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3 Authorship vs. Assemblage in Digital Media

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This chapter outlines an approach to complement current analyses on agencies of storytelling in digital environments. As our everyday life and meaning-making are increasingly entangled with digital platforms such as those of social media services, ways to critically examine digital media as an environment in literary theory are urgently needed – something that the existing analyses have mostly ignored. The particular point of contention in this chapter is the concept of authorship which has gone hand in hand with the understanding of authoring as a work of distinct agents, as it fails to acknowledge the ways in which human agency is entangled with more-than-human actors within digital environments. The chapter therefore explores assemblage as an alternative to authorship for conceptualizing agencies of storytelling in digital media. It is argued that assemblage enables the analysis of the platforms as affective environments based on a feedback loop of a kind: they are not only affected by our actions but, in turn, shape, and guide our agency.

Introduction

Since the 1960s, writers have systematically examined various procedural techniques of writing, where various constraints such as Oulipo member Georges Perec's famous "story-making machine" used in the construction of *Life: A User's Manual* (1978) have been utilized to generate works of literature. Despite this long tradition, the literary crafting of a story has been first and foremost discussed as based on human behavior, perception, experience, and scale. Two influential definitions of narrative can serve as illustrative examples: the rhetorical model of narrative as an act of someone communicating something meaningful to someone else for some purpose, canonized in criticism by Wayne C. Booth (e.g. 1983) and James Phelan (e.g. 2007), and Monika Fludernik's definition of narrativity on the basis of experientiality, as "the quasi-mimetic evocation of real-life experience" (1996, 12). This chapter sets out to discuss agencies of storytelling in relation to "story-making machines" which still execute algorithms in the sense of step-by-step instructions, but the functioning of which no longer corresponds to the level of human behavior and experience. Instead, their effects can be described as elemental or environmental, occurring outside our awareness but still conditioning and shaping our activity (see Hansen 2015; Hörl 2018).

In our view, most of the existing analyses of storytelling have ignored such environmentality. While excelling at the examination of representational strategies of storytelling, narrative theory remains limited to the domain of *content*, that which is immediately visible to human

users, because it is the part that is designed to be experienced by humans through the interfaces (Kangaskoski 2019, 46; Taffel 2019, 13; see also Roine 2019; Georgakopoulou et al. 2020, 21–2). At the same time, innumerable encounters between humans and machines are ignored. Though cybertext theory has revised narratological concepts in order to engage with the dynamic of visible and invisible operations of the machines (e.g. Aarseth 1997; Eskelinen 2012), it has not concerned itself neither with the environmentality of digital media nor the affective implications of human–technical assemblages that affect ends as well as means (see Hayles 2017; 37; also Latour 2002). For instance, humans write the algorithms, but the algorithms, in turn, collect data of humans on levels not visible to users, which then affects human perception of content, that which is visible. As a result, our coexistence is more than a collaboration: a kind of co-identity, as we are adapting ourselves to become more knowable to the algorithmic machines (Finn 2017, 190).

Our discussion in this chapter is focused on the concept of authorship, which has gone hand in hand with the understanding of authoring as a work of distinct agents instead of being a situational set of relations in a process. We suggest that tying authorship up with distinct agents is not, in digital environments, accurate or beneficial, as it emphasizes human activity at the expense of the nonhuman agencies of digital technology. In other words, the ways in which certain content appears on the level that is designed to be experienced by us are understood as conscious acts of human agents. In this chapter, we argue for an alternative view of content being conditioned by the whole, multi-agent environment that no individual subject directly controls but where various actors are being produced and make use of opportunities for action. As an illustrative example of the nonhuman agencies we discuss the role of platforms as "a 'raised level surface' designed to facilitate some activity that will subsequently take place" (Gillespie 2010, 350) in guiding and limiting our actions. We are not simply intertwined with digital technologies as separate entities but *entangled* with them in the sense of lacking an independent, self-contained existence (see Barad 2007, ix). It is worth noting that compared with concepts such as "storied matter" posited by material ecocriticism (see Iovino & Oppermann 2014), digital environments are, in their programmed, algorithmic nature, more forceful in their capacity to participate in the construction of stories than most nonhuman matter.

