"What's on Your Mind?" – A Literary Dialogue with the Machine-Computer

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Fig. 1. When English speakers log on to Facebook, they are asked "What's on your mind?"

When English speakers log on to Facebook, they are asked "What's on your mind?," a turn of phrase that prompts a dialogue with the platform, but also raises the issue of the modelling of the mind inside the machine (Fig. 1). All software tools are based on models of human action, desire, perception, and cognition; they anticipate the user's expectations, engage them in a dialogue based more or less on transparent presumptions. Menus and buttons, for example, are proposals to be creative, but also impose constraints and standards on the content; forms to be filled out are invitations to "express oneself," but also limit the space for expression, resulting in a way of organising the content that, in part, is not within the remit of the author.

"Architext" is what the French researchers Yves Jeanneret and Emmanuel Souchier called the highly structured writing interface of software tools and platforms (103). The architext imposes constraints on creativity. Nevertheless, a prefabricated device can also result in active appropriation. The poetics of digital literature lie, for me, in the complex and tense dialogue between writers and readers who perceive, interact with and interpret the contents and structures of the visible text on the screen, and its polyphonic programme that makes the voice of the author resonate, as well as the mind models of software designers and manufacturers, and the computer's "will" that updates the programme.

Recently, the formatting process of the text has taken a new turn which I refer to as "computext." While architext imposes a form on media content, computext anticipates its very production, and sometimes even writes instead of the author, as if the machine is able to read their mind. Predictive text generators, like Gmail's "Smart Compose," use machine-learning processes based on artificial "neural" networks, that predict what the human user is about to write according to probability. For example, when they answer an email, they just have to start their sentences for the system to complete them automatically. The suggestions are calculated by algorithms that detect expressions used regularly by all Gmail users, and by the individual. For example, when they answer an email from a colleague, they just have to start the sentences for the system to complete them automatically (Fig. 2): "Dear Nadège, I hope you a (…re well). Sorry I (… didn't get back to you sooner). I've been really busy (… lately)."
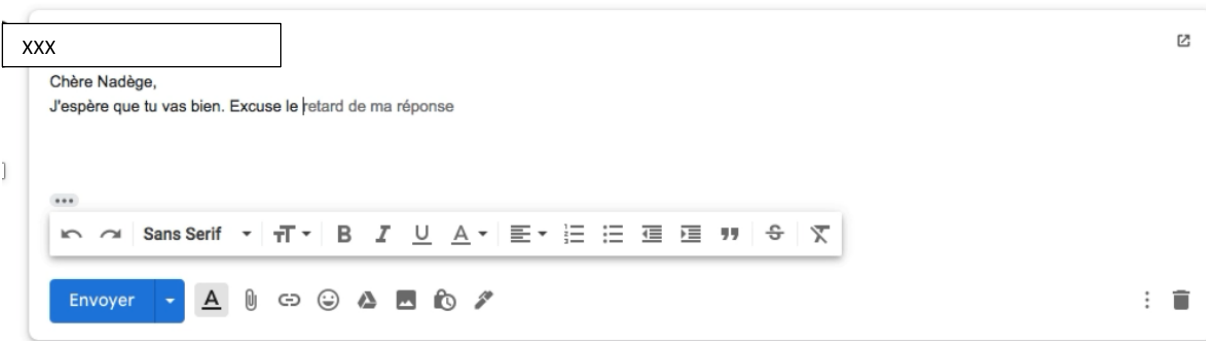
Fig. 2. Gmail's "Smart Compose" predictive text generator.

Engineers at Google confirm that the probability is calculated as soon as the user starts typing an email, but the results are nonetheless limited by the programme as, early on, the company had to deal with racist and sexist comments in the results generated (Chen, Cao et al.). When Gmail writes out what the user may or may not "have in mind," the result reflects a representation of the mind as a network of highly routinised connections between bits of content. Yet it also reflects what Google tries to impose as standards of expression on its community of users. A software tool for writing, editing, and publishing such as Word, PowerPoint, Facebook, Instagram, or Gmail, is not a neutral intermediary. They embody the viewpoints of their owners and engineers, from Steve Jobs to Mark Zuckerberg. The relationship between the "voices" inside the produced text can be disturbing, if not dissonant. From the infancy of net art to today's writings on social networks, these tensions have been reflected by writers who attempt to deconstruct it.

