Platform-based Rules of (Un)Notice

Digital literature and attentional modulation

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William James famously defined attention in terms of focused concentration: an act of zooming in on one out of many possible objects. In our current hypermediated moment, such acts of focused attention have become more difficult, to the point where we have come to rely on multiple sources of input in order to be able to concentrate. How to decide what to attend to and what to disregard becomes a pressing aesthetic, ethical, and even political issue (if it had not always been).

Traditionally, literary studies have celebrated the close reading of texts in a mode of 'deep', focused attention, as a core skill. However, a reader, it is impossible to pay equal attention to all details in a text. Narrative texts are written in a way that helps us modulate our attention. Certain elements are 'foregrounded', causing heightened attention, and others are 'backgrounded', nudging the reader to read them in a more superficial manner. In 1987, Peter Rabinowitz compiled what he called the 'rules of notice' by which the details in a narrative are hierarchically organized in such a way that a reader knows on what elements to focus.

A lot has changed since then. In our present attention economy, where we receive texts and images from myriad sources and channels on a daily basis, attentional flexibility and modulation are arguably more important than ever. Yet, the rules of notice seem to be missing: reading online, we are not always given a clear, hierarchical structure, and no one is telling us when to pay attention and when we can comfortably skim. We do not always know beforehand what might turn out to be of importance, and there is a feeling of being engulfed, that there is something that we are missing. This is reflected in works of digital literature.

In this paper, I attend to the different rhythms and attentional modalities of engaging with electronic and digital literature. What are the different modes of reading and what is their relationship to different media environments and platforms? How do works digital literature both reflect and anticipate different modes of reading and attention? How does their utilization of platform affordances incite us to modulate attention? I show how these works incite us to combine a whole range of attentional stances and foci from broad to narrow, vigilant to absorbed to distracted, and deep to hyper (Bennet 2018; Ensslin 2014). In some cases, an absence of rules of notice, I argue, I is part of the procedural rhetoric and overall meanings of these works, which perform overly familiar experiences of being overwhelmed and not knowing when and where to focus. In other cases, attention or immersion are guided in innovative ways, not by the narrative itself but through media- or platform specific affordances. These works challenge and train our analytical and hermeneutic abilities and 'cognitive patience' (Wolf 2018) and ask for the development of platform literacy.

Attention

It has by now become a commonplace to say that we live in an attention economy. Of course we have more texts, information, and forms of entertainment at our disposal today than in earlier historical times.

Where there was once a scarcity of information, we are dealing with an excess, and a shortage of time, cognitive resources, and especially attention. As a principle that originated in marketing, the attention economy describes how attention becomes currency. Companies, media, and influencers enter into competition for capturing and retaining our attention, and we express the value of things in views, clicks, likes and shares. Social media have the mechanisms of machine gambling built into their platforms, to keep us coming back and checking in. Attention is quantified and commodified in a world saturated with media.

Different media forms organize our attention in different ways. Literary studies has traditionally paid a lot of attention to close reading and to textual characteristics that invite focused attention, for instance foregrounding devices. However, since it was always impossible to closely focus on every single word, reading has always been about selection and about modulating attention. In *Contemporary Fictions of Attention*, Alice Bennett argues that literary reading, far from being a linear, immersed, and stable process, always has a dynamic mixture of attention and distraction built in. Bennett writes of the book as a "constantly interrupted object" with mechanisms like 'footnotes, cross-references, indexes, margins, chapter breaks, subheadings, page numbers, [and] bookmarks' that manage their requirements for attention. Reading, according to Bennett, is 'never undividedly attentive and always somewhat shifting, disrupted and unfocused' (2018, 17).

How does the brain select what to attend to? Theories of attention generally distinguish bottom-up and top-down processes, the first referring to our natural attraction to certain salient environmental stimuli (say, we see something shiny) and the latter to the ways in which our goals determine what we find relevant to focus on (we're browsing old pictures and looking for a child in a red dress). Bottom-up attention often occurs without conscious thought, it is part of our survival instinct; top down attention, on the other hand, requires effort and concentration (Gallagher 2009). Michael Posner's (2012) seminal theory proposes three attentional stages: first alerting (bottom-up forces make us aware of new aspects in our environment), orienting (we integrate them into our conscious state), and executive (we resolve conflicts and make decisions about how to attend stimuli).

