previous chapter, already often includes a re-interpretation of one or multiple orthothetic mnemotechnical objects. As such, the same re-interpretation occurs as with content created by others shared via DM’s, only the details of *what* is re-interpreted differs.

after 24 hours, just like anywhere else on the Instagram platform when sending a DM in reply to a story, for instance, the story slide is simply replaced by a text message that states that “You replied to their story”. Meanwhile, as mentioned, reels shared *only* as DM’s do not appear anywhere else; in the DM-thread, they disappear immediately after being viewed.

Thus we find that, in some cases, pieces of mnemotechnical content on the Instagram application can perhaps better be classified as *semi-orthothetic*; they do have a definite form, but that form is fleeting. In this, we might recognize a potential obstacle for the process of psychic individuation, as the situation in which individuals can re-encounter unaltered mnemotechnical objects becomes somewhat diminished. Ultimately, though, it is up to users themselves – particularly creators, since they decide whether or not to highlight a story slide or whether or not to share a reel *only* as a DM – to what extent their DM-threads become semi-orthothetic, while, as we have seen, the Instagram interface does encourage users to make their content available as definitively as possible.

Sustained correspondence through commenting

As said, there is a second type of user correspondence afforded by the Instagram interface, which is *commenting* on both posts and reels. Whereas correspondence via DM’s is a relatively private endeavor in the sense that only users that are actively sent a message, either as individuals or as part of a DM-group, can participate, this second type of correspondence is much more of a public occurrence. Like the option to share content as part of DM’s, the option to comment *on* content is continuously made visible on the Instagram interface; users wishing to comment can press an icon resembling a text balloon displayed right underneath *every* post (see Figure IV) and superimposed onto *every* reel.

I shall again take posts as an example. In the case of posts, pressing the text balloon button opens up a separate screen showing all comments already left behind by other users, as well as an empty text bar at the bottom of the screen, where users can type a text-based response to the mnemotechnical content at hand (see Figure V). Since the pop-up screen is explicitly titled “Comments”, the interface encourages users to directly comment on what they are seeing in the post or reel at hand. Thus, again we find the Instagram interface affording active engagement with mnemotechnical content in the form of commentary; it is quite literally a positioning of the self in relation to the other in the form of content produced by that other.

As mentioned, like with DM’s, creators receive a notification when another user comments on their posts or reels. When they do, not only are they drawn back to their post or reel; they are in fact encouraged to respond directly to that comment via a “reply”-prompt displayed underneath the newly received comment (see Figure V). Thus, here too, the Instagram interface affords a sustained type of correspondence in which all parties involved

might together give shape to their own identities by relating to one another and to the exteriorized memories that are discussed.

Public forums for discussion

Given the public visibility of comments, however, this correspondence reaches somewhat further. Regardless of whether a user has a private or public account, comments left behind on a particular piece of mnemotechnical content by that user becomes visible to everyone who has access to that content. The same is true for any reply to that comment. Furthermore, replying is not just available to the creator of the piece of content that has been commented on, but in fact to *all* users. Indeed, without exception, the aforementioned “reply”-prompt appears underneath *every* comment (see Figure V).

As such, the Instagram interface encourages all users to respond to *any* comment they might have something to say about. . This means that *any* post or reel can potentially become what I would call a *forum* for discussion. After all, since anybody with access to the post or reel can also see all comments and, encouraged by the interface’s sensory and cognitive affordances, reply to any of them, everybody can *and* is steered into contributing to the discussion whenever they want.

Consider for a moment that, whenever a user replies to a comment, the user that originally made it receives a notification that draws him or her back to that comment, where the interface’s sensory and cognitive affordances likewise encourage that user to reply in turn. What we find in Instagram's comment feature, then, is a system that facilitates potentially endless processes of psychic individuation by continuously drawing users back to previously encountered orthothetic mnemotechnical content, which they are made to re-interpret in relation to whatever reply they have received, as well as in relation to a potentially ever-increasing amount of other users.

Now, comments become a permanent part of the post or reel that inspired them.⁷¹ As such, we might even say that, through Instagram’s comment feature, users may be thrust in a process of relating to their *own* previously formulated interpretations (and re-interpretations) as well. In that sense, Instagram also affords the production of more or less implicit commentary on the past self *in relation to* an increasingly larger group of other users as well.

Furthermore, in Instagram’s comment feature, not only might we recognize a potent form of psychic individuation, but also a form of *collective* individuation. This becomes especially clear when we take into account that, since comments are text-based, users can @mention other users in their comments as they see fit. Through these acts of @mentioning,

⁷¹ That is, unless their authors intentionally choose to remove them of their own volition. However, nowhere in the Instagram application are users *ever* prompted to remove any content.

any individual user might potentially endlessly expand the group of users – or, indeed, the collective of users – that is involved in a particular discussion and that every participant of that conversation will have to relate to.

Correspondence begets correspondence

Now, in regard to the ‘endlessness’ of expansion of the collective, there is one clear limitation enforced by Instagram’s functional affordances. This is the fact that users can *only* access posts or reels from private accounts if the owners of those private accounts have accepted them as followers. In that sense, creators have more agency in deciding who becomes part of the collective than other users. That said, the Instagram application does make it easy for users to send follow requests to such private accounts: since account names are visible, even if the content a user has been @mentioned in is not – and the same is true for content shared via DM’s – the receiver *always* has the opportunity to ask for access to that content by sending a follow request on the private user’s profile page.

It is through these always-visible direct links to profile pages that, even when correspondence takes on a more fleeting form, it may nevertheless lead to a more sustained form of correspondence either way. Such is the case with the interactive poll-stickers used in story slides. Even though responses to these polls disappear in the stories archive along with the story itself, when going through the responses, creators may press the responder’s account names, send them a DM in reply and, if they have not done so yet, follow them.

Of course, this dynamic is present *anywhere* on the Instagram platform for *any* user. That is, when users encounter comments made by a hitherto unknown user, they are free to press the account name and follow that user – or, if the account is public, send that user a follow request – or to even send that user a DM right away. In that sense, the Instagram platform sustains an environment in which correspondence between users begets correspondence between (potentially completely different) users.

At this point, I should note that there is one other option made prominently available to users besides DM’ing and commenting and that is the ‘liking’ of mnemotechnical content, which occurs with the press of an ever-present heart-shaped button that appears over or in direct vicinity of any single post or reel. When users ‘like’ content, their name is added to a list of users that have ‘liked’ that particular content, which *all* other users with access to the post or reel at hand can access – for posts, a text prompt stating “Liked by [*account name*] and others” (see Figure IV) can be pressed in order to see the entire list, while with reels, users can simply press the heart-shaped button. Since here, too, the account names displayed direct users to corresponding profile pages, even the act of ‘liking’, which is often understood as a more or less thoughtless type of engagement with mnemotechnical that, as Sophie Fuggle

fears, might supersede reflective, individuating processes of self-writing (2013, 205–206), *may* in some way lead to a more sustained, reflective form of correspondence.

❖ **The essential pre-individual fund** ❖

In the previous paragraph, I purposefully stressed the word ‘may’, because the fact that the Instagram interface affords these various types of sustained correspondence between users on the level of individual posts, reels and stories, does not necessarily mean that it also affords such correspondence when it comes to its overarching configuration. I will come back to this in the next chapter of this analysis. In any case, that the Instagram application at least at some level affords repeated active re-interpretations of previously encountered orthothetic mnemotechnical objects in relation to and with others, thus showing remarkable *potential* for facilitating the process of psychic (and collective) individuation through the production of (self-)commentary, should be abundantly clear.

Correspondence and the pre-individual fund

What should also be abundantly clear is that the pre-individual fund, consisting of content created by users, is absolutely *essential* when it comes to initiating correspondence and shaping (re-)interpretations of orthothetic mnemotechnical content in relation to the self and others. We already saw the essential role of the pre-individual fund plays when we considered the production of reels, where users could utilize audio files made by other users. We also saw it when we considered how users could incorporate other users’ posts and reels in the production of story slides. Here we find that *any* instance of correspondence with and about mnemotechnical content that is *not* initiated by the creator of said content relies *completely* on the pre-individual fund, as one can really only make use of the ‘like’, comment and DM-buttons accompanying posts, reels and stories if one actually encounters them first.

Arguably, most sustained correspondence between users will *not* be initiated with the use of self-made content. Even if users were to produce more content than the total amount of content those they follow produce, as I come back to in the next chapter, the Instagram interface will still fill its general feed with content made by others in the form of suggested posts and reels. In other words, while the production of content and the process of psychic individuation it engenders *occasionally* rely on the pre-individual fund, the consumption of content in the form of sustained correspondence and the processes of psychic and, to some extent, collective individuation it engenders relies *mainly* on the pre-individual fund.

Consumption > production

Relevant to our appraisal of Instagram’s potential to facilitate an associated hypomnesic

milieu, then, is the question which of these two activities – the production versus the consumption of mnemotechnical content – both of which engender the processes of psychic individuation in different ways, takes precedence over the other. To answer this, consider the fact that the Instagram interface always opens on the general feed. Facebook Inc. *could* have opted for one of Instagram’s production environments to appear when users start up the application, but this is not the case. As such, users will inevitably always begin their Instagram session with the *consumption* of content.

In contrast, users are only encouraged to *produce* new content, either via the aforementioned [+] -button at the top-right of the Instagram homepage or via a similar button displayed at the top-right of the user’s own profile page (see Figure IV). Evidently, both of these symbols are considerably small in comparison to the part of the screen dedicated to showcasing content. Of course, there remains the option to incorporate posts and reels as part of the production of story slides, but not only does this inherently *always* involve the consumption of content – often the content of others – it is also not the most clearly encouraged option: the options to forward these posts and reels as DM’s to other users take up most of the space on the screen (see Figure V).