Since the 2000s, my objective as an author and academic in the field of digital literature has been to examine the ambiguous relationship of submission and appropriation, of quenched inspiration, of consensual exploitation and accepted governmentality that structures the dialogue between the human author and the machine-computer. In this article, I will locate the poetics of digital literature in the dialogical process that occurs between the human and the machine, rather

than in the result produced. I will explore this hypothesis through a techno-semiotic analysis of works created by other authors and by myself, relying on a materialist approach that "refuses to cut the interpretation of texts off from the effective conditions of their production and use" (Souchier, Gomez-Mejia et al. 9). The notions of "architext" and "computext" will be central in this discussion.

Don't touch me: a paradoxical dialogue between the recipient and the machine

Don't touch me is a 2003 hypermedia piece by Annie Abrahams which strikingly demonstrates the impact of representations of the mind encoded in software tools on writing and reading practices, and the unequal balance of power between the human actors and the machine that largely exceeds the will of the author. Up until 2020, when a reader launched the piece, a white screen opened with an interactive animation in the bottom right-hand corner, depicting the form of a woman lying on a bed (Fig. 3). As the reader moved the cursor toward the animation, the women turned around as if the movement had disturbed her. At the same time, a woman's voice started speaking about a childhood memory, in the first person – as long as the reader resisted the temptation to run the cursor over the sleeping woman. If they did so, the narrative went back to the beginning, again and again: the reader's actions were sanctioned by the increasingly insistent demand, written above the image: "ne me touchez pas / don't touch me."

Since the 2000s, Serge Bouchardon and I have been analysing the poetic tropes behind the form of hypermedia rhetoric.[1] Our hypothesis was that the advent of digital literature came with new poetic tropes, such as "animated metaphors" and "interactive metalepses." Obviously, a metalepsis is, first and foremost, a trope used in novels in print and in the cinema. A metalepsis

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[1] Bouchardon and Heckman 2012; Saemmer 2011.

occurs when, for example, a character in a novel asks the spectator to get up and shut the door. It suggests, as Jorge Luis Borges tells us, "that if the characters in a narrative can be readers or spectators, then, we, as their readers or spectators, can be fictional characters" (709). I remember the thrill I felt in the 2000s faced with literary hypertexts such as *Zeit für die Bombe* by Susanne Berkenheger,[2] when metalepsis was suddenly no longer just a fake transgression of the barrier between the world of fiction and that of the reader. Unlike characters in a Woody Allen film who address the viewer without the viewer being in a position to really come to their aid, in Abrahams' piece, the reader can, through a physical act, really have an influence on the way the narrative proceeds.

By orchestrating a dream about the fragile reconstruction of a childhood memory as a dialogue between the human reader and the machine, Abrahams illustrates one of information technology's founding fantasies: the creation of an autobiographical memory space linked together by associations and processed by the computer thanks to human stimulation. But Abrahams also illustrates the limits of this fantasy of preserving human memory inside the machine, as the compulsive urge to activate the hypermedia prevents the memorial space from working.