In order to include the entanglement of human and nonhuman agents and actors in the analysis, we consider *assemblage* as an alternative to authorship for conceptualizing agencies of storytelling. In our view, assemblage enables the understanding of digital media as affective environments, where users and platforms form a mutual relation of being-affected (see

Colebrook 2014), and in which we read and write texts and discourses that are "dynamic and ergodic" in nature (Aarseth 1997, 1–2). Our reasoning goes along the lines of N. Katherine Hayles who, building on Bruno Latour's (2002) and Peter-Paul Verbeek's (2011) discussion of technologies transforming the spectrum of possibilities within which human intentions and choices are conceived, suggests that we need to move away from individual, discrete actors towards thinking the consequences of the actions human–technical assemblages as a whole perform. As she further argues in her chapter in this volume, these assemblages are fundamentally cognitive, emphasizing circulations between humans and nonhumans, and insisting upon the importance of recursive cycling within the assemblage.[1] In this chapter, we apply these ideas to understanding various circulations and cycling specifically in relation to agencies of storytelling as well as in terms of affects and affections. As the length of the chapter is quite limited, we will use the platform of Twitter to illustrate our discussion, and instead of taking a singular case study, attempt to demonstrate the more general principles of digital media and the relationship between its platforms and users.

Agencies of Storytelling in Digital Media

Alexandra Georgakopoulou, one of the most prominent narratologists in the field of storytelling in social media, has argued that social media platforms such as Facebook or Twitter are transforming our understanding of what narrative is considered compelling. They encourage the increasingly common "life-tellings of the moment" or, as of lately, "the drafting together of life" in the form of Facebook Timeline, for instance (Georgakopoulou 2017a, 35). Following this, Maria Mäkelä has made insightful contributions to the field with her research on "literary craft in social media" (2019, 159), intent on drawing our attention to "the narrative and expressive potential" (ibid., 161) of Facebook as a specific platform. Although taking such an approach to social media has its merits, literary reading and writing strategies are undoubtedly losing their status as our baseline approach to media – and Mäkelä is, herself, conscious of the ways in which her methodological choice "requires the setting aside of some affordances of the medium while – more or less 'unnaturally' – foregrounding others" (ibid., 160; see also Chapter 2 in this volume). It is thus important to examine critically the ways in which our entanglement with digital environments, or human–technical assemblages, is affecting the agencies of storytelling, the processes of reading and writing themselves.

Literary critic Paul Dawson has taken important steps toward the understanding of larger textual environments with his discursive approach to the narrative communication model, originally proposed by Seymour Chatman in 1978. Dawson's model "situates the narrative text

in a broader discursive formation to investigate how narrative authority emerges out of the relations between subject position within formation" (2012, 110). In their recent article, Dawson and Mäkelä further emphasize the detachment of narrative authority from narrative agency as one of the defining features of the "story logic" of social media. They argue that "in contrast to classical definitions of narrative rhetoric, narrative constellations emerging from viral sharing are by default nonreducible to identifiable agents and situations to which narrative-ethical accountability could be attached" (2020, 28). While such a detachment as well as Dawson's earlier model acknowledge the context where texts can be produced and reframed by various actors, they still are limited to the domain of human agency and experience. In other words, the more-than-human environment – platforms, other agents, affects and affections, et cetera – of the "narrative constellations" remains unrecognized, although they importantly contribute to the feel of a story with real authority emerging.

In consequence, both the classical and more contemporary models of narrative communication tend to obscure the fact that the vast majority of the content we interpret as stories on various digital platforms are generated according to principles that exceed human perception or are otherwise hidden from us. As Mark B.N. Hansen argues in his discussion of "twenty-first century media", we must work towards exposing the environmental effects of today's media – effects that occur outside our awareness – as we can "no longer take for granted the connection of media and human experience that has informed media history up until today" (2015, 37, 38). Compared with the technical media of nineteenth and twentieth centuries, such as photography and cinema, digital media does not primarily address human sense perception and experiential memory, but stores "bits of data that register molecular increments of behavior and that do not in themselves amount to a full picture of integrated human 'lived experience'" (ibid., 40). In a similar vein to what we suggested above, Hansen urges us to turn away from the equation of experience and content towards the examination of how relations are composed between technical circuits and human experience (ibid., 43). The attempt to impose an inherently human logic – such as that of narrative – onto such phenomena runs the risk of merely upholding an illusion of how the platforms function and prevents us from understanding the digital environment and its affective logic.