Reading and discourse processing, it follows, are necessarily selective dynamics that combine bottom-up and top-down processes of attention: part of its selection processes guided by reader psychology and part guided by the particular manner in which the text is written or the object is constructed. As far as the latter is concerned, for written text, the so called Rhetorical Focussing Principle (Sanford & Emmott 2012) holds that the writer causes the reader to pay particular attention to certain elements, and read others in a more shallow manner.

In his 1987 book *Before Reading*, Rabinowitz collected the 'rules of notice' by which this priming and this hierarchical structuring of details occurs. He distinguishes three general subclasses of rules: of position (e.g., titles, beginnings and endings of sections, epigraphs and subtitles), of intratextual disruption, and extratextual deviation. They affect, first, 'noticeability' (where to place our attention), and, second, 'scaffolding' (the notion that our interpretation of the text's overall meaning should be able to account for those elements).

Textual manipulations to guide attentional selection are often described in terms of foregrounding and backgrounding techniques. Foregrounding is a term used for unusual or surprising linguistic forms or an unusually high or low density of particular forms, causing heightened or sharpened focus on those elements. These stand out by disrupting the continuity of the text itself, or going against extratextual norms. Foregrounding can occur on all linguistic levels: typographic (including punctuation), phonological,

lexical/semantic, syntactic, and discursive (see Leech and Short 2007 for a comprehensive inventory of examples on all levels).

If certain details draw our focus, it is only natural that others should be more 'skimmable' or even 'skippable' by comparison. We tend to skip words that are highly predictable, repetitions (however, in some cases these can cause heightened attention as well), certain forms of seemingly irrelevant information (yet again, this could go both ways), long descriptions (e.g., of landscapes), long dialogues, detailed character descriptions, graphic content, the overly obvious or overly complex, but also suspenseful passages. Whereas there is an established body of empirical studies into foregrounding, strategic backgrounding has received far less attention. An example of backgrounding, the de-emphasizing of information, is a technique called 'burying', where the writer hides a piece of information in a subordinate clause. In detective fiction, this is often done in such a way that a clue can be introduced and barely decoded by the reader, so that it will only in retrospect be discovered as a clue. In Agatha Christie's *Sparkling Cyanide* for instance, the character who will turn out to be the murderer is first introduced in an -ing clause embedded in a description of another character, surrounded by new information (Sanford & Emmott 2012, 92).

As we see, the way in which readers modulate attention is partly prompted by textual characteristics. Attention, however, is not a static faculty: our modes of attention, as Walter Benjamin knew, change along with our environment, and with the media we use. Whereas William James still famously defined concentration in sharp contrast to distraction, today, as Kristin Veel (2011) argues, we are so used to receiving input from multiple channels that we might need distraction precisely in order to concentrate. This can be seen in newer forms of texts that do not adhere to the classic 'rules of notice' and their pre-determined hierarchy of details. We can think of art forms that display a 'database aesthetic' (Veel 2011) as well as monumental novels (Letzler 2017; van de Ven 2019).

In attempts to extract information from cascades of data, artist Hito Steyerl (2016) writes, vision loses its importance and is replaced by filtering, decrypting, or pattern recognition. The same can be said about acts of reading. When it is no longer humanly possible to determine meaningful patterns in a large body of text, an undecidability occurs that has everything to do with the ways in which we are bombarded with information in daily life. The reader needs to do the hard cognitive work of sorting out what needs to be read and what can be skimmed. There is always the chance that something vital is missed, which makes such works typical for our experiences in an information age.

E-lit and platform literacy

Scott Rettberg (2019) defines electronic literature as forms and genres of writing that explore the specific capabilities of the computer and network, that are procedural and computational, and processed across multiple platforms, protocols, and technologies. Platforms are, then, not accidental to their effects and our engagements with literature: they afford as well as limit our experience. Platforms are designed environments that distribute control. They might be monetized, copyrighted, and negotiate forms and levels of visibility and privacy (Van Nuenen 2018). Their technological affordances (e.g. their possibilities for interaction) in turn shape social affordances, determining what types of sociality and community can be built on them. Attention to platforms broadly includes programming languages (Marino 2020), the integration of hardware and software (Bogost & Montford 2007), the ongoing integration of works in databases (Ackermans & van de Ven 2020) as well the appification of e-lit. On the one hand, the ongoing platformization of culture and literature means the focus of scholars of e-lit is necessarily broadened to

take this infrastructure into account when discussing works, on the other, attention to platforms on the level of the work itself necessitates 'platform literacy'. After all, the affordances and constraints of given platforms for electronic or digital literature such as Twine or Flash have effects on the modes of attention solicited by the works that are created with them.