Thus, while Instagram shows remarkable potential in facilitating processes of psychic individuation in the *production* of mnemotechnical content, it ultimately prioritizes the *consumption* of mnemotechnical content made by others. To be abundantly clear, I do not mean to say that Instagram does not encourage the production of mnemotechnical content. In fact, it is an essential part of the social media platform, precisely because consumption heavily relies on the presence of user-created content. Rather, my point is that, for *individual use*, the focus of the Instagram application is firmly on the consumption, rather than on the production of mnemotechnical content.

The question of accessibility

This focus on consumption means that Instagram’s pre-individual fund is in fact much more essential than I may have previously let on, as it is in large part on the basis of encounters with specific pieces of mnemotechnical content that are part of this pre-individual fund that the processes of psychic individuation facilitated by the social media platform occur. In essence, then, with which content users engage in processes of individuation is largely a question of *access* to the pre-individual fund.

Most access to this pre-individual fund occurs via Instagram’s content feeds. Of course, users might receive content in the form of a DM or actively search for user accounts using Instagram’s search function, but in the latter case, this will generally be preceded by the consumption of mnemotechnical content via one of Instagram’s feeds nonetheless. After all, unless one already knows a particular user *outside* of Instagram, one will have to encounter

content created by that user in order to discover that user's account name.

In other words, Instagram's main focus is on the consumption of content, and the consumption of content – which in the ways described above *may* facilitate processes of psychic and collective individuation – occurs mainly through Instagram's feeds. As such, in order to properly understand the extent to which Instagram might facilitate either an associated or dissociated hypomnesic milieu and thus lives up to its potential, we must consider *how* individual users may gain access to this pre-individual fund through the use of Instagram's feeds. That is, we must consider *how* content appears on these feeds. I will do so in the final chapter of this analysis, where I consider Instagram as a *mnemotechnology* that literally orders mnemotechnical content according to its own logic and delve into some of the economic forces that are behind this logic.

IV. Imposing order on the pre-individual fund

In this final chapter, I will explore how mnemotechnical content is *ordered* on Instagram's feeds – or, to put it in different terms, how access to the pre-individual fund is structured – and consider *why* content is ordered in this way from Facebook Inc.'s perspective. My main focus will again be on the general feed, since it doubles as the Instagram homepage and in that capacity plays the most prominent role in the use of the social media application. That said, much of the logic behind the ordering of mnemotechnical content on the general feed also pertains to Instagram's Explore page, as well as the page that showcases reels – there are a few differences that I will come back to, but unless I explicitly indicate otherwise, the ordering of content on these other feeds occurs in the same way.

❖ Understanding Instagram's feeds ❖

As established, most of the general feed is filled with posts made by other users. Therefore, in what follows, I will primarily focus on how posts are selected and ordered for individual users. Story slides and reels also appear on the general feed, either when followed accounts publish new content, or, in the case of reels only, when Instagram resorts to 'suggesting' new content. I will briefly reflect on the ordering of these types of mnemotechnical content throughout the following exploration of Instagram's general feed, but given their central role within the general feed, posts shall have my main focus.

Perpetually refreshing

As said, users can scroll down the general feed in order to access all mnemotechnical content

displayed. They can do so by swiping upward. Users can navigate back to the top of their general feed with a downwards-swiping gesture. Once users are back at the top, they can swipe downward *again*. This ‘refreshes’ the page, causing it to show additional new content – that is, relatively new content previously unseen by the user – added to the top of the feed.

Besides this conscious effort, refreshing continuously occurs *automatically* every time users visit the homepage after being away from it, for instance because they were in the process of creating a piece of mnemotechnical content elsewhere in the Instagram application, or even because they simply put away their smartphone for a while. Furthermore, the feed will often refresh itself *while* users are scrolling, which then takes the user right back to the top, where they may encounter the newly added content. Just like with the *production* of mnemotechnical content and the processes of psychic individuation it fosters, we recognize a clear tendency of the Instagram application to focus on the present or (very) recent past.

Suggestions

This focus on the present or (very) recent past can be recognized in more aspects of Instagram’s general feed. After a while, older content disappears from the general feed altogether; once users have scrolled far enough to see all content newly displayed on their feed from up to three days in the past, Instagram will tell users “You’re All Caught Up”, after which it will showcase a list of “Suggested Posts” instead of the posts that originally used to follow the last post displayed before this message on the general feed (see Figure VI later in this chapter). This list of suggested posts goes on indefinitely.

The more often users re-visit their general feed, the faster they encounter this list of suggested posts. If users have already viewed a post created by another user they follow, after a while, when the feed is refreshed either automatically or manually, it simply disappears from the general feed altogether. In the case of a carousel post that has only been partially viewed, the next time users visit their general feed, it automatically shows the first unseen pane; once all panes have been viewed, the carousel post disappears as well.⁷² When no new content made by followed users is available, the section of the general feed that showcases content from followed accounts simply becomes shorter.

As such, the general feed focuses, not just on the (very) recent past and present, but also on the continuous consumption of *previously unseen* content, which can either be content actually published by accounts followed by users, or different content altogether. Arguably,

⁷² Along with the message that they are caught up on their feed, users are given the option to “View Older Posts”, which takes them to a separate feed that does show *all* previously encountered posts. Here, we may actually recognize a somewhat *semi-orthothetic* character; this feed also continuously changes due to the continuous addition of content, but the content does remain available. However, like with the Gallery, there is no option to search by date, so even while this feed does afford to revisiting of older content, users are discouraged from actually delving too deep into the past. The interface does not stress this option to visit older posts either: the text prompt leading to this secondary feed is relatively small, and the interface ‘snaps’ right to the top of the first suggested post, thus enticing users to keep on scrolling through their general feed instead of revisiting previously encountered content.

the Instagram platform is inclined to show the latter type of content, given the fact that the more users visit their general feed, the shorter the list of content made by followed accounts actually becomes. In effect, then, at least *every* three days, but more often than that with frequent use of the Instagram application, users are met with *completely* different general feed that prioritizes the presentation of content made by those yet unknown to the user. We might even say that, just like its human users, the Instagram feed – the pre-individual fund *and* the access to it – is in a perpetual state of becoming.⁷³

Involuntary non-orthotheticism

In the previous chapter, I established how some mnemotechnical content on the Instagram platform might best be characterized as semi-orthothetic, because users – especially creators – can decide whether it becomes a more or less permanent part of Instagram’s pre-individual fund. To reiterate: creators can for instance choose whether to share a reel *only* as a DM, thereby dooming it to a fleeting existence, or decide whether a story slide becomes permanently accessible to others or not. Essentially, creators have certain degree of agency over how long their mnemotechnical content actually exists on the Instagram platform.

Such is *not* the case when we consider the perpetual becoming of the Instagram general feed, which constantly refreshes and shows previously unseen content *regardless* of whether users want it to or not; its continuous changing and its removal of mnemotechnical content is inevitable. To adapt Stieglerian vernacular once again, this means that, whereas much mnemotechnical content on Instagram can *in itself* be characterized as orthothetic or at least semi-orthothetic, ultimately, Instagram’s general feed is inherently non-orthothetic.

I will reflect on the ramifications of this non-orthothetic character of the general feed later in this chapter. Suffice it to say that this non-orthothetic character is imposed by the Instagram application; there is no way whatsoever to stop it from changing. Given the general feed’s bearing on the processes of psychic individuation flowing from both the production and consumption of mnemotechnical content, it would be prudent to explore *how* this process of perpetual change manifests itself.

Algorithmic relevance

To do so properly, we must consider the *mnemotechnological* aspects of the Instagram platform and delve into the algorithms that are responsible for selecting and ordering content on the social media platform’s general feed. What follows here is a brief exploration of Instagram’s selection and sorting algorithms, based on information available on various tech

⁷³ In this, we might clearly recognize a process of *transductive* individuation: the constitution of Instagram’s pre-individual fund can be understood as a form of collective individuation spurred on by processes of psychic individuation in the production of mnemotechnical content, which in turn informs subsequent processes of psychic individuation.

blogs (Lua 2021; Warren 2021; Rodriguez 2021), as well as on about.instagram.com. This is Instagram's own official auxiliary website (Mosseri 2021), which provides some basic insights into the platform's selection and sorting algorithms.

While users can decide which accounts to follow and creators can decide which of their content becomes potentially available to other users – by privatizing their account and selecting which users may in fact follow them, and by sharing content in certain ways as established in the previous chapter – Instagram's algorithms decide which content actually does end up on each user's individual general feed. Furthermore, if content does end up there, the algorithms decide in which order. As such, it might occur that content uploaded by an account a user follows does not end up on that user's general feed at all (Lua 2021).

As it is generally understood, the ordering of content on Instagram's general feed is an algorithmic process that operates according to the principle of *relevance*. The algorithms on which Instagram runs calculate what is relevant to individual users on the basis of both that user's previous interactions with user-made content and user accounts, as well as other users' engagement with individual pieces of content.

Although the *precise* way in which Instagram's algorithms determine relevance remains a company secret closely guarded by Facebook Inc., it is commonly known that posts and stories from users that *mutually* follow, tag and message one another, or leave comments on each other's posts and reels are prioritized to appear at the top of those users' general feeds. Those users will also be more likely to see each other's account names as suggestions when sharing posts and stories as DM's as discussed previously (Mosseri 2021). Furthermore, 'liking' a user's content in general, direct messaging that user or searching for that user via Instagram's Explore screen will also increase the position of that user's content on the feed. It also matters which other users have recently published a post or story as well: the more accounts an Instagram user follows, the more content Instagram has to select from and the more content might fall by the wayside (Warren 2021; Mosseri 2021; Cooper 2021).

Additionally, Instagram's selection and ordering algorithms also take into account *general* user engagement with posts in the form of comments, shares via DM's and story slides, as well as in the form of 'likes' and even the amount of time users in general have spent viewing a particular post or story. The personal relation between the user and the account he or she follows, however, is understood to carry more weight when it comes to the first part of the general feed (Warren 2021; Mosseri 2021).