In other words, a model with its basis on human agency and experience cannot be used alone to understand agencies of storytelling in contemporary digital media. As regards the ways in which agential capacities of nonhuman things and processes are reduced to our narrative representations, Juha Raipola has made a useful distinction between two different notions of nonhuman agency. The first variety is the agency of the actual, non-specified human and

nonhuman "forces" which entail the entangled activities of different agencies. This agency does not, however, consist of any pre-given meaning in the form of narratives, but can only later be interpreted as such: "[T]his kind of agency might be termed a 'semiotic agency' or 'meaning-producing agency', but identifying it as a 'narrative agency' seems like a definite misnomer" (2019, 277). The second type of nonhuman agency Raipola discusses is *narrated* agency, always ascribed after the fact or in anticipation of a fact, to make sense of the temporal progress of the action. With this interpretative act, agency is projected to individual actors within the system: although the resulting narratives are based on the actual agency of matter, their binding to narrative logic ultimately fails to represent the complexity of systemic behavior.

The same distinction between meaning-producing agency and narrated agency can fruitfully be applied to social media platforms. The ways in which content (such as updates, tweets, comments) appears on the level that can be experienced by humans results from the entangled activity of human and computational agencies and cannot be easily distinguished from the machine–human interactions. Naming such an entanglement meaning-producing agency is definitely a more accurate choice than narrative agency. Narrated agency, then, manifests itself on social media platforms as the capacity to recognize, name and frame certain constellations, based on the actual agencies within the human–technical assemblage, as specifically "narrative" (cf. Dawson & Mäkelä 2020, 28; see also Mäkelä's Chapter 2 in this volume on defining narrativity through moral positioning). In this case, as pointed out by Raipola, the binding of these constellations to narrative logic does not accurately represent the complexity of the assemblage.

On the level of content in social media platforms, with narrated agency comes not only the projection of agency to individual actors, but also the projection of authorship or authority. Complex, entangled activity of different agencies is made sense through narrative logic, narrativized.[2] This interpretative act consequently projects an anthropomorphic author figure with an intent to communicate something meaningful to others for some purpose (cf. Phelan 2007) as well as endows them with subsequent experientiality (cf. Fludernik 1996, 12). Similarly to Dawson and Mäkelä's (2020, 12) speculation of storytelling becoming an art of reframing in digital media, we would suggest looking at the act of narrativization on this level as an intentional act of adding another *paratext* to the text.[3] Here, narrated agency manifests itself through an effort to affect the ways in which a text is read through its visual presentation. Following literary theorist Gérard Genette, paratexts are generally known as the thresholds of the text, or signifiers that give sense and meaning to the textual whole as "those liminal devices

and conventions, both within and outside the book (or any other text), that form part of the complex mediation between book, author, publisher, and reader" (1997, 5–6).

Seeing narrativization in terms of adding paratexts does not necessarily repudiate experientiality as the basis of narrative, as it can simply be understood as an act of reframing something to be read *as* narrative. However, in an environment where our objects of study adapt to us as we interpret them (Finn 2017, 185) and where, ultimately, this process of adaptation on the platform takes the dynamic role in the work of authoring, the equation of content and experience following human logic is misleading. In other words, such an environment is based on an affective relation or feedback loop of a kind, where the platforms are not only affected by our actions but, in turn, shape and guide our actions. Paratextuality can thus be seen as a textual component or a facet of the assemblage of digital environments (cf. Piippo 2020, 46), and as such, it affords a literary criticism of that assemblage. We will get back to paratexts and the feedback loop between the users and the platform in the last section of this chapter.

The concept of cognitive assemblage offers a way to understand such a loop as well as the entangled agencies. It has been put forward by Hayles (e.g. 2017) as a particular kind of network characterized by the circulation of information, interpretation, and meanings by both human and nonhuman cognizers.[4] It is worth emphasizing, again, that Hayles counts digital media among cognizers together with humans: they, too, direct, use, and interpret the material forces on which the assemblage ultimately depends. These cognizers drop in and out of the network in shifting configurations that enable interpretations and meanings to emerge, circulate, interact and disseminate throughout the network. What is especially interesting from the perspective of this article, such shifting configurations are reflected on the contemporary aesthetics, especially the ones related to the internet, which heavily rely on recycling, reusing, and reframing found material that is not always produced, recycled, reused or reframed by a human agent.

