



# When is the right time to remember? Social media memories, temporality and the kairologic

new media & society  
2024, Vol. 26(5) 2872–2888  
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DOI: 10.1177/14614448221096768  
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## Abstract

This article asks what impact temporality and timing have on the ways in which memories are felt and made to matter on social media. Drawing on Taina Bucher's theorisation of the 'kairologic' of algorithmic media, I explore how digital memories are resurfaced or made visible to people at the 'right time' in the present. The article proposes the notion of 'right-time memories' to examine the ways in which social media platforms and timing performatively shape people's engagement with the past. Drawing on interview and focus group data, I explore four ways that right-time memories are sociotechnically produced and felt in everyday life: through an anniversary logic, personalisation, rhythms, and tensions. Ultimately, it is argued that when memories are made to matter in the present is a crucial way to further examine the temporal politics of social media platforms and algorithms.

## Keywords

Algorithm, memory, social media, timing

## Introduction

What is the relationship between social media, temporality, and the ways in which we remember the past? There has been a proliferation of memory features in recent years, and social media platforms have come to function as giant repositories of people's pasts. Features such as Facebook Memories, Timehop, Apple Memories, and Snapchat

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Memories seek to store and repackage people's past data as 'memories' while also automatically resurfacing these memories at particular times in the present, often at the time of a memory's anniversary. These memories are often made visible to people through notifications like 'you have a new memory from 2 years ago'. This begs the question: does it matter *when* memories are made to matter in the present by social media platforms? If so, what impact does timing have on memory-making? This article examines how the relationship between social media and timing performatively figures in the everyday engagement with the digital past, shaping not only *what* content is resurfaced as 'memories', but also *when* such memories are made to matter in the present. That is, how memories are materialised within the platform and are given a certain importance. Exploring the impact of when digital memories are resurfaced is crucial, given both how algorithmic media operate in general (Bucher, 2020) and how contemporary memory features operate specifically. As we increasingly engage with the past in and through social media and memory features, it is crucial to better understand how these shape and transform our memory practices. As this paper will argue, timing figures as an important element in the construction and resurfacing of social media memories in everyday life.

In 2013, New York developers launched an app called Memoir. Similar to memory features such as Timehop and Apple Memories, Memoir was designed to store and automatically resurface people's past data as 'memories' in the present. The app received access from the user to gather various types of data such as their images, videos, and posts from platforms such as Facebook, Twitter, and Instagram. These memories were then resurfaced within the app at particular times in the present, often at a time it was first documented or stored within the feature. The particular point in time these memories were resurfaced was considered a crucial part of the feature's functionality when it first rolled out. Indeed, one of Memoir's promotional lines was 'Your memories surfaced at the right moments' (Hoskins, 2016: 28). A statement issued by the app's co-founder and CEO, Lee Hoffman, echoed a similar idea: 'we're making these cohesive memories that we play back to you when it's most nostalgically relevant' (Perez, 2013). Although Memoir is now defunct, the notion of memories surfaced at *the right moments* remains highly relevant in the current social media and memory landscape. In fact, the question of when to resurface certain memories has become increasingly central to how contemporary apps and platform features such as Timehop, Facebook Memories, and Apple Memories operate. As a result, the question – when is it the right time to remember the past on social media? – becomes imbued with sociotechnical decisions, processes, and assumptions that are important to explore and unpack.

The notion of memories resurfaced at the 'right moments' is part and parcel of a broader logic that underpins one of the key temporalities of algorithmic media, namely, 'the kairologic' (Bucher, 2018, 2020). According to Taina Bucher (2018), Facebook's News Feed is as much governed by a logic of 'right time', or *kairos*, as it is real time. Bucher argues that this logic of right time is not limited to one specific platform, but has become 'the key temporal mode of algorithmic media' in general (p. 80). As a result, our relationship to digital technologies and social media platforms is increasingly interwoven with notions of timing: 'providing us with the right content, the right way for organizing politically or our daily lives, and the right feeling at the right moment' (Lohmeier et al., 2020: 1522).