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[2] *Zeit für die Bombe,* one of the first ever pieces of German hyperfiction, was created by Susanne Berkenheger in 1997. At the bottom of one page of *Zeit für die Bombe*, we notice for example a short passage that is both underlined and in red. The graphic command of "drück den kleinen Schalter" (flick the small switch) is a hyperlink. In terms of the narrative, it is addressed to a fictional character. However, the hyperlink leaves the text open to manipulation and invites the reader to also flick the small switch in question (Saemmer 2015).
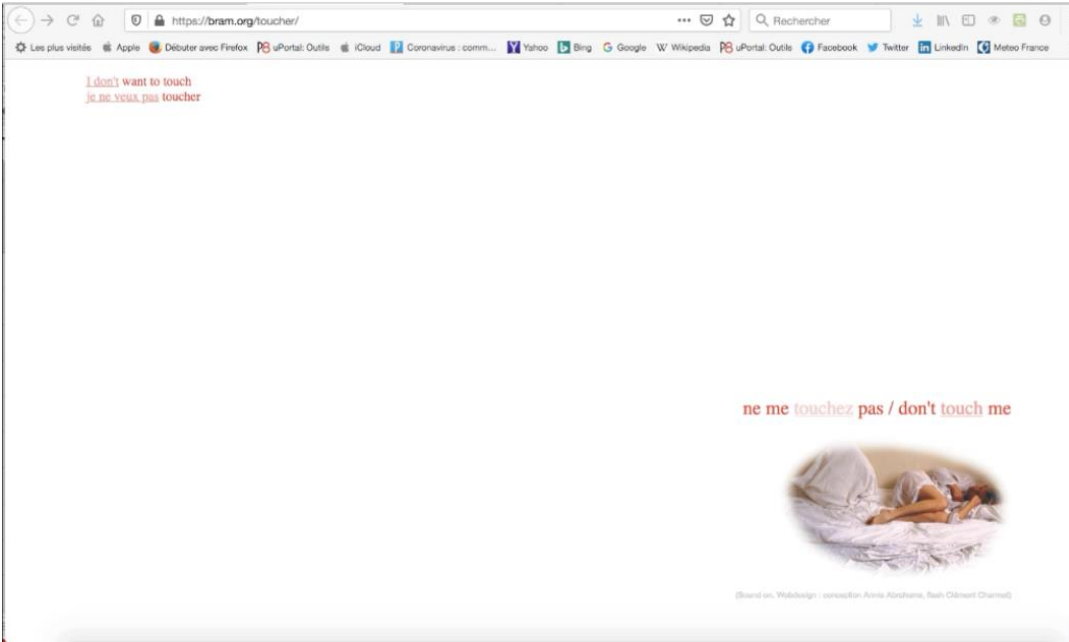
Fig. 3. Annie Abrahams, Don't touch me, 2003.

In 2021, this paradoxical dialogue of seduction and frustration takes a radical turn. If a reader consults the piece on a recent computer, the interface notifies them that there is a "missing module," and redirects them to the Adobe website (Fig. 4). When *Don't touch me* was originally made, the dialogue between the piece and the machine took place offstage, away from the reader, as Flash player was already installed on most computers. Today, this is no longer the case and, even worse, from 2021 onwards, Adobe no longer updates the player. The childhood memory is not just altered by the eventual impatience of the *reader*, an industrial decision makes it impossible to access this memory.
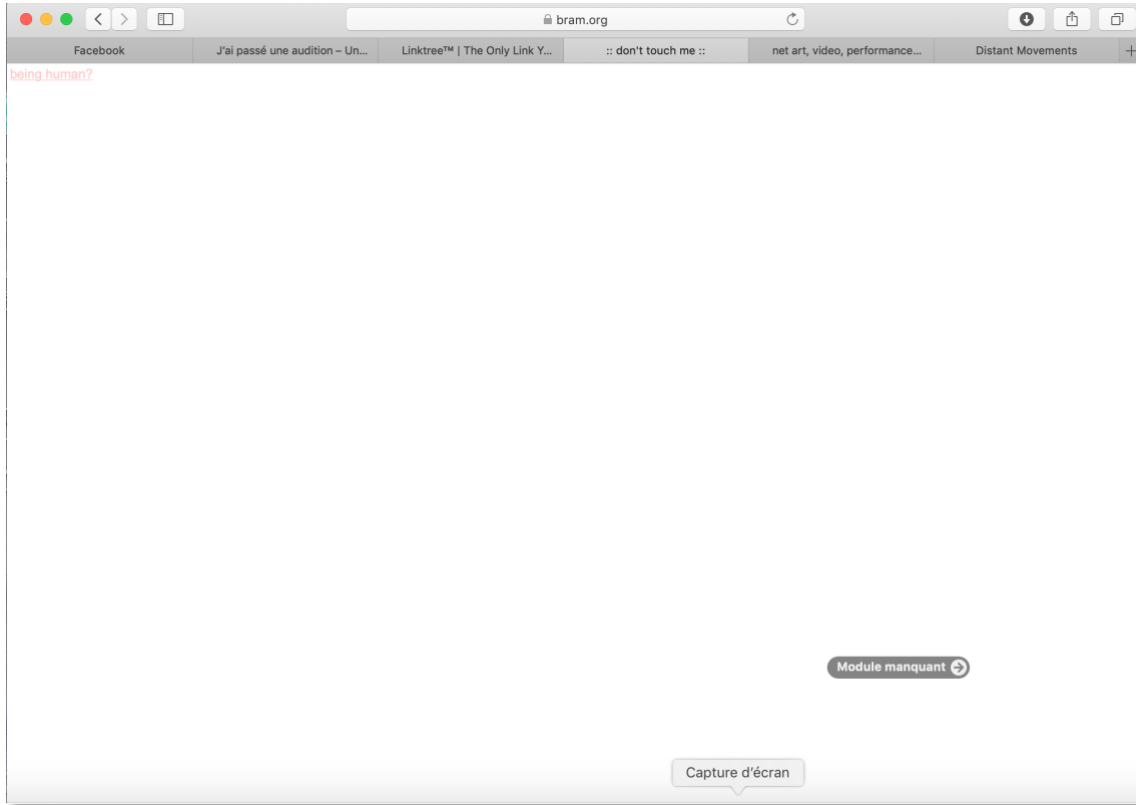
Fig. 4. Screenshot of the opening page of *Don't touch me* in 2021.