Nonhuman cognizers do not, however, possess narrated agency by themselves despite being able to identify and make use of various opportunities of action. In many cases of "augmented imagination", the transformative work that humans and machines can only do together (Finn 2017, 186), agencies entangle into a close collaboration. Similarly, with her term of *readingwriting*, Lori Emerson (2014, xiv) calls our attention to the fact that due to our constant connection to networks, media poetics is fast becoming a practice of writing through the network. This network possesses what Raipola calls meaning-producing agency: it tracks, indexes, and algorithmizes everything we enter into it, thus constantly reading our writing and

writing our reading. Such a feedback loop between reading and writing signals a definitive shift in the literary poetics as well and points out the ways in which our core cultural practices of reading, writing, conversation, and thinking are becoming digital processes, or at least entangled with them. The predictive – and, by large, cognitive – capacities of digital media also show their important role in manifestations of narrated agency. In the bleak vision presented by Matti Kangaskoski in Chapter 4, our quick and affective signaling of what we desire to the cultural interfaces is beginning to register as almost automatic reaction to stimuli and thus, as Bernard Stiegler (2019) has suggested, the prediction begins to precede the individual will and simultaneously empties it. Our analysis of agencies of storytelling is aligned with Kangaskoski's aim to "create a break" to the inevitability of such automatization through the investigation or aesthetic features, values, and opinions that broader assemblages produce, and, as we argue next, in order to uncover the fundamentally *affective* nature of digital environments.

Affects and the Human Scope

On the subject of understanding and theorizing the dynamic nature of digital texts and environments, significant efforts have already been made, especially in cybertext theory, which grounds itself in the functions of the text instead of medium specificity. The key figure of this approach, Espen Aarseth, breaks the text – be it digital or nondigital – down into two units: textons and scriptons. The latter are revealed or generated from the former and presented to the user of the text by a mechanism Aarseth calls a traversal function (1997, 62). He then proceeds to present seven variables of the mode of traversal: dynamics, determinability, transiency, perspective, access, linking and user function (ibid., 62–4). Markku Eskelinen has added two more variables to Aarseth's typology: user position and user objective, along with several new secondary variables (2012, 45–46). This typology hence expands and defines the Genettean notion of the duration and frequency of the text,[5] as well as the questions of the reader's engagement and the text's own self-modifying practices. Cybertext theory thus provides us with a solid understanding of the structure and functions of digital texts and has tracked down the definitive shift discussed above by illustrating the dynamic nature of digital text through the analysis of ergodic literature (e.g. Eskelinen 2012, 288). However, it has not concerned itself with the affects and affections produced in and by the digital platforms and environments, while communication scholar Zizi Papacharissi has prominently shown the logic of affect to be the key characteristic of digital media.

Describing digital media as following, amplifying, and remediating the tradition of storytelling in older media, Papacharissi (2015, 4) argues for a view of social media platforms as a storytelling infrastructure that enables the feeling of being present, and allows for affective expression. The emphasis on the present is indeed visible in the way in which, for instance, Twitter shows the timestamps of the tweets in the form of their age: how long ago they were posted instead of when they were posted. Papacharissi further suggests that the structures of connection and expression are characterized, more than anything else, by feelings and emotions. Both newer and older media invite people to participate in events that are physically remote but virtually and affectively close, thus creating the sense of *sharedness* and activating ties between people. These ties, in turn, are important for generating affective publics, "powered by affective statements of opinion, fact, or a blend of both" (Papacharissi 2015, 129). Following Papacharissi, every single tweet, video or meme can be seen as an "affective attunement" to their narrative, an expressive gesture of affect and engagement.

We should be mindful of Papacharissi's understanding of affect and affectivity, however. Understood in the Deleuzian sense, affection refers to the state of the affected body and includes the presence of the other body that produces the affection (Deleuze 1988, 48–51). Therefore, it is a relation. Affects, on the other hand, create these different kinds of affections – the codependent state of both the affecting and the affected body – depending on the bodies involved.[6] Following Deleuze, Claire Colebrook (2014) argues that affects should not be confused with affections, or feelings of the lived body, as the beginning "is not the body and its affections, but the affect" (ibid.). While researchers of storytelling practices in social media such as Papacharissi and Ruth Page – whose concept of *shared story* describes a "distinctive narrative genre" (2018, 2) with a potential to proliferate into huge numbers of interactions involving thousands of tellers (ibid., 4) – focus on structures of circulating content as well as sharing affections, Colebrook argues that we should turn away from them, "not to the lived body, but to the quantities and relations of forces from which identifiable bodies and sentiments emerge" (ibid.) In the context of this chapter, we argue that instead of content, discrete actors and their affectivity, our focus should be on examining agencies within the human–technical assemblage as a whole.