Electronic literature and attentional modulation

How does attentional modulation work in case of multimodal, digital works of literature? Works of electronic or digital literature have a whole range of devices at their disposal in addition to the narrative techniques for foregrounding and backgrounding. They can manipulate attention by way of multimodality, multilinearity and maximalism, moving text, deviating typography and sound effects. In order to analyze these techniques, what needs to be added to the 'rules of notice' for narrative is attention to platform- and media specific affordances. The scope of this paper will not allow for a full inventory of such rules, so I will describe attentional modulation in relation to four texts to convey a range of devices and their combination: expanding and contracting 'stretchtext', moving, dynamic, or streaming text, RSVP, prompts for close reading, and immersive devices.

Pry **(Tender Claws, 2014)** is an app for iOS, and as such has to work with the platform affordances of Apple. Apple, which is hybrid in the sense that the company focuses on both products and platforms, has strict rules for the aesthetic of their applications and what can and cannot be done on their devices. It offers gadgets but also the software that allows people to integrate them into their daily lives, and allows for feedback between different apps. Pry asks its readers/viewers to haptically navigate layers and layers of text that can be scrolled through in all directions in a formal-material rendition of the stream of consciousness monologue. The experience of textual excess here mimics the state of mind of the protagonist, as the creators explain: 'The whole point of the interface is to capture the sense of being overwhelmed. We use this sense of overload and endlessness as a way of mirroring James' internal state' (Holmes 2014). The text literally expands and contracts, new blocks appear between the lines, and it is impossible to read it all in one uninterrupted flow. *Pry* asks us to read with attention to scale variance, a reading that, divergent and explorative, zooms in and out. While scrolling and scanning, my eye could fall on a passage that would hand me a key to my scaffolding for an interpretation of the overall meaning of the work. For instance, when the text itself seems to thematize its reading in snippets like: 'something about inherited attention span' and 'I keep going because in the next line, in the next code, I will find the secret'. These sentences drew my eye, as a reader with the theme of attention on her mind, yet for other readers they will be different, very much like a textual equivalent of Barthes' (1981) 'punctum' in photography.

Porpentine Charity Heartscape's *With those we love alive* **(2014)** was made for Twine. **Twine** was originally designed for branching path narratives, often called Choose your own adventure stories. The platform hypertextual and browser-based rather than parser-based, which increased usability for creators, who do not have to work with code. Twine is open source and open access. Functionalities can be added using HTML, CSS or JavaScript. A 'node map view' offers a visual interface of the work's structure (Rettberg 2019). As works are published straight to the web, it connects easily to social networks. An amateur interactive fiction and hypertext community could be built thanks to these affordances. ***With those we love alive*** is a dystopia that centers on a character enslaved by a monstrous larval queen. The work consists of poetic fragments in a hypertext structure with choices that fan out, and solicits a modulation between close and hyperreading. Both the text and the background change colors, dependent on the choices you make. Heartscape makes use of a device called 'stretch-text': hyperlinks that make the

on-screen text expand with new lines or paragraphs emerging between the lines. Sometimes when you choose and click an option, the unstable text jumps to another point on the screen, so that descriptions, adjectives or a character's characteristics change. This textual fluidity inspires a non-linear reading with fleeting attention. What makes this electronic text unique, however, is that it wears its rules out notice on its sleeve, as it explicitly indicates when it pays off to pay attention and close read. This happens quite literally, like when you arrive at a defamiliarizing, poetic description, like

> 'Urchins draw lines in the dust, doing their rituals of luck against starvation and luck against police brutality'

and your choices are to either 'watch' 'look away'. This takes you out of your rhythm of reading and navigation, it urges you to slow down, take it in (or actively reject such an experience, understanding this entails an ethical and political act as well). 'Textual adventure games' typically emphasize action. Yet, Porpentine Charity Heartscape's work gives us choices that are mundane and introspective. You can choose to take a nap (the screen will turn to black) or lie awake, to meditate, to regulate your breathing (when you hold your breath the text disappears and the background music stops). The author says in an interview about one of her works: 'The only way to get anywhere ... is to stop consuming and start paying attention.'[1] The reader must engage in close reading to grasp the meaning of the rich text, yet, as a work of interactive fiction that is constantly shifting, it also asks us to hyperread with dispersed attention and attune to textual fluidity. These devices together amount to a unique rhythm of reading.