I consider the state of the piece at the end of the year 2020, which invites the reader to install the module while already warning them of its obsolescence, to be a version of *Don't touch me* that reveals its techno-semiotic structure; the state where the module launches automatically is no doubt the version that most faithfully reflects the artist's intentions; the 2021 version which prevents the interactive animation from launching, definitively illustrates that all digital pieces are not only performative and fragile, but aesthetically ephemeral (Saemmer). All three versions are valid and make up the poetics of the digital art piece *Don't touch me*: a testimony of the dialogical and performative nature of memorial processes loaded onto a machine, but also a testimony of its fragility and risk of loss.

On the procedural, performative, and polyphonic nature of digital art

Digital art pieces cannot be reduced to their hypermedia content alone. As Philippe Bootz points out, they are *procedural*: their hypermedia structure is executed live, using a programme, on a machine whose characteristics can vary from one computer brand to the next, from one era to another. Furthermore, digital art works are intrinsically *performative*. They unfold in the dialogue between, on the one hand, the piece and the human, and on the other, the piece and the machine. As we have seen with the planned obsolescence of Flash software, this double dialogue does not happen on a level playing field. The French artist Emmanuel Guez affirms that hardware and software forces digital art to march in step with industry, insisting on the inexorable dominance of big IT firms over digital art.

Moreover, all digital art works are *polyphonic*. In order to work on a computer, art works need an operating system that structures the display in advance. The Apple symbol or the Microsoft primary-coloured window logo then become an integral part of the work and, as Gustavo Gomez-Mejia tells us, "for the first time ever in the history of writing, this is evidence of the explicit intrusion of commercial announcers into our daily writing practices" (65). [3]

Apart from requiring hardware, many digital art works are made using software tools. The software tool and its "architext" materialise points of view and values, "an ideology of writing and communication" (Souchier, Candel et al. 160), through the proposals it makes to the user in menus and icons, and through the frames it imposes on a text. In using this "architext," the author has to deal with recommendations and anticipations regarding what they may (or may not) have on mind: drop-down menus are injunctions to give media content a pre-defined format; forms to be filled

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[3] Some pieces are of course programmed "by hand" by the artist, without the use of industrial software. Nevertheless, programming languages are not invented from scratch each time a piece is created, instead they follow traditions, they materialise values. The debate caused by the use of "master" and "slave" terminology by Python coding language (Soon, Cox) is an eloquent example of how these programmes can be culturally charged.

out limit the space for expression. Even though the architext is no longer apparent, once the work is published, as is the case in *Don't touch me* by Annie Abrahams where the architext has been incorporated into the piece, and subsequently disappears, the structure of the work crumbles.