From our perspective, approaches such as Papacharissi's and Page's see contemporary digital environment first and foremost as a human environment, where both the affects and affections are reduced to named and experienced feelings or representing them. Although fitting in some instances, the concept of authorship we discussed above carries a similar bias towards human experience and scope, often evoking the prototypical view of stories of personal experience as

compelling and most affective, thus almost forcibly going viral. Mäkelä's "literary approach" to Facebook describes the readers' "quest for experientiality" as the reader being "on the lookout for familiar epistemic, affective, and bodily parameters that would yield a presentation akin to the reader's experiential schemata" (2019, 163). However, some highly viral content, such as trolling, doxing, hate campaigns, viral marketing, and other mass-produced affective material without anything "personal" or "experienced" behind them pose a problem to the supposed experientiality in the content that is being created and shared.

Following Colebrook (2014), we argue that what is "really felt" while being entangled with digital environments is specifically our experience of being a part of an assemblage that simultaneously produces us as an experiencing agent. The feelings represented in the compelling stories, for instance, can be seen as a form of "pre-packaged, already-consumed-consumable affections" (ibid.), instances of our bodies only re-living themselves within predetermined schemata instead of acknowledging and processing the feel of the assemblic relation itself. This, of course, plays into the hands of phenomena such as "fake news", which exploit the recycled affections in the content.[7] Moreover, it has been hypothesized that bots already outnumber human traffic online (see Read 2018) – and that people are not necessarily able to distinguish human actors from machinic ones. Empirical evidence and analysis provided by Minna Ruckenstein and Linda Lisa Maria Turunen (2019) further shows that the current platform logics of digital media force human moderators to operate like machines, which creates discontent and diminishes the human capacities of meta-analysis and care over the algorithmic content.

In our view, forcefully maintaining the distinction between anthropomorphic authors and other, such as computational or machinic, actors effectively prevents us from analyzing larger phenomena, which supposedly emerge from the sharing of smaller stories that are compelling in their communication of personal experience. Such communication can also be understood as imagined rather than actual. As Benedict Anderson's classic notion of "imagined communities" (2006) – closely relating to Papacharissi's "affective publics" – suggests, our sense of communality is in part enabled by current technological affordances, but that sense of communality or connectedness does not precede those respective affordances as such, since the realization and actualization of affordances hinge upon interactive relations established by (or at least in relation to) agents (see Scarlett & Zeilinger 2019, 27). Originally, print capitalism in the form of newspapers and novels, which were written in the vernacular made it possible for us to envision a community imagining together, simultaneously. The same can well be argued about the current data capitalism, which is not simply focused on making profit on selling

products (such as newspapers or online services) but precisely on our experiences, as they can be transformed to behavioral data which then can be profited on, as Shoshana Zuboff (2019, 14) argues for what she calls "surveillance capitalism". In current digital platforms such as Twitter, both human and nonhuman actors participate in realizing and actualizing structures such as connectedness and sharing, and this has important consequences for understanding the agencies of storytelling.

Twitter as an "Imagined Environment"

As stated above, our aim is to seek out ways to analyze storytelling in digital environments while taking the actions human–technical assemblage as a whole performs into consideration (cf. Hayles 2017). Within the framework of literary theory, we approach this through a focus on content in a broad sense, that is, on the visible aspects of the digital, including the platforms as well as their interfaces in the analysis. We suggest seeing digital platforms not only as sophisticated and designed, but also imagined from the individual perspective. In the case of social media services such as Twitter, the interface remains the same from user to user – despite undergoing changes in design from time to time – but the feed is assembled in many respects by algorithms and, therefore, appears differently to every user. What appears to an individual user as a single platform is in fact comprised of a multitude of different variations of what is being created and shared on the platform (see Bozdag 2013). "Twitter" is, consequently, an "imagined environment" where, to borrow from affordance theory, agents and actors with the ability to identify and make use of opportunities for action in this precise environment (see Scarlett & Zeilinger 2019, 27) do so by not only writing, sharing, and reading, but also by assembling, reframing, and recontextualizing. These agents and actors can, of course, be both human and nonhuman. Next, we illustrate this through the analysis of the design of Twitter, focusing on its paratextual and affective aspects and thus showing how the visible can offer insights to the hidden as well.