Drawing on Taina Bucher's (2020) theorisation of the 'kairologic' of algorithmic media, this article proposes the notion of 'right-time memories' to explore how the timing of social media memories is sociotechnically produced. The idea of right-time memories foregrounds both the ways in which social media platforms attempt to temporally frame memory making as well as emphasising the attempts of platforms and devices to generate memories that appear 'organic' and 'natural'. Whilst machine learning algorithms may give the impression that, for instance, content organically emerges on people's Facebook News Feeds or Twitter Trends, Elinor Carmi (2020) reminds us that, on the contrary, 'there's no type of content that is natural to social media.' This includes social media memories. The memories that are resurfaced on social media are programmed, contingent, and often contested. Right-time memories highlight the particular politics of timing that participates in the resurfacing of memories on social media.

Drawing on interview and focus group data, the article also explores the affective impact of *when* social media memories are resurfaced, made visible or made to matter in everyday life. Ultimately, I seek to make sense of the ways in which people's engagement with the past is increasingly shaped and underpinned by the sociotechnical construction of 'right time' on social media. The notion of right-time memories signals how social media and memory features aim to resurface particular memories to people at particular times in the present. In short, right-time memories aim to make sense of how memories on social media are constructed to matter at the right time, drawing attention to the significance of timing for memory-making. This article thus contributes to our understanding of the intersections of social media and memory (Hoskins, 2016; Humphreys, 2020; Keightley and Pickering, 2014; Serafinelli, 2020; Van Dijck, 2007) by exploring empirically the impact of timing in relation to social media memories and how it is felt in everyday life. Moreover, it seeks to add to our understanding of the heterogeneous impact of digital media, algorithms, and diverse temporalities more generally (Ananny and Finn, 2020; Beer, 2019; Bucher, 2020; Wajcman, 2015, 2018). The aim of this paper is not to capture the totality of people's experiences of engaging with resurfacing memories in everyday life; rather, I want to provide insights into some of the prevalent ways in which timing and memory intersect in contemporary media spaces.

The analysis is divided into four parts, which explore the ways in which right-time memories are both produced on social media platforms and felt by people in everyday life. The first section explores this in relation to the notion of 'anniversaries', whereby memories are resurfaced at particular times in the present usually around their monthly, annual, or seasonal anniversary. Second, right-time memories are explored through the way in which sociotechnically constructed timing amplifies a sense of the past as personal and personalised. The third section examines the role of repetitions, rhythms, and cycles for the emergence of right-time memories. As I show in this section, this engenders certain 'rhythms of remembering', where people's engagement with the past are being re-calibrated with the temporal patterns and rhythms generated by social media algorithms. Finally, I explore some of the tensions generated in and through right-time memories, focusing on instances where these can be understood as badly timed, but also in terms of sense of discomfort that is engendered as a result of the sense of unpredictability that often accompanies right-time memories.

## Social media and memory

The relationship between social media, memory features, and memory has been well explored in contemporary scholarship (Hand, 2017; Hoskins, 2018; Özkul and Humphreys, 2015; Van Dijck, 2010). Different notions such as ‘mediated memories’ (Van Dijck, 2007), ‘digital memories’ (Garde-Hansen et al., 2009) and ‘data mementos’ (Lupton, 2020) have been proposed to make sense of the ways in which digital technologies, platforms and data shape people’s memory practices and their engagement with the past in everyday life. For instance, the notion of ‘mediated memories’, Jose Van Dijck (2007) states, suggests both ‘the activities and the objects we produce and appropriate by means of media technologies, for creating and re-creating a sense of past, present, and future of ourselves in relation to others’ (p. 21). There is therefore a focus on both the active practices involved in creating, storing, remixing, and sharing digital traces from the past in the form of images, videos, posts, and tweets. As such, mediated memories can be understood as ‘evocative objects’ (Turkle, 2007), digital objects such as social media images and tweets triggering memories and feelings of the past. Yet, these mediated memories are not stable or fixed containers for past memories. On the contrary, just like people’s memory practices and attitudes towards the past more generally, mediated memories are highly fluid, changeable and dynamic. As Steph Lawler (2008) remarks, ‘There is no unmediated access to the “facts of the matter”; we remember, we interpret those memories, we re-remember and reinterpret, and so on’ (p. 40). The concept is, therefore, indicative of highly reflexive and dynamic processes and practices.