Böhmische Dörfer: A literary dialogue with architext

When the author relies on a software tool or an industrial platform to create a literary work, they invest in a structure that was not created for the task at hand. The tense dialogue with the prefabricated industrial tool and its anticipations regarding the creative process, is an integral part of the work. Nevertheless, a prefabricated device can also result in active appropriation by the author. In the 2000s, Jean-Pierre Balpe experimented with PowerPoint to write his "Cinépoèmes." Twenty years later, I used presentation software Prezi to script my exploration of a family memory involving the forced migration of the Sudeten people, a German-speaking minority in Czechoslovakia at the end of the Second World War. My grandmother was thrown out of her village, along with her three children and was forced onto one of the death marches that cost the lives of hundreds of Sudeten people. However, as the Sudeten had made a pact with the Nazi regime when Czechoslovakia was annexed by the Third Reich, the story never came up in family conversations. It was only after the Berlin Wall came down that I was able to access some archival material and start to reconstruct this memory, at least partially.
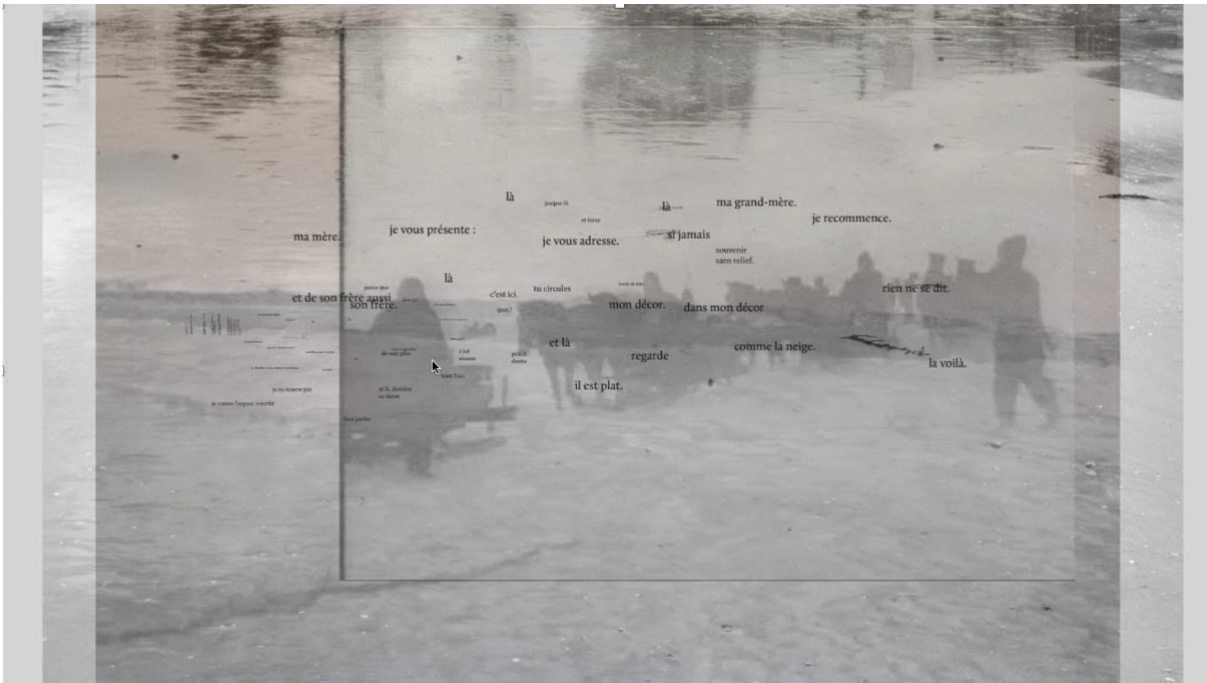
Fig. 5. Open canvas from Alexandra Saemmer, Böhmische Dörfer, 2011.

Prezi software does not offer a structured, slide by slide "architext" for a presentation as, for instance, PowerPoint does; instead, it positions all of the visual and written material in one slide, or "open canvas," and then links the elements by numbered browsing paths. The author can navigate freely through the elements, either chronologically or in a different order during the presentation. The "zoom reveal" function lets the author programme the zooms or unveil details by hand as the presentation unfolds.

I uploaded an archival video to the background of *Böhmische Dörfer*, a rare piece of visual evidence of the Sudeten people's death marches. I then placed text elements on top of the video (Fig. 5) so that the viewer could watch it clearly by zooming in on the video, but if they tried to concentrate on the written narrative, they would literally lose sight of the video. I made it impossible to consult the image and the text at the same time. The dizziness that I sometimes feel

as a trivial Prezi presentation automatically zooms in and out seemed, to me, to translate the feeling of imbalance that I had as soon as I began to explore these patchy family memories.