Finally, *when* a post was uploaded also matters for its position on users' general feeds. Taking all previously mentioned factors into account – the more a piece of mnemotechnical content 'ticks' off these various variables, the higher the chance that Instagram's algorithms will consider it 'relevant' to the user – Instagram will try to push the most recent posts to the top of the general feed. Thus, posts will roughly appear in reverse

chronological order as much as possible. The same goes for story slides, the most relevant and most recent of which will be displayed at the top-left of the general feed (Warren 2021; Rodriguez 2021). Incidentally, here we might once again recognize Instagram's orientation toward the present and the recent past.

Relevant suggestions

As I mentioned earlier, after a while, the general feed will start displaying "Suggested Posts". To fill this list of suggested posts, Instagram's algorithms select recently uploaded content from accounts that it deems relevant to that user, which it again bases on previous user interaction (Mosseri 2021). For instance, Instagram's selection and ordering algorithms take into account which accounts *not* followed by a particular user *are* currently being followed by other accounts that particular user *is* following (Warren 2021).

Further relevance is again distilled from *general* user engagement with a piece of mnemotechnical content; 'likes', comments, shared via DM's and stories and amount of time spent viewing it all play a role here as well (Warren 2021; Mosseri 2021). In contrast to the selection and ordering of content uploaded to *followed* accounts, with the selection and ordering of *suggested* content, it is this *general* previous engagement that holds the most weight in Instagram's algorithmic decision-making process (Mosseri 2021).

This same relevance-based logic is applied to Instagram's other feeds, which, in contrast to the general feed, *exclusively* display mnemotechnical content from accounts that the user is currently *not* following (Warren 2021). Again, according to Instagram's own auxiliary website, the amount of general user interaction with a post – or reels, in the case of the reel showcase page – weighs more than a user's personal interaction and interests algorithmically distilled from that interaction (Mosseri 2021).

❖ The benefits and drawbacks of Instagram's feeds ❖

In previous chapters, we saw how Instagram tends to order photographs and videos in reverse chronological order, for instance every time it presents users with the Gallery. Exploring Instagram's selection and ordering algorithms, we now find that the ordering of mnemotechnical content on the Instagram platform actually goes quite a bit further than simply displaying content according to one simple temporal characteristic. It is the underlying logic of this ordering of exteriorized memories, manifested in and through Instagram's algorithms that we must question further. Only then can we properly appraise to what extent the social media platform – that is, in its current configuration – truly seems to live up to its potential to facilitate an associated hypomnesic milieu.

True to the pharmacological nature that Stiegler ascribes to all technics (Hansen 2015, 50), the configuration of Instagram's feeds can be understood as beneficial to some aspects of the processes of individuation I explored in the previous two chapters, while at the same time, the very structure from which these benefits emerge also effectuates certain drawbacks in regard to the facilitation of those processes – in that sense, Instagram seems to be rather ambivalent when it comes to facilitating an associated hypomnesic milieu. To fully understand both these benefits and drawbacks, we must first briefly reconsider how mnemotechnical content comes to be on the Instagram platform in the first place – a process which, as we shall see, has both its own benefits as well as drawbacks.

The problem of overabundance

As said, Instagram provides users with the ability to exteriorize memories in (audio-)visual form and share them in various ways, which, as shown, in itself engenders processes of psychic individuation. Given the fact that *every* user capable of consuming content on the Instagram platform is likewise capable of producing and sharing it, we might say that, through Instagram – and social media platforms like it – users have gained an increased capacity to utilize their own and other users' exteriorized memories in processes of psychic individuation on hitherto unprecedented levels. Of course, this is precisely the benefit of contemporary mnemotechnics Stiegler himself alluded to (Stiegler and Hansen 2010, 83).

Yet, adhering to the pharmacological nature Stiegler deems inherent to all technics (Hansen 2015, 50), this increased capacity to produce and share inevitably leads to what we might think of as an overabundance of content. This is especially so if we consider that, through its default settings, the Instagram application encourages users to share most of their content publicly. As the pre-individual fund is endlessly added to, it becomes increasingly difficult to navigate through it. It is here that Instagram's feeds play a crucial role.

Navigating the pre-individual fund

Broadly speaking, we might distinguish two benefits emerging from the configuration of Instagram's general feed, both of which constitute an increased ability to correspond with others in meaningful ways. Consider again that Instagram determines the relevance of posts on the basis of previous interactions with accounts in the form of DM's and comments, and that accounts and their content will be deemed especially relevant if those interactions are *mutual*. Since the algorithms that order the general feed compound these variables when deciding which post is most relevant, what essentially occurs is that content from accounts users have previously had the most elaborate correspondence with in the form of DM's and comments – which is thus the content users will be most likely to interact with in meaningful ways *if* encountered – will always be pushed to the top of those users' general feed.

In contrast, posts from accounts whose content is generally only ‘liked’ and not, for instance, so much commented upon will be deemed less relevant and appear further down on the general feed, while content from accounts that have not been interacted with appear relatively low on the feed, *if* it appears at all. As such, the Instagram application affords *repeated* and sustained correspondence between users that have already purposefully corresponded with one another in the past.

In some cases, Instagram’s selection and ordering system might be understood as especially *empowering* to certain processes of psychic individuation. Recall that, since DM-threads are (semi-)orthothetic, users who repeatedly engage with one another through DM’s are essentially thrust in processes of re-interpretation of both previously shared memories and their conversations *about* those memories, both of which constitute active processes of psychic individuation. By considering DM’ing as relevant in determining both what content is relevant enough to appear on the general feed, as well as which users are relevant enough to be suggested in DM pop-up screens – thus exposing users to both *content* and *users* they are likely to interact with meaningfully – Instagram’s selection and ordering algorithms heavily steer toward these repeated DM-based interactions to occur, without users necessarily having to actively seek particular users out.

In any case, in *general*, the Instagram application facilitates the circumstances for sustained correspondence to occur between users that have corresponded in meaningful ways previously, more so than it does for users who have not. Thus, by virtue of the way Facebook Inc. has configured the general feed, we might say that the Instagram user has gained the capacity to navigate through the inevitably dense forest of content taken up as part of the pre-individual fund in order to arrive at precisely those pieces of mnemotechnical content that are most likely to foster meaningful correspondence with other users.

Expanding discussion forums

We might also recognize a certain benefit emerging from the general feeds’ presentation of content created by accounts users are *not* currently following. By exposing users to new content from previously unknown accounts that is likely to be relevant to them and subsequently encouraging them to enter into sustained correspondence with the owners of those accounts, the Instagram application affords continuous exposure to new perspectives in considering both one’s own and other users’ exteriorized memories.

In some cases, the benefits reach even further. Any new user followed – or, for that matter, any new *username* learned – is another user to @mention in a comment section. Let us assume that those individuals Instagram understands as relevant to the user are indeed more likely to actually be @mentioned by that user – after all, this relevance is already in part based on previous sustained and meaningful interactions. In effect, this means that the

comment section, which, as said, functions as a public forum for discussion, may become increasingly occupied with individuals likely to interact with one another in meaningful ways as well. After all, almost *every* user will at some point have stumbled upon that particular post and its corresponding comment section, either because Instagram deemed it relevant to them *based* on previous sustained, meaningful interactions with other content or users, or because they have been referred to it by another user, with whom they are likely to be in contact with based on the same previous sustained, meaningful interactions.

In simple terms, presumably, the comment section will increasingly be filled with users that find the same content relevant and are therefore more likely to interact with one another (in relation to that content) as well. As such, we might also understand Instagram's inclination to expose users to new and relevant accounts as working toward a continuous expansion of collectives consisting of individuals that might interact with one another in meaningful ways.

Thus, through the configuration of general feed, the Instagram user has not only gained the capacity to navigate through an otherwise nigh-on impenetrable pre-individual fund, but also to come into contact with new individuals or, indeed, collectives that the user, given those individuals' (alleged) relevance, is likely to engage with in meaningful ways – individuals and collectives, then, with which and against which the user can individuate.

Overshadowing benefits

As much as users might benefit from the repeated meaningful correspondence with others, as well as the aforementioned exposure to new accounts, the configuration of the Instagram feeds also has several drawbacks. Some of these drawbacks find their source in the dual focus of Instagram's general feed to both facilitate *repeated* meaningful correspondence with other users *and* expose users to previously unknown accounts. In a way, these drawbacks at once diminish the benefits this dual focus engenders.

Where the non-orthothetic character of the general feed lends itself well to exposing users to previously unknown accounts, it also means that users only have a small window of opportunity to repeatedly engage with other users on the basis of the mnemotechnical content they encounter on that feed. Almost just as soon as content appears on the general feed, it disappears, leaving users with little time to actually initiate meaningful correspondence.

This is not only true for content uploaded to accounts that the user is already following either; as soon as the user follows a new account, that account's content will likewise become subject to the fleetingness of the general feed. The benefit of exposing users to content made by previously unknown accounts thus overshadows and even diminishes the benefit of repeated correspondence between users and these newly discovered accounts.

To be clear, I am not arguing that this meaningful correspondence is altogether

impossible to achieve – on that note, I am also not arguing that all other activities that facilitate processes of individuation, such as the production of mnemotechnical content, are impossible to achieve. The point I *am* trying to make here is that, even as the Instagram interface clearly affords these activities, it also undermines them to an extent due to the way the general feed is organized. The meaningful repeated correspondence that fosters processes of psychic individuation has to be initiated as soon as mnemotechnical content is encountered, or the user likely forfeits the use of that content in meaningful correspondence with others altogether.⁷⁴ Once again, we recognize Instagram’s tendency to focus on (relating to) the present and (very) near past, which I will circle around to again later in this chapter.

For now we can say that, in the Instagram feed, we find a feature that, while capable of facilitating repeated meaningful correspondence and the processes of psychic individuation that flow from it, is ultimately more oriented toward the endless consumption of content made in the (very) near past or present. As such, from a technical perspective, it seems to undercut much of the general feed’s potential to facilitate the processes of psychic individuation that emerge from meaningful correspondence between users.