There has also been a focus on the larger infrastructures and technologies that afford these memory practices in everyday life. For instance, much has been written about the ways in which digital technologies and social media platforms shape the sharing of memories in the present (Keightley and Pickering, 2014; Serafinelli, 2020; Van Dijck, 2010). As social media platforms and other memory devices become increasingly algorithmic, there has also been a growing number of studies into the impact of algorithms and automation on memory. Indeed, there have been calls for research into the ways in which social media specifically ‘facilitate memory work through the reminding of previous traces’ (Özkul and Humphreys, 2015: 363). As opposed to memory features such as Timehop, features like Facebook Memories use machine learning and neural network algorithms to actively resurface the past to people, that is, to push certain memories within users’ parameters of attention (Jacobsen and Beer, 2021). Prey and Smit (2019) argue that current social media platforms and memory features construct increasingly ‘personalised’ memories for users, whereas Pereira (2019) explores the ways in which images and videos are automatically clustered on Apple Memories through the use of machine learning algorithms in order to generate ‘memories’ or ‘meaningful stories’ about the user in the present (see also Jacobsen, 2020). Algorithmic systems are ‘apparatuses of mattering’ (Amoore, 2020), and as this repackaging of people’s data into memories becomes increasingly algorithmic, it is crucial to examine *when* algorithms come to matter in the present, especially as this has an impact on how and when people engage with the past.

## Algorithms, temporality and the kairologic

In recent years, there has been considerable scholarly work focusing on the relationship between algorithms and data, on the one hand, and speed, acceleration and efficiency, on

the other (Beer, 2019; Wajcman, 2015, 2018). Past research has focused on, for instance, the temporal affordances of algorithms in the financial sector (Hayles, 2017; Mackenzie, 2011, 2018) and how they are weaving a logic of speed into the fabric of economy and wider society. N. Katherine Hayles (2017) points out that the allure of high-frequency trading (HFT) algorithms resides not only in the ways they are capable of locating opportune stocks to either buy or sell, but also in the sheer speed by which they operate, a speed which far exceeds the cognitive abilities of human stock traders. This, Hayles argues, results in 'incommensurable timelines of human and technical cognizers' (p. 155), fuelling a contest between companies to develop and make use of 'faster and faster algorithms' (p. 165). The power of high-frequency trading algorithms is exemplified, in part, by their capacity to occupy temporal slices that are inaccessible to human actors, time frames in which only algorithms can operate.

The capacity for systems to respond to input data in 'real time' has also been crucial for the proliferation of data analytics and data-driven decision-making processes in society (see, for instance, Van Dijck, 2014). Rob Kitchin (2014) points out, for instance, that real-time data analytics was one of the main promises offered by the advent of Big Data. As David Beer (2019) suggests, 'visions of speediness and the promises of real-time knowing are central to the spread and intensification of data-led processes throughout the social world' (p. 39). The notion of real time also remains crucial to the promise and operationability of social media platforms (Weltevrede et al., 2014). For instance, in his discussion of Twitter trends, Tarleton Gillespie (2016) points out that Twitter trending algorithms rely on a very narrow 'when' when detecting and determining trending topics within the platform. That is, trending algorithms not only identify the topics that generate the most activity or noise on the platform, but also focus on a particular moment in time, a narrow temporal slice. In other words, trending topics rely not so much on speed as the need to remain current, fresh, timely, a logic undergirded by real-time algorithmic calculations and modifications.

However, as social media platforms have come to rely on assemblages of machine learning models and architectures (Mackenzie, 2019), this has had an impact on the kinds of temporalities generated by and through these platforms. Taina Bucher (2018, 2020) argues that social media platforms are increasingly governed by the temporal regime of 'kairos' or 'right time'. Whereas social media used to be organised in reverse chronological order, showing users the most recent content first on their news feeds, Bucher (2020) argues that the focus now has shifted to the deployment of machine learning algorithms in order to 'show everyone the right content at the right time so they don't miss the stories that are important to them' (p. 1700). This shift is indicative of a wider, emerging temporal regime Bucher calls 'the kairologic of algorithmic media' (p. 1708). 'Kairos' here signifies the opportune moments for action or communication. As such, the aim for social media platforms, what Bucher calls 'algorithmic media', is no longer the delivery of 'fresh' or 'most recent' content to users, but rather 'the personalised timing of mediation' (p. 1708). As she states in the book *If . . . Then* (Bucher, 2018: 80), the kairologic has become 'the key temporal mode of algorithmic media'.