I wrote *Böhmische Dörfer* as a conscious dialogue with the industrial software tool Prezi and its anticipations on the functioning of the human mind which allowed me to give the memorial space a form that *seemed* to correspond well. Nevertheless, I also negotiated the process with the tool's questionable suppositions on this functioning. Firstly, the tool represents the functioning of a memory space as a "neuronal" canvas of contents and links – a very simplified translation of the actual processes taking place in the human brain. Secondly, the company states that they also use "neuroscience" in order to make presentations of these spaces "more engaging, persuasive and memorable (Prezi Software Presentation)" for the receiver: the possibility to alternate zooms in and out, to employ smooth transitions, spectacular loops, one-off dives and panoramic overviews in a non-linear way is supposed to help the audience memorize the content. In *Böhmische Dörfer*, the "neural" connections mimed by the tool's navigation however did not allow the rendering of the patchy memory of the expulsion of the Sudeten people in a "memorable" way; quite the opposite. In fact, I used the tool to show that the reconstruction of this memory was impossible, for the author as well as for the reader; the spectacular effects of Prezi only emphasise the absence of a narrative thread of this family memory which is actually lost, because most of the actors are dead, but also because of the unspoken shame and resentments which still weigh on the memory of the Sudeten people.

The fictional profile: a literary dialogue with a hidden narrator

Jean-Pierre Balpe was among the first writers to experiment with industrial software tools in digital literature, and he also initiated in France what I consider to be an emerging full-blown literary

genre, the "fictional profile" on social networks. For a number of years now, Jean-Pierre Balpe has had many identities on Facebook, including Rachel Charlus, Germaine Proust, Antoine Elstir, Maurice Roman et al. He updates Rachel Charlus' profile daily, having her post automatically generated proverbs, comment on everyday events, as well as share and interact with other profiles, be they fictional or not (Fig. 6).
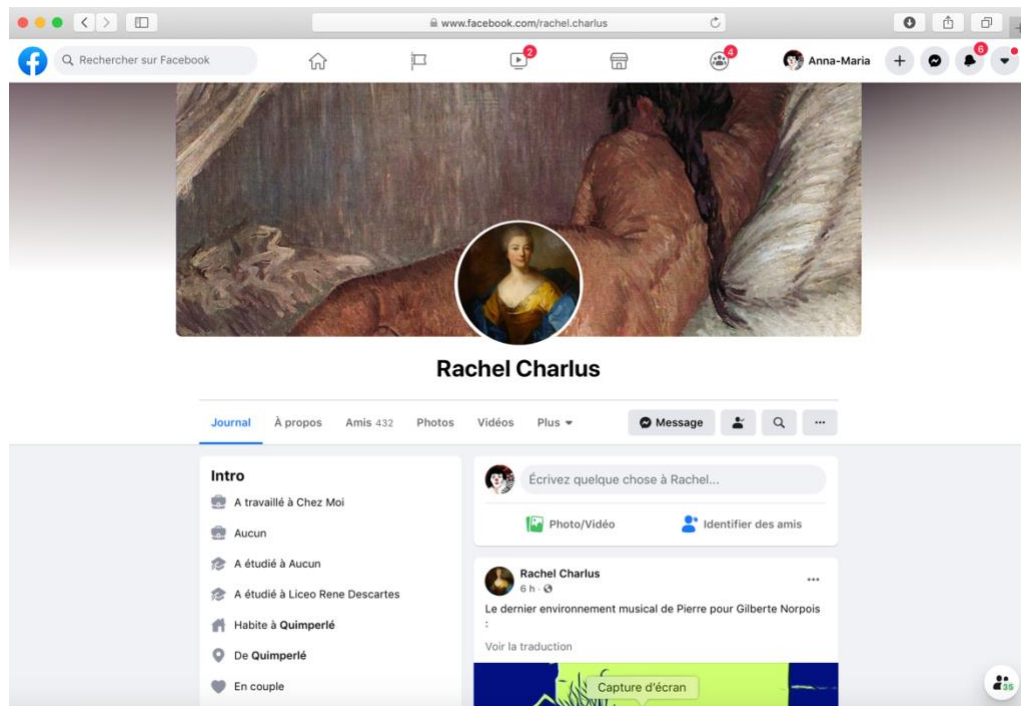

Fig. 6. Jean-Pierre Balpe's fictional profile "Rachel Charlus" on Facebook.