The standardization of the pre-individual fund

In addition to overshadowing the facilitation of meaningful correspondence, the configuration of Instagram’s general feed has another drawback that should be considered. To an extent, we may recognize this drawback in the way Instagram structures that part of its general feed dedicated to displaying content from *followed* accounts, but it comes most readily to the fore in the way Instagram showcases *suggested* content on the general feed. Although I will retain my focus on the general feed, the following also applies to Instagram’s other feeds.

As said, Instagram’s selecting and ordering algorithms take into account *general* previous engagement with each individual post – or reel, in the case of the dedicated reels page – before deciding whether it should appear to a specific user. While this might be beneficial to discovering those pieces of mnemotechnical content that are most likely to foster a more meaningful, engaged type of correspondence, it also means that Instagram’s feeds have an integrated tendency toward *standardization*.

To elaborate: the more users interact with specific posts – or reels – the more likely it is to appear on other users’ feeds. The more these pieces of mnemotechnical content appear on those feeds, the more likely it is that they are interacted with, leading to them appearing on even more feeds. Essentially, the way Instagram determines relevance constitutes a feedback loop of sorts in which what we might call ‘popular’ content only becomes more popular.

⁷⁴ Of course, the user can always visit the profile page corresponding to that particular piece of mnemotechnical content at a later time, but this is, again, not what the Instagram application encourages users to do. First of all, any direct link to that profile page disappears right along with the post. Second, the interface always opens up on the general feed and not, for instance, on a page where accounts can be searched for, or a page where all followed accounts are displayed.

Remember how the more a user accesses the general feed – which, since the general feed functions as the homepage of the application, basically means the more an individual uses the application in general – the more Instagram tends to prioritize the appearance of suggested content over content uploaded to followed accounts. What we find, then, is that, through repeated use of the Instagram application, users are met with a general feed that becomes increasingly similar to the general feed of other users.

The endless flow of mindless consumption

Consider that, on top of this, the Instagram application tends to prioritize the *endless* consumption of new content; after all, the general feed is inherently non-orthothetic and will perpetually provide users with new suggestions, even if all new content from followed accounts has already been viewed. Thus we find that, in its current configuration, Instagram’s general feed essentially constitutes what we might perhaps best understand as an endless temporal object – in the sense that its constitution stretches out over time indefinitely – that is increasingly homogenous.

The Instagram feed is not entirely like the temporal objects Stiegler writes about, since its unfolding is in large part dependent on users actually scrolling through it – it does not unfold entirely by itself like a film or a musical track might once it starts playing. In some cases, however, its continuous unfolding in time – that is, the continuous consumption of content accessed via the general feed – does indeed happens automatically, while in most other cases, users are at least heavily enticed to endlessly keep their consumption of mnemotechnical content going. While I cannot stress enough that the Instagram application does facilitate and encourage the previously established more elaborate and meaningful types of correspondence between users on some level, it does seem to me that many of the application’s aspects – including some of the limitations in the *production* of mnemotechnical content I mentioned earlier in this analysis – in fact constitute what might best be described as a particular ‘flow’ of endless consumption of this increasingly standardized access to the pre-individual fund.⁷⁵

Consider again that post carousels, as they appear on the general feed and elsewhere, can only exist of *up* to ten photographs and videos and that these videos cannot be longer than one minute, or that captions are truncated after 125 characters. In both cases, we might recognize a tendency, enforced by Instagram’s affordances, toward the consumption of *similarly structured* and *concise* material: posts always consist of a relatively short sequence

⁷⁵ The way I use the term ‘flow’ here is reminiscent of Raymond Williams’ use of the term as he coined it in relation to 20th century broadcast television. Put (very) succinctly, Williams used ‘flow’ to designate the purposefully structured experience, constituted by a sequence of individual pieces of content – in William’s context television shows and advertisements – meant to keep the audience engaged with the medium until the end of a broadcast (Williams 1974).

of photographs and videos, with only a small amount of text at most – even when comments are present, only a small amount of them are shown – that, importantly, together do *not* fill the entire interface.

Since posts are always shaped this way, users looking at posts on their general feed can almost always also see the top of the next post (see Figure VI) – only when users refuse to adopt the encouraged 1:1 aspect ratio might the post become too long vertically, although once users scroll down even a little, the next post becomes visible nonetheless. Thus, even as the presence of DM-buttons and comment sections encourage users to initiate correspondence, the interface also entices users to simply keep scrolling through their feed instead. Again we recognize some ambivalence or even a certain tension within the Instagram platform, which I will come back to in the concluding paragraphs of this thesis.

In the case of reels accessed on the general feed, the Explore page or on the dedicated reels page, this continuous flow of consumption can be recognized in several aspects. There is the fact that reels can only be either 15 or 30 seconds long at most, after which they repeat *endlessly*. Reels cannot be paused, so if users wish to see the next reel – which would likely be after having seen the same reel repeat a few times – they have to swipe up. When users swipe up, another reel, made by ‘unfollowed’ users if followed users have not recently produced a new reel, is selected by Instagram’s algorithms, *even* if the first one was accessed appeared as part of the general feed that showcased content from followed accounts. Thus, the interface ‘pulls’ users, as it were, into a flow of consumption *away* from the general feed. Note how this system of continued encouragement for consumption yields additional engagement with reels already selected as ‘relevant’ on the basis of previous user interaction, thus causing content from corresponding accounts to become even more often distributed to users’ general feeds, thus sustaining the feed’s insatiable need for new content.

Instagram’s tendency to facilitate a flow of continuous consumption over the more consciously initiated, sustained and meaningful correspondence between users can perhaps most clearly be seen in the way stories can be accessed through the general feed. As said, stories are represented at the top of the page in the form of user profile pictures, where they appear every time users visit their general feed. Once selected, the Instagram application will automatically play *all* story slides currently active made by the corresponding user. As such, the user has an even smaller window of opportunity to respond to the content they are consuming. What is more, once all story slides made by one user have finished playing, the application will *not* take the user back to the general feed. Instead, it will start playing all other currently active story slides belonging to other followed accounts. Only after *all* these slides have been showcased, does Instagram take the user back to the general feed.

Short-circuiting feeds

Thus we find once again that, on some level, Instagram behaves not unlike the 20th century cinema that Stiegler so heavily criticized (Fuggle 2013, 205; O’Dwyer 2015, 48; Stiegler and During 2017a, 71). Again, I will not go so far as to suggest that the Instagram general feed *only* encourages mindless consumption of mnemotechnical content – after all, the encouragement to initiate meaningful correspondence remains an integral part of every post, story and reel displayed anywhere on the platform. However, as we have seen, in the Instagram feeds we can indeed recognize something that resembles the temporal objects Stiegler wrote about (Crogan 2013, 2017; Stiegler and During 2017a, 66).

To elaborate: for a large part, an individual cannot exact any direct influence over the feeds in terms of how they are structured. In this regard, users are again consumer rather than producer, encouraged by the Instagram application to consume their feeds, rather than to produce mnemotechnical content. Simultaneously, as we have seen, the feeds exhibit the potential to ensnare their consumers’ consciousnesses to their own unfolding, which is an unfolding that is increasingly standardized.

What is more, the standardization of the general feeds means that content from some users will get more traction than that of others – these users are generally referred to as *influencers* (Geyser 2018) – thus engendering an unequal distribution of power in constituting the pre-individual fund, or at least that part of the pre-individual fund that is likely to be accessed by most users. This is an unequal distribution of power that is spurred on in part by users themselves – since users do choose to interact with a specific account – but which becomes inflated by design, since engagement with a particular user account means that more and more users will likewise be exposed to that account’s content.

In short, then, while Instagram’s functional, sensory and cognitive affordances facilitate the transductive processes of psychic and collective individuation in both the production and consumption of mnemotechnical content, in Instagram’s feeds we may recognize hybridized mnemotechnological temporal objects that, to an extent, short-circuit these processes. These feeds do so by engendering an unequal distribution of production and consumption capabilities – in the sense that, while everybody can consume, only *some* are capable of actually reaching larger portions of the audience constituted by Instagram’s user base – by standardizing what content users are exposed to and by attempting to entrain users consciousnesses to their continuous temporal unfolding. Again, we find eerie similarities to the 20th century cinema Stiegler criticized (Stiegler and During 2017a, 66).

❖ Instagram's pharmacological nature ❖

Taking together all that we have learned of the Instagram platform so far, we find that, with the Instagram social media platform as a whole, we gain an increased capacity to produce mnemotechnical content as well as share it in the form of meaningful, elaborate correspondence with others. In doing so, we gain an increased capacity to individuate ourselves both *with* and *against* our past selves, as well as *with* and *against* others – others that, by virtue of Instagram's selection and ordering algorithms, will likely be precisely those individuals with whom we might engage most meaningfully. This is where Instagram's remarkable potential to facilitate an associated hypomnesic milieu, in which symbolic practice takes the form of meaningful interactions between individuals (Stiegler and Hansen 2010, 66), lies.

Inevitable pharmacological exchange

At the same time, however, considering Instagram's mnemotechnological aspects, we lose a part of our capacity to consciously decide which others we become exposed to; this falls to the algorithms that select and order content on Instagram's feeds on our behalf. I contend that this is an inevitable side-effect of our increased capacity to produce, share and reflect on our own or other's exteriorized memories: given the sheer amount of content that results from this increased capacity, it would be humanly impossible to sift through all publicly shared content. As such, a form of algorithmic selection and ordering is inevitable.

This, we might say, is Instagram's – and, arguably, other social media platform's – inherent pharmacological nature: an increased capacity for producing, sharing, talking about and reflecting on the self with others through exteriorized memories in exchange for a decreased capacity to decide, as individual users, with whom and with what content that might be. Indeed, as scholars before me have already pointed out, in the 21st century, we have given up our grasp on the communication technologies around us in exchange for increased possibilities for human interaction (Hansen 2015, 50–51). Here, we see in a very concrete way what that might actually mean to the everyday user of digitally networked mnemotechnological platforms.