Serial flash text is based on the cognitive techniques of Rapid Serial Visual Presentation (RSVP) that measures attention by noting eye blinks. In e-lit, it has famously been used by the collective **Young-Hae Chang Heavy Industries** whose texts have been programmed in flash with sped-up synchronization of poetry to the beat of jazz. **Adobe Flash** is a multimedia software platform with a timeline-based development environment (Rettberg 2019). Its dependence on key frames and processing instead of the labor- and data-intensive methods of traditional animation deeply transformed how graphic animations were produced and distributed (Salter & Murray 2014). It was a flexible platform that allowed poets who with little experience in coding to work with animation and media elements on a relatively straightforward interface. There are also constraints for creating works of digital literature: readers are unable to see how a work is constructed, because the source files and playable output are separated (Rettberg 2019).

YHCHI's work refers back to the black and white animations on the original Macintosh screens. Take the example of the six-minute Flash poem 'Lotus Blossom' (2002).[2] When the music by Kenny Dorham gathers speed, the text follows suit. Single words or short phrases are fired at the reader in quick succession in a single typeface (usually Monaco) in large font, with jump cuts between words and phrases. The experience is marked by a lack of interactivity: the text is constantly changing and can't be paused, it runs continuously from beginning to end with a speed that at times renders it illegible. The result is, in Jessica Pressman's words, a 'visual onslaught of text that produces an affect of difficulty through […] an aesthetic of inaccessibility' (Pressmann 2009, 318). The lack of control you experience as a reader means you can only focus on certain words; there is a sense of missing something, but you cannot go back. *Deep attention* is rendered impossible, flash text elicits a dispersed attention, a state of dreamlike distraction. Alterations of speed can be a used to draw attention to what we ordinarily filter out, at the thresholds of perception. Such works offer us the chance to attend to reality at a different speed, in different rhythms, than we are used to; they have a defamiliarizing effect.

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[1] Howling Dogs | Rhizome
[2] https://www.yhchang.com/LOTUS_BLOSSOM_V.html

Alternatively, immersive reading experiences can be stimulated, as has been done with **Lotus**, an iPhone and iPad by **Niels 't Hooft and Saskia Freeke** (with game studio Codeglue and audio studio SonicPicnic). *Lotus* is a novella enhanced with color, sounds, and animation, a Wagnerian ebook of sorts, with Leitmotif melodies tied to different characters. It is a meditative app that promises (and delivers) an immersive, absorbing reading experience. All elements are designed to shut out possible distractions from outside. Minimalist soundscapes of white noise-like sounds, sparse diegetic sound samples (wind and water, street sounds, murmurs, air conditioning noises in a hotel lobby) in your headphones help you concentrate. Together color and audio create a 'sense scape'. The text is cut up into small chunks, progress is indicated by the Lotus symbol, central to the storyline and visible for both reader and characters. It visualizes the structure of the story, that is set in different times. Attentional modulation is manipulated in subtle ways: the chunks of text differ in length; the less is displayed, the more attention is drawn to what you see, which will gain in importance. Some segments are presented line by line, hence emphasized. Tension is also enhanced this way. Sudden and dramatic changes of color will also trigger close reading. Thus, text design modulates reading tempo, rhythm, and attention.

Conclusion

Such works raise interesting questions about how and if the digital age equips the reader with an advantage to selectively modulate various kinds of attention during reading. They might even offer a cognitive training in the allocation and modulation of attention, especially where they test conventional reading practices with boredom, distraction, and overload. Different interpretive stances activate different forms of attention: vigilance, noticing, absorption, a broad or narrow focus, single-minded fixation, or expansive flexibility, and so on. Just as reading extended prose fiction in the novel does according to Wolf (2018), this might train our faculties for 'cognitive patience'.

These are in turn enabled by the platforms which distribute the works, and as such we need a concept of platform literacy in platform-based attention economies, to grasp the workings of attentional modulation. The scope of this paper does not allow me to develop such an approach, only as a brief sketch of concerns and to outline its necessity. So far, platform studies in e-lit have largely focused on platforms' affordances for the side of production and creation, but not so much the reception. The platformization of culture raises questions about the future of media literacy.

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