As we pointed out above, paratexts are generally understood as the thresholds of the text, giving sense and meaning to the textual whole. As a concept, paratextuality has been coined in the context and for the use of print media and transferring it to the discussion of digital media calls for slight adjustments (see e.g. Green 2014; Tavares 2017). For instance, one must bear in mind that an individual tweet as well as the entire Twitter feed (or any other user interface of a social media platform) both construct their own paratextual elements, and that the relationship between a tweet and the feed is also paratextual (Piippo 2019, 58). Furthermore, one of the key functions of paratexts, naming the authorship, is connected to the user handles marked with @.

They are often associated with verifiable human identities, the "author" of the tweet, but they can also be anonymous aliases or connected to bogus accounts or bots. While the identity of a tweeter carries a lot of interpretational weight in terms of authority (in relation to their social or political status, for example), the more time we spend skimming through the content of a certain platform, "the more we start to pay attention to the repeated words, wordings, themes and affects, while the context provided by the author's name fades into the background", as argued by Laura Piippo (2019, 59). It is also worth noting that, in the context of Twitter, some of the elements Genette considered parts of the epitext actually become peritext, or even parts of the actual text.[8] A good example of this is a retweet complemented with an added commentary by the retweeter.

The user interface of Twitter can, importantly, be also considered a liminal text, something residing on the boundary of the actual text (see Galloway 2009). This is an understanding that brings the interface close to the concept of paratext, which not only shares the same attributes of a threshold (cf. Tavares 2017, 18), but also "in reality controls one's whole reading of the text", as suggested by Genette after Philippe Lejeune (1997, 1–2). The user interface is never singular, but plural, for – in addition to the dynamic between textons and scriptons – they tend to incarnate as various versions over the years and across different devices. However, a feature that further connects user interface with the concept of paratext is that the users seem not to pay much conscious attention to its design. As Bonnie Mak points out,

> readers rarely regard the title of a book with suspicion or interrogate its chapter divisions. The paratext says, 'The text is thus,' as if it were a statement of fact. Authorized by its own presence, the paratext is trusted because it exists.
>
> (2011, 34)

The similarly unquestioned nature of the interface is highlighted by the fact that the changes to Twitter's user interface, whether significant or mostly insignificant, have been forgotten quite fast, as the users adapt to the new versions.[9][9] In other words, the users have become so accustomed to the interface that it, in turn, has become invisible (see Bolter & Grusin 1999) in the way the most profound technologies do, as famously suggested by Mark Weiser: "They weave themselves into the fabric of everyday life until they are indistinguishable from it" (1991). In a mundane level, the same happens to the paratextuality of the icons indicating likes, retweets, and replies: they blend into the actual message of a post or a tweet.

At the same time, the very paratextuality of the interfaces affects the material users write and publish on them. In general, the distinction between textuality and paratextuality seems to leak when texts shared and referred to are all embedded within the same interface with the sources. Consider, for instance, Genette's (1997, 5–6) assertion that commentary is a paratextual element. If so, how should we categorize a retweet with an elaborate foreword? Here, the authorship over an action in the context of the platform and the design of the user interface become important: in effect, *the context of reading* defines the paratext. The logic affects, for instance, elements of an online discussion, where the intentions of a singular commentator are not necessarily the ones that matter but the ways in which their comments may come to contextualize the whole discussion – and may be recontextualized again by either human or nonhuman actors. Comments, whether they are made by authentic users or generated by bots, become "the paratexts that surround the main texts and, thus, have an impact on individual tweets' significance and tone, and – even more importantly – take part in forming the affectivity of the entire platform" (Piippo 2019, 61). In a printed book such as a novel, the tone is created by the text, but on Twitter it is created by the paratext.