Considering further drawbacks

We have also encountered several additional drawbacks to the way the Instagram platform is configured. In its primary orientation toward facilitating an endless and relatively mindless consumption of content, Instagram seems to undermine its own potential to facilitate meaningful correspondence between users, both in the form of repeated correspondence, as well as in the form of correspondence with previously unknown users. At the same time,

Instagram's primary orientation toward more or less superficial consumption of mnemotechnical content seems to overshadow – although, I would stress again, not wholly thwart – its potential to facilitate processes of psychic individuation through the *production* of mnemotechnical content.

However, even if Instagram users *do* concern themselves with the production of mnemotechnical content, here too we may find certain drawbacks that find their source in the standardization of the general feed. If the reader recalls, in the production of mnemotechnical content, Instagram's interface tends to steer users primarily toward relating to the collective of Instagram users *as it exists in the present*, amongst other things by @mentioning and tagging other users in the mnemotechnical content they create. From our newfound understanding of Instagram's feeds, we may come to the understanding that the appearance of this collective, which comes to the individual user in the form of exposure to other users *through* access to the pre-individual fund, becomes increasingly homogenized by design. As such, we find that *who* and *what content* users can actually relate to when *producing* mnemotechnical content in general also becomes increasingly homogenized.

Even in the production of mnemotechnical content on Instagram, then, we find parallels with the standardized exposure to 20th century cinematographic content that Stiegler saw as the cause of symbolic misery in today's age (Stiegler and During 2017a, 66). Indeed, the standardization of Instagram's feeds impacts potentially *every* process of individuation that might occur on the social media platform, regardless of whether users are occupied with the consumption or the production of mnemotechnical content.

Imagining a better Instagram

One burning question remains, and that is whether these additional drawbacks are as necessary as our relinquishing our individual control over what content does and does not appear on our general feeds. I would strongly argue they are not. We might, for instance, quite easily imagine a general feed *without* suggested content, where posts – and the occasional reels – do not disappear almost as soon as they have been viewed once; suggested content is already displayed on Instagram's Explore page, so this would not obstruct the benefit of being exposed to new perspectives. We might even imagine an added feature that allows users to search for older posts and reels by date, so as to allow users to more easily navigate the general feed that, without posts and reels disappearing, becomes endlessly longer. The same function might be included in the Gallery, thus allowing users to engage more freely with their own deeper pasts as well.

We might also imagine an Instagram where a story slide does *not* automatically progress to the next slide after only five or fifteen seconds have passed, so that users are less easily drawn into a flow of endless, considerably mindless consumption. Furthermore, we

might image a possibility where users can make longer reels and incorporate longer videos into stories and posts altogether, which would likewise break this flow and allow users a greater agency in regard to how they want to exteriorize their memories.

Also consider the possibility for Instagram's algorithms to take into account interactions followed accounts have with 'unfollowed' accounts *over* general user interaction with accounts when providing suggestions on the platform's numerous feeds. Such a thing would go some way in working against the standardization tendency of Instagram's feed. It would also distribute the ability to reach larger masses more equally among Instagram's user base, as it would no longer artificially inflate the relevance of user accounts.

In terms of Instagram's focus on consumption over production, we might imagine a homepage where users are more clearly enticed to *produce* content, thereby allowing more space for the unfolding of processes of psychic individuation that occur during the production of content as explored in the second chapter of this analysis. We might even imagine a feature that allows users to respond to mnemotechnical content *in* the form of posts, reels and stories directly, which would mean the act of producing mnemotechnical content and the act of consuming would become more intertwined than ever. That would thrust the user into a process of relating the past and present self to one another, the past and present other to one another, *and* both the self and the other to one another. We already saw this occurring to some extent in both the production of mnemotechnical content and its utilization in correspondence with others, but in this case, this intertwining of past, present, the self and the other and the processes of psychic individuation emerging from that intertwining would potentially reach unprecedented heights.

Unnecessary sacrifice

I can think of no reason why implementing these features would not be *technically* feasible. As we have seen, the building blocks are already there: users can already produce and consume all mnemotechnical content present on the Instagram platform, while directly sharing posts, reels and stories *and* directly replying to users in both public and private ways are likewise well-established features of the Instagram platform already. It is only a matter of access, as well as a matter of affordances.

Put succinctly: giving up control over our individual access to the pre-individual fund is inevitable, at least if we want to retain the aforementioned benefits of increased production *and* sharing of our own exteriorized memories. However, *how* this access subsequently takes shape and how we might indeed give shape to our exteriorized memories, lies open to us. It seems to me, then, that in its current configuration, Instagram's overshadowing of certain processes of psychic individuation in favour of the more or less mindless consumption of mnemotechnical content is a rather unnecessary sacrifice, at least from a pharmacological

perspective; users give up, without gaining anything in return.

❖ Facebook Inc.'s money-making machine ❖

One question remains, then, and that is *why* Instagram operates this way. Why are these elements that prevent Instagram from reaching its full potential as a mnemotechnology that fosters the transductive process of individuation in place? In line with Stiegler's political project, in this final part of my analysis, I will turn to the possible economic motivations behind Instagram's configuration and in doing so consider to what extent we might indeed understand Instagram as facilitating an associated hypomnesic milieu. While Facebook Inc.'s true motivations for configuring Instagram in this way remains speculation, considering the revenue model behind the social media platform reveals that, while many of the aforementioned drawbacks negatively affect Instagram's potential to facilitate processes of individuation, they do in fact turn Instagram in what one might colloquially refer to as a 'money-making machine'.⁷⁶

A steady flow of advertisement revenue

Broadly speaking, Facebook Inc.'s main method of generating profit through its Instagram platform is by selling advertisement space (Cuofano 2019).⁷⁷ Most notably, advertisements appear between posts on the general feed, between story slides from different users – they do not appear between story slides from the same person – and, as of June 2021, between reels (Kastrenakes 2021). Generally, companies advertising on Instagram pay Facebook Inc. a set fee for every thousand times users are exposed to their advertisements (Kenton 2020; WebFX.com 2021).⁷⁸ In that sense, Facebook Inc. clearly profits from the continuous flow of consumption Instagram's current configuration seems to engender: every moment a user stops to engage in a more meaningful, elaborate type of correspondence is a moment where that user is not exposed to any advertisements, meaning no profit is made.

Notably, the flow that is facilitated by automatically progressing stories, by the general feed that continuously shows the next post and by the endless stockpile of reels is *not*

⁷⁶ Like with my exploration of Instagram's algorithms, most knowledge represented in this section was gained from various blogs (in large part written by influencers that have experience in partnering up with retailers), or from Facebook Inc.'s own website dedicated to businesses. The point is not to provide a full account of Instagram's revenue stream, but rather to contextualize and make sense of Instagram's current configuration.

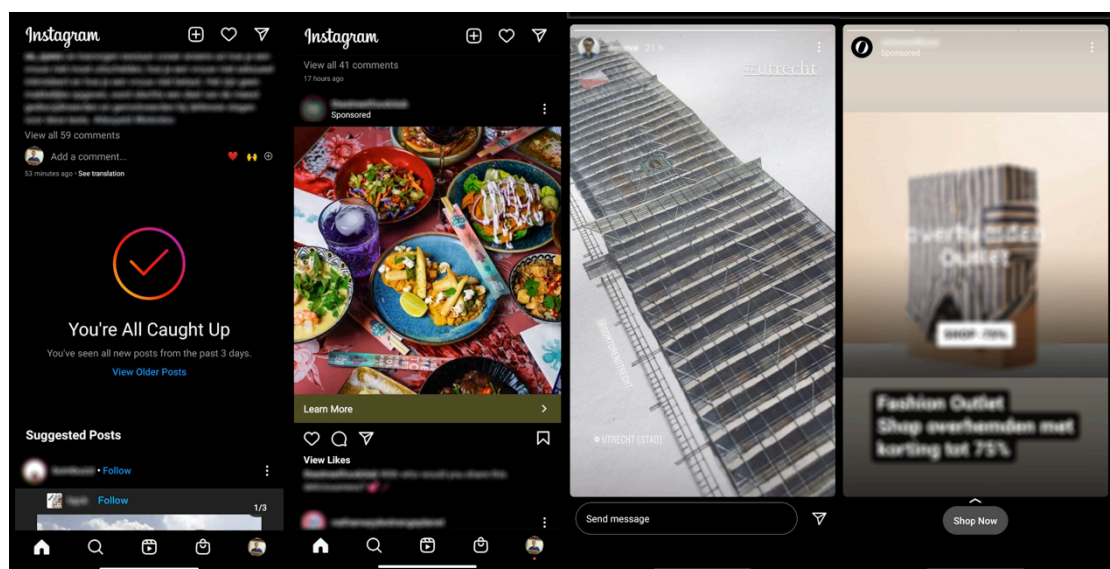
⁷⁷ Facebook Inc. is also known to sell users' meta-data to third parties (N. Sharma 2018). This practice, however, does not seem to have any direct bearing on the structure of the general feed, so I will not consider this method at any length in this analysis – although one might argue that the presence of 'liking' can be attributed to this aim of gathering data, so in that sense, it does seem to be related to Instagram's facilitation of a continuous flow of more or less mindless consumption. In any case, in my opinion, this aim of data gathering should be seen as a more or less incidental method of generating profit, and not Instagram's core business.

⁷⁸ According to one source, every thousand 'impressions' yield \$6.70. On that note, every time a user actually clicks on an advertisement, it costs the company hiring the advertisement space somewhere between \$0.20 and \$2.00.