A fictional profile is a narration that follows the daily flow of social network posts (Saemmer 2021). Of course, Rachel Charlus' posts could be extracted from the platform and published on paper, but they take on a specific meaning for the reader when surrounded by thousands of diffracted representations of everyday news. The fictional profile tells its story through its very existence on a social network. As narratology theorist Raphaël Baroni (2017) explains, when we are immersed in the fictional story of a printed novel, we are both involved in the world we are reading about while also being locked out of it. With the fictional profile, for the first time in

literary history, the reader can contact a fictional character through a social network and hope to get an answer. Rachel Charlus's maxim, "Virtue can only be found in a cultivated, enlightened soul that is perfected by continuous exercise" elicited a comment from a reader: "I hope this is generated text, as it is not only stupid, it is a dogmatic, elitist monstrosity," only for Rachel Charlus to reply: "Dear Sir, who do you take me for?" (Fig. 7)

Fig. 7. Screenshot of communicative exchange between reader and fictional character on Jean-Pierre Balpe's fictional profile "Rachel Charlus" on Facebook.

When a writer creates a fictional profile on Facebook, they begin by outlining the contours by filling out the "architext" provided by the platform as to the age, gender, place of birth, interests, and friend circle of their character. They then bring their character to "life" by posting on its behalf and reacting to the various interactions of other users. But this is not all. The contours of the fictional profile are not only defined by the identity it openly claims, by what it writes or shares.

The social network also takes into account behaviours such as the time spent looking at a particular image, and cookies harvesting data that are *not* declared as such by the author but are nevertheless used to categorise the profile. The advertisements inserted on the newsfeed of a profile are selected by the company according to the characteristics of this calculated "shadow." The authority that categorises the shadow profile could be considered to be a sort of narrator inside the tool that knows more about the character than the writer does.

It is possible to access a shadow profile on Facebook using a function that allows users to view and adjust their "ad preferences"(Facebook advertisers). The profile is defined according to centers of interest that are categorised as follows: News, Entertainment, People, Pastimes and Activities, Lifestyle and Culture. Facebook only displays the results of calculations carried out on the data harvested but does not give details as to the level of importance given to each category. However, if we "reverse-engineer" the system by doing a cross study of the shadow profiles of characters with different characteristics, we can throw some light on the blind spots in the process.

Nouvelles de la Colonie is a collaborative narrative that I initiated on Facebook in 2018 (Fig. 8) (Saemmer et al). Five profiles wrote a novel of anticipation from day to day, about a world where life no longer existed outside the platform. To be more exact, the characters are all part of an entirely virtual university campus, where even using one's legs is forbidden. Anna-Maria Wegekreuz, Ivan Arcelov, Pavel Karandash, Olga Limitrova and Brice Quarante told the story of this captivity through their profiles, which were themselves captives of Facebook.

Fig. 8. Screenshot of the page of Nouvelles de la Colonie, a collaborative narrative on Facebook.

Anna-Maria Wegekreuz, my character in *Nouvelles de la Colonie*, is a "fictional profile." As already mentioned, a fictional profile tells its story through the data it declares in its account details, and through the posts it publishes, shares, comments on or likes under that name. But the story of the fictional profile is also "told" by the platform: its personal posts are mixed with others in the newsfeed, according to a rating system that takes into account subjects of past interest, when the profile commented or liked a friend's post, or even if they just stopped to look at a given image. Advertising posts are inserted by Facebook according to this behaviour, but also based on cookies and the computer's geolocation. For example, advertisement for a Gothic-style skull appeared on Anna-Maria Wegekreuz's Facebook page based not on her declared profile, but on her shadow

profile: Anna has never openly expressed an interest in these types of objects, but the platform seems to know what Anna likes, more than the author does.

Among the "centres of interest" that Facebook has deduced for the shadow profile Anna-Maria Wegekreuz (Fig. 8), luxury products, jewellery and… Halloween all appear at the top of the list; but it also features the travel website Booking.com even though, in the fictional world of the Colony, all travel is forbidden. Art and literature are on the list, but so are… skulls (*Crâne* in French), an interest I definitely did not attribute to the character. But, I have to admit that I myself have a collection of gothic jewellery!