Hashtag, the most significant feature – and a vital paratext – of Twitter, can be seen as a concrete example of the ways in which human and nonhuman agencies entangle in digital media. According to Paola-Maria Caleffi (2015), hashtags function as metadata, a form of special language, and an arena for linguistic creativity, for example. This is to say that they serve as a means of connecting, collecting and sharing, and can be used to mark a subject, an event, or an occasion (Murthy 2013, 3). As such, they carry the ability to form assemblages, enhance phenomena and divert the authorship of the tweeted and retweeted content. Since the algorithm is indifferent to the various uses and functions of the hashtag, it simply regards the repetitive uses of certain words as a sign to amplify the visibility and circulation of the content. This feature plays into the hands of the affective economies by bundling up equally the ironic, sincere, malevolent, as well as other uses – which then are often hijacked by the most malevolent of the uses. The hashtag also accounts for many of the ways for machinic and algorithmic creation and circulation of content. What then happens to the concept of authorship when the whole of paratext is in a state of flux?

Here we can once again see how the concept of authorship begins to lose its analytical power when we move to digital environments. In Twitter, the prevailing act of reading defines the paratext: what we encounter first becomes the text, whether it is a tweet, an indication of an action (a plain retweet or "like") or an elaborative foreword for a retweet. Dawson and Mäkelä bring up a similar point with their discussion of the #MeToo movement and perpetual

reframing of existing content, where "individual tweets about a user's experience which when tagged create multiple tellers for the shared experience of sexual harassment and assault encoded as a prototypical narrative in the phrase #MeToo itself" (2020, 24). They thus describe the hashtag as "a cultural script providing a frame for individual tweets" (ibid.), for its part contributing to a story logic where "narrative power resides with the reteller *qua* reframer of the narrative, and narrative authority can emerge 'out of thin air,' as a collective, noncoordinated framing" (ibid., 32).

In our view, the logic described by Dawson and Mäkelä is produced by the ways in which the human–technical assemblages as a whole perform. This logic, in part, contributes to the affective relation between the reader and what they are reading, and affects other elements, which in another context could be understood as "human interaction" or "discussion." Instead, comments and replies become paratexts, controlling one's whole reading of the text, giving it its significance, tone, and meaning. The platform begins to participate in the process of authoring texts, while the "author" begins to blend into the platform, exemplifying the circulations between humans and nonhumans as well as the recursive cycling with the assemblage (see Hayles, Chapter 1 in this volume). This calls for researchers to make an adjustment that Ruckenstein and Turunen (2019) have dubbed a move from the logic of choice towards the logic of care. In other words, and as also argued by Hayles, we need to move from theorizing the actions, choices and texts attributed to a single human author towards the analysis of the dynamics of an assemblage as a whole. It can be seen as "the risky ethics of uncertainty" that "commands us to give up the comfort of familiarity" (Shildrick 2002, 132). As an approach, it must extend itself to the unknown and nonhuman of the digital, algorithmic environments, yet also staying benevolent and nurturing toward the human experience (Ruckenstein & Turunen 2019). For narratologists, this means a definite shift from asking who or what the author, authoritative figure, or narrating agent is towards the question of how narratives come to be or are being perceived through the entanglements of human and nonhuman agencies in digital environments. In these environments, Perec's "story-making machine" is taken to the next level by complicating its mechanics beyond the human scale of comprehension. It seems that after the death of the author – and their subsequent resurrection – we must now yet again re-articulate these types of literary co-agencies.

Conclusions

In his call for "experimental humanities", Ed Finn (2017, 195–6) argues that we must simultaneously accept that our relationship with knowledge has become a set of practices for

interacting with rapidly increasing complexity and the vital role of the humanistic inquiry in the fields of ambiguity, dissonance, interpretation, and affect. We agree with Finn, and have, in this chapter, focused on assemblage as a possibility for conceptualizing agency of storytelling on digital social media platforms, such as Twitter, which are affective environments generated by both human and machinic actions. Understanding this not only helps us to better grasp the platforms' dynamic and inherently "nonhuman" nature in relation processes of reading and writing, but also has serious moral and ethical implications. It has a potential to turn our attention away from, for example, individuals writing – or moderating – hateful messages towards the affective logics as a system that itself generates, circulates and intensifies such hatred.

Rethinking the human–machine relations in terms of assemblage in digital environments may allow us to free ourselves from "a cycle of responding to one post at a time" and rather offer "a meta-perspective to the discussion by overseeing and nurturing it" (Ruckenstein & Turunen 2019). We are affected by the whole of the network through which we are reading and -writing. Furthermore, setting "the human" aside as a privileged agent requires us to outline a model for textual agency in digital media, which acknowledges the human–machine nature of such an environment. This also allows us to renegotiate the terms and conditions of the said agency, potentially resulting in more ethically and affectively sustainable digital environments and relations.