– or at least hardly seems to be – disturbed by the presence of these advertisements. Advertisements appear in the same form as posts, stories and reels, the only differences being a small indication at the top of these advertisements that they are in fact sponsored pieces of content, and some small text prompts encouraging users to either “Learn more” about the product displayed or to “Shop Now” (see Figure VI). Thus, while the endless flow of consumption does not *have* to be a characteristic of the Instagram platform, the context in which Facebook Inc. operates – the business of selling advertisements – does go a long way toward explaining its presence.

Figure VI.

Suggested content on the general feed and advertisements similar to posts and story slides.



The left-most pane shows the “You’re All Caught Up” text prompt on the general feed, suggesting that the user has exhausted all new, previously unseen content made by followed accounts. The second pane from the left displays an advertisement as it appears on the general feed. Note how it mimics the form of posts as seen in Figure IV. The third pane illustrates how a story slide appears to users. The right-most pane shows an advertisement as it appears in between story slides, clearly mimicking the form story slides take as shown in the third pane.

The focus on the near past and present in the *production* of mnemotechnical content might also be understood in light of this endless consumption that is beneficial to Facebook Inc.’s revenue stream. Of course, in order for a continuous flow of consumption to be possible, there also needs to be a continuous influx of new content. The production processes’ focus on the near past and present might perhaps be understood as a way for Facebook Inc. to try and condition users to regard every moment they experience as a potential ‘Instagrammable’ moment. After all, a production process that normalizes an understanding of every-day experience as potentially ‘Instagrammable’ would contribute more to the influx of new content than a production process that, in being oriented toward a deeper past, does not.

While the effectiveness – or, indeed, presence – of this conditioning is largely speculation on my part, as I briefly mentioned in the opening paragraphs of this thesis, social media in general *have* been criticized for precisely this type of conditioning (Dow 2015, 132).

Online shopping

Instagram’s focus on attracting retailers comes even more clearly to the fore when we consider its built-in webshop, which, as I briefly explained earlier, can be reached via the webshop button at the bottom of the homepage. The webshop page showcases products offered by retailers that have partnered up with Facebook Inc., and is free to use – Facebook Inc. asks no commission whatsoever (Polovets 2020; business.instagram.com 2021).

At a glance, Instagram’s webshop perhaps seems to have little to do with the rest of the platform, since it does not directly yield any profit for Facebook Inc. and users have to navigate to the webshop completely on their own accord – there are no direct links to the entire webshop anywhere within the Instagram application. Users can access *small* portions of the webshop – pages dedicated to one product or one retailer – through clickable tags on post or ‘shoppable’ stickers on story slides. However, only some of the more popular Instagram users, which I will get to in a moment, can make use of these stickers. It is through this underlying system of popular users directing other users to webshops, and the way this ultimately does help Facebook Inc. in achieving its ultimate goal of generating advertisement revenue, that we might contextualize Instagram’s tendency to standardize its general feeds.

The role of influencers in establishing Instagram’s credibility as a feasible marketplace

To fully grasp how the standardization of the general feed is ultimately beneficial to Facebook Inc., we must again consider the role of the *influencer*. As said, one of the consequences of the standardization of the general feed is that the popularity of some users inflates, allowing them to reach increasingly larger audiences compared to other users. The term ‘influencer’ I have been using to designate these popular users comes from the marketing world, where retailers often enter into partnerships with users that have such a large following that they make the perfect candidates for drawing positive attention to their products. After all, it is through their large following that these popular users may exact influence, not just on *what* content other users are exposed to, but also on *how* those other users come to understand that content (Geysler 2018; Rodriguez 2019).

On Instagram, retailers can create a *free* business account and open up a webshop free of charge – after Facebook Inc. has given its approval – and subsequently DM a particular popular user to hammer out the details of their prospective partnership (Gotter 2020). If that popular user converts his or her Instagram account to a ‘professional’ accounts – which is also free of charge – the retailer can add that user to a list of users that are allowed to promote

that retailer's content via the aforementioned 'shoppable' tags and stickers (Mediakix.com 2019; Brandsom 2020). In that sense, for retailers, the standardization of Instagram's feeds – resulting in certain users having a far larger reach than others – is remarkably beneficial, as it allows them to use popular users as advertisers that lead other users directly to their products.

In turn, Facebook Inc. profits from the fact that presence on Instagram through partnerships with influencers is beneficial to retailers. It positions Instagram as a credible tool or digital environment for reaching precisely those consumers that fall within target audiences. Instagram's ability to provide users with increasingly standardized content that is supposedly relevant to them, while also facilitating the existence of influential users that have a more or less natural affinity to specific audiences validates Instagram as a platform with precise access to users for whom a retailer's products might be especially relevant.

Through influencers, this access is indirect, but successful partnerships show retailers how powerful Instagram can be as a platform *and* marketplace in one that can reach large portions of its user base. In turn, this might entice retailers to *also* buy advertisement space, allowing them to reach these audiences in a more direct manner. Indeed, Facebook Inc. uses their ability to expose an increasingly large group of users to new and 'relevant' content as one of its main selling points to prospective advertisers. It does the same with its alleged ability to expose users to and entice them to buy products through Instagram influencers (business.instagram.com 2021).

Additionally, it should also be noted that Facebook Inc. has recently announced that, starting somewhere in 2023, they will start to monetize sponsorships between influencers and retailers by taking a so far unspecified percentage of the proceedings as a commission (Spangler 2021). In that sense, while Facebook Inc. already greatly benefits from the inflation of popularity of certain user accounts in the near future, it will stand to gain even more in the future at the expense of its potential to facilitate processes of psychic and collective individuation, which, as established, become disrupted by the increasing standardization of access to the pre-individual fund.

Does Instagram live up to its full hypomnesic potential?

In short, Facebook Inc. seems to benefit greatly from Instagram's continuous flow of relatively mindless consumption, the platforms increasingly standardized feeds and the way these foster influencers' ability to reach increasingly larger audiences. Essentially, Instagram's overall structure – the way the application ultimately provides users with the access to the pre-individual fund necessary for the initiation of many processes of psychic individuation explored in the previous analytical chapters – can be understood as having a clear dissociative tendency.

That is, the symbolic practices whose facilitation is Instagram's main focus tend to

take on forms that are not *as* meaningful to users as they can possibly be, and they are not so because they are ultimately facilitated in service of Facebook Inc.'s revenue model. Thus, in the Instagram social media platform, we might recognize precisely the type of mnemotechnology that, according to Stiegler, is "controlled by industries intent on exploiting our desire for their gain" (Stiegler and Hansen 2010, 66) and gives shape to a dissociated hypomnesic milieu intent on fostering the symbolic misery that plagues our contemporary age (Stiegler and During 2017a, 71). To put it bluntly, then: in its current configuration, Instagram ultimately does *not* live up to its full potential.

PART FIVE...

...ON DETERMINING THE RIGHT BALANCE

The aim of this thesis was three-fold: to operationalize Stiegler's philosophy on memory and technics for empirical media research, to illustrate, through an analysis of the Instagram social media platform using the method developed, how Stiegler's philosophical ideas may indeed be useful in empirical research, and, in doing so, to provide new insights into the role Instagram might play within contemporary Western society, especially in regard to society's alleged polarization. The preceding analysis of Instagram has been an attempt at attaining these goals. In these concluding paragraphs, I will first provide a brief overview of my operationalization of Stiegler's philosophy and then reflect on insights gained from the preceding analysis, both in regard to Stiegler's philosophical ideas and in regard to the role the Instagram social media platform plays on a societal level.

I. Operationalizing and nuancing Stiegler's philosophy

As said, Stiegler's ideas were developed primarily in relation to the media landscape of the 20th century. Additionally, the large stock of Stieglerian notions such as *(mnemo)technics*, *symbolic misery*, *associated* and *dissociated hypomnesic milieus*, *grammatization* and *individuation* were all developed from a philosophical perspective. Thus, some theoretical and methodological efforts were required before Stiegler's philosophy could be put to proper use in a thorough exploration of the Instagram platform.

Adding to and updating Stiegler's philosophy

To attune Stiegler's work to the 21st century media landscape, following Lev Manovich (2013), I introduced an understanding of social media platforms as *hybrid* media forms constituted by multiple other media forms, which could themselves be constituted by multiple media forms. Inspired by the work of José van Dijck (2004), I introduced the understanding that self-actualization – psychic individuation – does not only occur when individuals *encounter* exteriorized memories (Stiegler 2009b, 72), but also when they engage in the *act* of exteriorizing and subsequently literally ordering memory. Finally, through the philosophical work of Mark Hansen (2015) and Robert Prey and Rik Smit's (2018) empirical research into Facebook, I introduced the idea that, in our contemporary age, our access to exteriorized

memories is often regulated by algorithms over which we have little control.

These additions allowed me to consider the many different aspects of the Instagram platform: from the way individual users can exteriorize and subsequently order memories using the smartphone application, to the way Instagram's selection and ordering algorithms regulate access to memories exteriorized by other users. Subsequently, this allowed me to consider Instagram's different features' potential to facilitate processes of psychic individuation, the occurrences of which, according to Stiegler, work toward subduing the symbolic misery from which xenophobia, fanaticism and various forms of resentment – tendencies that foster polarization – emerge (Stiegler and During 2017a, 71).

Operationalizing Stiegler

To operationalize this 'upgraded' iteration of Stiegler's philosophy, I developed an interdisciplinary three-pronged approach. It consisted mainly of a discursive interface analysis as put forth by Mel Stanfill (2015). This discursive interface analysis was supported by what I referred to as a web-search based 'light' algorithmic audit and an exploration of Instagram's business model. The combination of these three aspects allowed me to approach the Instagram social media smartphone application from two vantage points.

On one side, it allowed me to understand Instagram as both a mnemotechnical and mnemotechnological platform that steers the use of exteriorized memories, as well as in some ways algorithmically regulates access to those of exteriorized memories. On the other side, it allowed me to consider how societal forces, in this case Facebook Inc.'s ownership of Instagram, impact the configuration of the social media platform – that is, the specific way technological possibilities available today are utilized in the constitution of the platform. Thus, in line with Stiegler's thinking, I could approach Instagram as caught up in all aspects of the transductive process of psychic, collective and technical individuation (Crogan 2006, 40; Roberts 2012, 13).