Let us take a closer look at the algorithmic process in order to understand the deductions made by Facebook about these "unconscious" desires and passions of the character. Dominique Cardon tells us that, in the artificial neural networks used by big companies, the future of the identity of the user is predicted according to the individual user's behaviours, but also "using the past of those who look like them" (380). Yann Le Cun, an engineer at Facebook, explains how this works: on the one hand, the neural network takes into account the individual's areas of interest, calculated according to their past interests; however, it is also pulled along by the billions of daily clicks on Facebook from other users. The neural network predicts whether or not the person will click on a given advertisement according to the ponderation between the individual and the group, relying on de-contextualised data that predict future interactions – including those of which it is only vaguely aware. As Dominique Cardon puts it: "Predictive algorithms do not give an answer as to what individuals pretend to want to do, but to what they do without wanting to admit it" (173).

Fig. 9. Screenshot of the declared profile of the fictional character Anna-Maria Wegekreuz on Facebook, and the calculated categories of her shadow profile.

Fictional profiles on Facebook are strictly outlined by the company, as the company has a certain idea of its "model" user (Eco): the importance of their openly declared interests and desires, but also their hidden wishes, reflexes, and passions, calculated and anticipated by the "computext." The techno-semiotic structure of the newsfeed, where profile posts are mixed with commercial contributions selected by the platform, reflect the company's model of the human user's conscious and unconscious mind structure, as well as industrial priorities.

However, contrary to the pessimistic pronouncements by dissident software engineers in the Netflix documentary *The Social Dilemma* (2020), the user that corresponds perfectly to the puppet invented by engineers does in fact not exist. Once the author of a fictional profile knows how Facebook creates the declared profile and its shadow, they can use this knowledge: the author may then not only focus on what the fictional profile openly declares, but make sure that the slightest reflexes – momentary stops on an image, geolocation, etc. – do not reflect their personal

preferences, but those of the character. In other words, the author does not only write the character, they literally *embody* its interactions.

Instead of concluding

In software tools and on platforms, the visual formatting of media content and its appearance on the screen are governed by "architext." The constraints imposed by predefined colours, fonts, frames and menus on writing and editing do not only standardize the form of digital texts; they rationalize it, following models of human expectation, wishes and desires as well as economic and political interests, as demonstrated by the evolution of Abraham's piece *Don't touch me* based on Flash software. This formatting process has recently taken a new turn that I referred to as "computext." While architext imposes a form on media content, computext anticipates its very production, and writes *instead* of the author. In the last few decades, digital literature has invented its own poetics in relation to architext and its constraints in terms of standardization and rationalization. How will these poetics be reinvented in the age of computext? In answer to this question, I again suggest locating the "literariness" of digital writing in the dialogical process that occurs between the human and the machine-computer as opposed to the result produced.

Whereas the proposals by Facebook's newsfeed or Google's Smart compose first and foremost may raise fears of new forms of standardization, the results calculated by the *Write with transformer* neural network, an open science tool (Write with transformer web app), give us a taste of the literary potential of this dialogue. The user, first of all, chooses an AI model from a list. By clicking "trigger autocomplete" on the page, options are given for the continuation of each sentence. By setting the "temperature," the user can opt for a varying degree of conventionality, in other words: they can encourage results that converge with or deviate from the regular responses in the generator's database, without the pressure to respect any "standards." If the user has the app

complete a list using first a high level of conventionality, then a low one, it seems for example like the app can decide to no longer follow the standards it detects, and to materialise the idea of a machine-writer that uses the standards freely. Obviously, *Write with transformer*, like any text generator, reveals discursive routines, but the writer can regulate the level of routinisation. Notwithstanding these issues, *Write with transformer* above all begins a lively conversation with the literary library. Each piece of text proposed comes from the books in the tool's database, and these origins continue to resonate in the new text produced as the author selects, rejects or rewrites the proposals. As Tom Lebrun and René Audet state, writing with machine "computext" may be considered as curatorial, and involves finding an individual path through the avalanche of content generated by AI.

On Facebook, the text of a fictional profile is immersed in a mesh of "polyphonic quotes, gloss and reruns" (Candel 125) resulting from a very restrictive and constraint model of the human mind, based on a declared conscious and a calculated subconscious, that give rise to part of its poetics if the writer tries to negotiate with and subvert this model. Using tools like *Write with transformer*, singular texts emerge from this mesh while remaining deeply connected to the algorithmic structure of the tool, and the content of its database. I imagine the future of literary writing with artificial neural networks as an enquiry that digs into the literature of the world as if it were an open database in order to forge a new path.

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