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Notes

[1] As Hayles points out herself, assemblage is how *agencement* is usually translated in Gilles Deleuze and Félix Guattari's work *Thousand Plateaus* (1987): for them, it connotes a kind of agency without individual actors, a flow that temporarily creates a provisional and highly flexible arrangement capable of agency. Hayles differs from them in describing connections through which information flows as technically precise and often knowable. Furthermore, in relation to agency, it is worth noting that Deleuze and Guattari's understanding of the human conscious as an assemblage (e.g. 1972) is a useful comparison: this assemblage is rather a factory than a theatre, in that it "really (not just in a phantasmal sense) produces social subjectifications" (see Sauvagnargues 2013, 88).

[2] Both narrativity and narrativization as concepts have been most influentially defined within the cognitive school of narratology. In her groundbreaking book *Towards a "Natural" Narratology*, Monika Fludernik redefined narrativity as "mediated experientiality" (1996, 12–13, 28–30) as opposed to structuralist definitions rooted in temporality and causality. Furthermore, in narrative meaning-making, markers and effects of artificiality or medium-specificity are set aside by "narrativizing" (ibid. 33) any kind of representation to fit our basic cognitive schemata for story comprehension (see also Mäkelä 2019, 163).

[3] Compared with Georgakopoulou's (2017b) account of narrativity being an emergent property, based on the logic of social networking sites encouraging *sharing stories out of the moment* and thus using conventionalized story-framing devices such as reference to time, place, and characters to suggest there is a story to be engaged with, we want to emphasize the entanglement of different agencies.

[4] Hayles's usage of "cognition" is a concept re-envisioned on the basis of cognitive biology, which extends cognition as "embodied knowledge" beyond humans, primates and mammals to all living organisms, even unicellular organisms and plants. For her part, Hayles extends cognition to technical devices, offering the following definition for cognition: *cognition is a process that interprets information within contexts that connect it with meaning*. For more detailed discussion, see Hayles 2017 and Chapter 1 in this volume.

[5] In his discussion of time in relation to "discourse time" (the time it takes to peruse the discourse, cf. Chatman 1978) and "story time", Genette focuses on various deviations between them through the categories of *order, duration* and *frequency*. In relation to order, Genette calls the deviations "anachronies" and distinguishes between *prolepsis* (flash-forward) and *analepsis* (flashback). The deformation of duration, on the other hand, he calls "anisochrony" (1983, 86), and discerns four types of story-discourse relations: pause, scene, summary, and ellipsis (ibid. 95). Frequency, then, outlines the relationship between the number of occurrences in the story and the number of occurrences narrated, and here, Genette distinguished between singulative (telling once what happened once), repetitive (telling many times what happened once), and iterative (telling once what happened several times (ibid., 114–16)).

[6] Philosophy of cognition has pointed out that people have always tended to manipulate their environment for affective effects, such as entertainment or pleasure. This serves to underline the fact that our affective states are frequently enabled, supported, and regulated by environmental elements such as physical objects as well as other people (see Sterelny 2010; Colombetti & Krueger 2014; Maiese 2016; Saarinen 2019).

[7] Such phenomena have been prominently discussed by Sara Ahmed (2004) under the concept of "affective economies", although her approach to affectivity differs from Colebrook's and ours.

[8] Book historian Johanna M. Green (2014; see also Piippo 2019) offers a detailed analysis into the paratextuality of both Twitter feed and single tweets as digital pages. For instance, she categorizes tweets, with all their medial features as constituting the text proper; the rest of the user interface surrounding the feed as comprising the epitext; and everything not visible on the screen but still related to Twitter as peritext.

[9] The mechanics of the feed have undergone some changes over the years, as has the design of the user interface for different devices. Until 2015, Twitter's feed simply presented the tweets in reverse-chronological order. After that, the platform has gradually introduced an algorithm-based feed (Newton 2016), which exploits the users' actions, inactions, networks and engagements. In 2018, the company answered the users' demands and brought back the option to use the old non-algorithmic, more up-to-date and in-the-now feed (Newton 2018). The biggest change so far has been the transition from the limit of 140 characters to enabling tweets that are up to 280 characters long.