Associative and dissociative tendencies and the associative-dissociative spectrum

In large part thanks to the hybrid media perspective I adopted in analyzing Instagram through a Stieglerian lens, I found the social media platform as a whole exhibiting a certain degree of ambivalence when it came to facilitating processes of (psychic) individuation. I ended my analysis with the considerably pessimistic notion that Instagram's feeds foster a *dissociated* hypomnesic milieu, obstructing meaningful symbolic practices through which users might individuate, all to the purpose of generating advertisement revenue.

However, earlier in my analysis, I argued and illustrated at length that the Instagram application encourages users to consciously relate to both their own past selves and to others,

as well as to reflect on those relations during the *production* of mnemotechnical content. I also showed that Instagram encourages users to subsequently utilize both their own and other users' exteriorized memories in sustained and meaningful correspondence with others, affording further active and conscious self-reflection. In that sense, Instagram also demonstrates remarkable potential in facilitating an *associated* hypomnesic milieu.

As I will come back to in some more detail in a moment, this potential was *in part* overshadowed by the configuration of Instagram's feeds. Even the relating to others in the production of content was *to some extent* obstructed by the feeds' tendency to standardize *who* those others might be. Nevertheless, the potential persists, not in the least because the processes of memory exteriorization Instagram affords are absolutely crucial to the functioning of its feeds, since these are filled with user-made content.⁷⁹

To move beyond my analysis of Instagram for a moment, what we have essentially found is that social media platforms – or, for that matter, hybrid mnemotechnical media constellations in general – can exhibit what I would refer to as both associative and dissociative *tendencies*. Which tendencies emerge and how they emerge depend, not just on technological possibilities that enable these social media platforms in the first place, but also on the way those technological possibilities are specifically utilized to facilitate specific types of use of those platforms.

As previously mentioned, in developing his philosophy, Stiegler's focus was primarily on how *single* technics afford the exteriorization of memory, which arguably explains why he understood mnemotechnics as fostering *either* associated *or* dissociated hypomnesic milieus (Stiegler and Hansen 2010, 66). The preceding analysis offers a certain nuance to these Stieglerian notions, as now we find that we might perhaps better think of hypomnesic milieus as moving along what I would refer to as an associative-dissociative *spectrum*, influenced by specific hybrid mnemotechnical configurations of technology – specific technical possibilities *coupled* with specific ways in which these possibilities are utilized – that may exhibit both associative and dissociative tendencies simultaneously.

⁷⁹ To make matters more complicated, this dependence of Instagram's feeds on the production of mnemotechnical content can actually be understood in two ways. Since the process of memory exteriorization is *crucial* to the superficial continuous consumption of content the Instagram application affords – after all, content has to be made before it can be consumed – in a sense, even the facilitation of processes of psychic individuation associated with the production of mnemotechnical content can be seen as subjected to market forces, especially given the aforementioned fact that the relating to others that is part of this production becomes increasingly homogenized as a result of the standardization of Instagram's feeds. However, this does not mean that the more meaningful, reflective handling of memory, which, as we have seen, is also clearly afforded by the Instagram interface, suddenly disappears. In fact, one might argue the opposite, stating that even the superficial continuous consumption of mnemotechnical content afforded by Instagram's feeds is *always* at some point preceded by a more reflective, meaningful exteriorization of memory.

II. The epoch of Instagrammatization

With this newfound understanding of mnemotechnics as moving hypomnesic milieus along an associative-dissociative spectrum, through the preceding analysis and the ‘Stieglerian’ interpretation of its results we may develop a nuanced understanding of the Instagram platform and the way it impacts individual users and, through them, contemporary Western society at large. What is more, by virtue of the methodological underpinnings of the *discursive* interface analysis, through our understanding of Instagram, we may also develop an understanding of our current epoch of grammatization in general. Let us begin with briefly recounting what we have learned about Instagram.

Instagram’s associative and dissociative tendencies

Again, as we have seen in our consideration of Instagram as a hybrid mnemotechnical and mnemotechnological medium, the social media platform shows various associative tendencies, most notably in the way it shapes production processes for mnemotechnical content in the form of posts, reels and stories. The application extensively asks users to reflect on and relate to other Instagram users, which chiefly occurs through tagging and @mentioning. Furthermore, albeit to a somewhat lesser degree, the Instagram application asks users to continuously relate to and reflect on their own pasts – that is, primarily their very *recent* pasts – as they become manifest in previously exteriorized memories in the form of photographs and videos stored on the users’ smartphones.

We identify more associative tendencies in the way Instagram affords and encourages in-depth correspondence between users, which, following Stiegler’s philosophy, should similarly thrust individuals into processes of self-actualization as they are made to reflect both on their relation to mnemotechnical content, as well as on their relation to those they converse with. Instagram even affords *repeated* correspondence between users via its direct messaging and commenting systems, thus encouraging users to reflect on how they *previously* related, both to the mnemotechnical content they conversed about and to the users they conversed with – again, here users are made to reflect on who they are in the present in comparison to who they were in the past. Instagram facilitates these practices by making its direct messaging and commenting features prominently visible throughout the user interface, and by repeatedly exposing users to mnemotechnical content produced primarily by those individuals they have previously had the most elaborate contact with.

Meanwhile, we also recognize clear dissociative tendencies, most notably in the way Instagram’s algorithmically governed feeds are configured in such a way that they become

increasingly homogenized as time wears on,⁸⁰ meaning that users are increasingly exposed to the *same* content. As I surmised, this is all in service of Facebook Inc.'s attempt to generate advertisement revenue: increasingly exposing users to the same accounts allows for the emergence of so-called influencers that draw advertisers to the Instagram platform.

Add to this the fact that Instagram's feeds, while often showcasing mnemotechnical content likely to be meaningful to users and encouraging them to interact with one another through said content in meaningful ways, simultaneously steer users primarily into consuming *new* content. Even Instagram's general feed, which is set to repeatedly showcase mnemotechnical content made by accounts users have previously interacted with at length, only shows said content momentarily, quickly replacing it with previously unseen content from yet to be discovered accounts the feeds' governing algorithms deem relevant to the user.

The result is an endless flow of new content that users are encouraged to consume more or less thoughtlessly. Since advertisements are continuously shown in between posts, reels and stories, I surmised, this too works toward generating advertisement revenue. Finally, even Instagram's tendency to mainly focus on the *recent* past in the production of mnemotechnical content, which, while facilitating self-actualization in relation to those inhabiting one's present, can also be seen as to an extent obstructing deeper introspection into one's past, can be understood in this light. As I argued, this continuous focus on the recent past might be regarded as an attempt to condition users into experiencing everyday life as potential 'Instagrammable' moments,⁸¹ which works to Facebook Inc.'s benefit, as facilitating a continuous flow of consumption requires a steady *production* of content as well.

In any case, certain forms of reflecting on one's self, as well as the initiation of in-depth correspondence and the repetition of such correspondence with others are in part obstructed by Instagram's feeds. In short, then, as Stiegler likewise said of 20th century cinema and other mass media that emerged in its wake (Stiegler and During 2017a, 76), it is due to Instagram's subjection to market forces that at least *some* of its potential to facilitate processes of psychic (and collective) individuation is lost.

Fostering and combating polarization and children's Instagram

In short, then, in line with our newfound understanding of mnemotechnical platforms as capable of exhibiting both associative and dissociative tendencies, Instagram both affords and obstructs processes of psychic individuation, sometimes through the same features: the feeds both expose users to content they might use to interact with others in meaningful ways and

⁸⁰ Of course, given the 1.074 billion users Instagram has (Mohsin 2021), this homogenization is not *as* intense as it was when our media landscape was dominated by mass media, but the tendency is nevertheless present.

⁸¹ Again, although this is largely speculation on my part, other authors have indeed commented on this conditioning of social media users to regard every waking moment in their everyday life as potential moments to be captured and uploaded to social media platforms (Dow 2015).

simultaneously steer users into nevertheless consuming them in a more or less superficial manner. At once, Instagram facilitates acts of self-writing that Stiegler saw as *the* cure for symbolic misery (Stiegler and Hansen 2010, 83), and, in being subjected to market forces, steers users into consuming exteriorized memories “without a moment’s thought”, thus superseding those same reflective, individuating processes of self-writing (Fuggle 2013, 205–206). Thus we find that Instagram gives shape to a hypomnesic milieu in which the potential for symbolic misery and polarizing tendencies that emerge from it to thrive co-exists in a strenuous relation with the potential for this misery to be combatted.

Now, as we have seen, Instagram’s more dissociative tendencies seem to stem in large part from Facebook Inc.’s utilization of the platform in generating advertisement revenue. In this respect, the presumably soon-to-be developed advertisement-free children’s version of Instagram (Mac and Silverman 2021; Kaye 2021) mentioned in the opening paragraphs of this thesis might not seem like such a bad idea. That is, at least not in theory when considering the grand possibilities for psychic individuation and the supposed subsequent combating of polarization within contemporary Western society the social media platform might afford when no longer encumbered by homogenizing general feeds configured toward endlessly exposing users to more or less relevant advertisements.

Of course, I do say this with quite some reservations. If Facebook Inc. does indeed hold true to its promise, the fact that this ‘kid-friendly’ version of Instagram is not going to contain any advertisements does not necessarily preclude that its feeds will still exhibit generalizing tendencies. Although Facebook Inc. claims that it is developing this version of Instagram in order to prevent children from accessing social media websites that lack parental oversight (Osborne 2021), one might alternatively recognize the development of this ‘kid-friendly’ version of Instagram as an attempt by Facebook Inc. to acquaint younger audiences to the Instagram social media platform early on, so as to draw them to the more profitable adult version of Instagram when they come of age. If such is the case, there is little reason to believe its feeds would behave any differently than those of ‘regular’ Instagram and show fewer dissociative tendencies.

Broader trends

Even if one does not adopt such a pessimistic – and, admittedly, speculative – perspective, however, there is yet another reason to deem a children’s version of Instagram unlikely to significantly differ from its present-day ‘adult’ version. That is, it will be developed in an epoch of grammatization where the homogenization of access to the pre-individual fund is possibly simply part of the normalized way of dealing with exteriorized memories.

As said, by virtue of the discursive interface analysis’ methodological underpinnings, what we reveal when considering an interface’s affordances is more than just the type of use

it tries to impose on users of that specific application. To reiterate these methodological underpinnings very briefly, in steering use, interfaces contribute to the normalization of types of use, while also reflecting the types of use already normalized in society (Stanfill 2015, 1061). As such, we might extrapolate our findings regarding the Instagram platform to a broader context and take our findings as revealing some of the broader trends within our contemporary society in understanding exteriorized memories.

Through the preceding analysis, then, what we have revealed is nothing less than a glimpse of the character our current epoch of grammatization – the dominant ways our society exteriorizes, and, I would add, subsequently utilizes memory and thus gives shape to its hypomnesic milieu (Stiegler and Hansen 2010, 66) – takes on. Arguably, this is a different epoch than the epoch of technology Stiegler described: again, Stiegler’s thinking primarily relates to individual technics and as such fails to fully account for the types of *hybrid* digitally networked online social media platforms we know today. For lack of a better term, I will provisionally refer to our current epoch as the epoch of *Instagrammatization*.

Memory in the epoch of Instagrammatization

Thus, to extrapolate my findings from the preceding analysis – most of which I have already covered in these concluding paragraphs – the epoch of Instagrammatization may be characterized as follows.⁸² It is an epoch in which processes of memory exteriorization have become digitized and have once again become available to multitudes of individuals,⁸³ who can utilize both their own and other individuals’ exteriorized memories to individuate, primarily with and against other individuals that inhabit their present.

The epoch of Instagrammatization is also one in which control over what we remember and what we forget is relinquished to selection and ordering algorithms, without which the ever-increasing archive of exteriorized memories brought on by individuals’ ability to digitally produce *and* share content would not be navigable. It is in the inevitable utilization of these algorithms that we find a tension between two more or less competing views on exteriorized memory.

On one side, memory is treated as a valuable tool with which individuals in society can develop their sense of self in relation to those with whom they are presently acquainted. On the other side, memory is treated as a commodity, not so much for individuals like we saw in the epoch of technology (Stiegler and During 2017a, 71), but rather to advertisers, with

⁸² Of course, I am somewhat exaggerating the external validity of the preceding analysis here; a full-fledged account of our current epoch would require more elaborate empirical research on other social media, as well as further philosophical consideration that more fully takes into account the intricate relations between market forces and the constitution of social media platforms. That said, I deem the current research as a solid starting point for revealing some of the tensions obviously present within the hypomnesic milieu nurtured by the social media platforms that are so prevalent in today’s age.

⁸³ Indeed, as shown in the very first chapter of my analysis, anyone with the ability to consume mnemotechnical content on Instagram can also produce it, or at least has the technical means required to do so.

algorithmically regulated access to exteriorized memories – meaning algorithmic determinations of what we tend to remember and what we tend to forget – fostering environments in which increasingly precise groups of individuals sharing more or less the same interests can be reached repeatedly and with relative ease.

In short, then, based on the preceding analysis of Instagram, at this point we may characterize the epoch of Instagrammatization as one of opposing tendencies. These are the aforementioned associative and dissociative tendencies exhibited by mnemotechnical hybrid media platforms, but, following through on Stiegler’s philosophical train of thought, these translate into opposing tendencies to both renew and short-circuit forms of individuation, to both foster and oppose a hypomnesic milieu where symbolic misery may thrive, and to both enable and combat the extremely reactionary temptations that bring about polarization in contemporary Western society.⁸⁴

III. To determine the right balance

Ultimately, what Stiegler’s philosophical thinking about memory and technics, attuned to the 21st century media landscape, brings to the table in considering social media platforms is the realization that, depending on how we utilize the technologies on which they are based, they are very much capable of giving, as well as taking. That is, giving and taking in terms of our ability to utilize our digitally exteriorized memories in developing our individual sense of self and to subsequently fight the polarization plaguing our Western societies today (Molla 2020; Lubach 2020; Carothers and O’Donohue 2019).

It is through Stiegler that we find the tension of our hypomnesic milieu lies in the commodification of memory versus the meaningful utilization of memory in individuals’ processes of self-actualization. It is also through Stiegler that we have gained very specific insight in how this tension concretizes. Again, in the case of Instagram, dissociative tendencies emerge primarily from the way the configuration of its feeds is subjected to Facebook Inc.’s aims of generating advertisement revenue.

A question of balance

Now, to take a first step in looking beyond this thesis: in the case of Instagram, one might perhaps argue that the aforementioned tension might be resolved by regulating – perhaps through legislation – social media companies’ ability to generate profit through advertisements. One should keep in mind, though, that it is very likely precisely because of social media platforms’ potential to be profitable that companies such as Facebook Inc. have

⁸⁴ One might say that this contemporary epoch is at once both what Stiegler hoped it would be – an epoch in which memory exteriorization is once again a participatory affair – as well as what he feared it might become – an epoch in which memory remains commodified and subjected to market forces (Stiegler and Hansen 2010, 83–84).

been developing and maintaining them in the first place. In fact, considering the tremendous costs associated with facilitating social media platforms – as early as 2009, Facebook Inc. already spent 20 billion dollars *annually* on merely housing its servers alone (Social Pro Daily 2009) – the social media platforms we know today probably endure only by virtue of their ability to make economic returns.⁸⁵

As such, we find that what is at stake is essentially a *balance* between social media platforms' associative tendencies that facilitate self-actualization and combat polarization, and their dissociative tendencies, which work toward undoing some of the boons their associative tendencies bring, but which also make them possible in the first place. The question, of course, is whether and to what extent we should be satisfied with the current balance between associative and dissociative tendencies, and whether or not we should try – and if so, to what extent – to tip the balance more in favor of the former.

The road goes ever on and on

Now, before we can ever properly begin to decide on what should be the 'right' balance – to what extent we are prepared to let the way we handle memories be subjected to market forces and to what extent we might want to regulate the market, possibly sacrificing some of the aforementioned boons social media platforms bring – we must do more than conduct analyses of the technical capabilities of social media platforms and the configuration of those capabilities. The preceding Stieglerian analysis of Instagram's interface has provided us with valuable insight into precisely what we *may* stand to lose and/or gain in the way Instagram is currently configured, thus allowing us to pinpoint exactly what aspects we might want to focus on when considering social media platforms in relation to questions of identity formation and polarization.

However, since the preceding exploration of Instagram is ultimately geared toward *afforded* use and based on a *philosophical* understanding of the relation between memory, technics, self-actualization and polarization, what we still lack is any sort of understanding about how processes of individuation actually manifest themselves in everyday use of social media platforms – or, for that matter, to what extent such processes are obstructed. In other words, in regard to processes of individuation, we do not actually know to what extent any regulation of the market – which in this context means a regulation of social media platform configurations geared toward generating advertisement revenue – is *necessary*.

Thus, in order to move forward, I suggest we now move beyond an exclusively

⁸⁵ One could of course envision converting the use of social media platforms into a paid service, but this would cause yet other problems in the form of unequal access due to socio-economic differences in society. Given their obvious boons to society, one might alternatively envision the task of developing and up maintaining social media platforms as best left to governments, but given the excruciatingly large amounts of costs involved, this is perhaps not the most feasible solution. I will leave further considerations of these options to others.

philosophical consideration of the configuration of social media platforms and instead work toward understanding everyday user experience. Perhaps the empirically grounded work of Rebecca Coleman mentioned in the opening paragraphs of this thesis offers a valuable starting point for such a next step. As said, through in-depth interviews, Coleman has already shown that Instagram users both feel pressured to endlessly and mindlessly scroll through their feeds (Coleman 2020, 66), but she has also argued that, at the same time, users feel empowered to actively shape their sense of self through the use of social media (Everts & Coleman 2021). Thus, although it was not necessarily her aim to consider questions of polarization, she has already provided some evidence of the ambivalence I identified through my Stieglerian analysis of the Instagram platform. Similar in-depth research more directly aimed at considering how social media platforms' contradictory tendencies in steering use actually impact everyday experience might help us gain a deeper understanding of the role social media platforms play in our contemporary society, not just from a philosophical perspective, but also from an empirical one.⁸⁶

Only then, when we more fully understand the extent to which individual users can actually individuate with and against others through social media, can we *begin* to properly determine if what we may stand to gain in handing over the work of retention to partly automated platforms weighs up to what we may stand to lose in subjecting those platforms to market forces. Even then, given the conflicting interests between individuals and (social media) corporations, it seems as though we have a long and arduous road ahead before we arrive at what we might refer to as the 'right' balance.

Since technologies keep developing, we might very well never truly arrive at such a moment; all that we can – and, I think, *must* – do is to continue critically considering how we give shape to our contemporary hypomnesic milieu and, by doing so, help steer our hypomnesic milieu in a desirable direction. Perhaps that road goes ever on and on. To some, this might seem like a rather pessimistic outlook on the future, but it is not necessarily so. After all, as Stiegler has taught us (2011a, 74), we as individuals, the collectives we constitute, and the technologies we develop and use are all caught up in a perpetual process of mutual becoming anyway.

⁸⁶ In a way, Stiegler's philosophy even calls for such a step to be taken. In this thesis, I have been considering how Facebook Inc. makes use of technological possibilities in shaping Instagram. Given the transductive nature of the processes of psychic, collective and technical individuation (Crogan 2006, 40; Roberts 2012, 13), however, the way actual individuals and the collectives they constitute make use of technology is just as important a factor.

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