That being said, it is important that the notion of 'kairos' or 'right time' should not be construed as a natural or fixed property inherent to time. Like all modes of temporalities, the kairologic of algorithmic media has been imagined, constructed, and iteratively tested. Bucher's term seeks to highlight the sociotechnical processes that

made this construction possible, shaping what comes to count as opportune moments within social media. As Bucher (2020) states, the kairologic ‘is materialized in and through algorithmic feedback loops and specific business intentions and goals’ (p. 1710). It is crucial, then, to examine the politics of how timing is sociotechnically produced on social media and how this shapes people’s memory practices. As the following analysis sections will demonstrate, the idea of the kairologic opens up a conceptual and analytical space to see how social media memories come to matter in the present. I argue that they can be increasingly conceptualised as ‘right-time memories’, that is, memories whose timing is crucial to their mattering in the present and has been sociotechnically produced. The notion seeks to bring attention to the importance of not only *what* memories are being resurfaced in the present, but also *when* in the present these memories come to matter to people.

## Methodology

This article draws on a combination of qualitative interview and focus group data. More specifically, it draws upon 26 remote qualitative interviews conducted from January to March 2019 and four focus groups conducted from May to October 2019. The interview and focus group data were collected as part of a broader project that examined the various everyday effects of algorithmic systems on people’s memory practices. The reason for using different qualitative methods was in order to try and capture the heterogeneous ways that people experience, negotiate, and engage with their memories on social media. That is, the digital memory objects that they are shown on social media platform feature such as Facebook Memories, smartphone features such as Apple Memories or standalone apps like Timehop.

The qualitative interviews were conducted with people who use the popular memory app, Timehop. The rationale for selecting Timehop was rooted both in its widespread use and sustained popularity as well as in the assumption that its user base comprised of people using the app actively, intentionally, and voluntarily. The majority of people who were interviewed used the memory app routinely, often on an everyday basis. However, many of them also drew on their own experiences using other memory features such as Facebook Memories and Apple Memories, which in turn provided interesting points of comparison. The focus groups, on the other hand, were conducted with people discussing their experiences of features such as Facebook Memories, Apple Memories, and Google Photos. The focus group participants had diverse degrees of familiarity with social media and memory applications, ranging from those unfamiliar with these features to those using them on a regular basis. The focus group interviews provided a better understanding of the implicit and passive ways in which people react to seeing ‘memories’ resurfacing on diverse memory features. As such, conducting both in-depth interviews and focus groups engendered a more comprehensive and nuanced insight into the various ways algorithms, social media platforms, temporality, and memory intersect in everyday life.

In terms of the sampling for qualitative interviews, from January to March 2019, I made regular searches on Twitter for mentions of ‘Timehop’ as well as user uploads of ‘Timehop memories’. I used purposive sampling, seeking to get a varied



sample of people particularly in terms of gender, age, ethnicity, and nationality. Potential participants were contacted directly on Twitter and invited to take part in an online interview about their use of the memory app. Twenty-six people agreed and were provided with an information sheet and a consent form via email. The sample was demographically and nationally varied. In terms of age, the sample ranged from 22 to 60. The sampling for the focus groups, on the other hand, occurred between May and October 2019, and involved a much broader sampling frame. The recruitment of participants took place through advertising and directly approaching social and community groups. The sample varied in age, ranging from 18 to people in their late 70s. The focus groups lasted approximately 1 hour, and at the start of the focus group discussion it was explained how one particular feature, Facebook Memories, functioned, using screenshots and images. The following discussion encompassed a variety of topics, where participants shared their own thoughts of the feature as well as broader reflections on the impact of social media on memory. Some also reflected on their own use of the feature as well as other memory applications. The interviews and focus groups were coded thematically, according to categories such as 'practices', 'affects', 'memories', 'numbers', 'affordances', 'temporalities' and 'perceptions of the app'. They provided not only insight into how people used various memory features, but also how they negotiate the impact of social media platforms, algorithms and automation on their remembrance of the past in diverse ways.

Through the use of these qualitative approaches, I was able to examine a variety of ways in which people experience, respond to, and negotiate different memory features and how these shape their relationship to the past. The data also provided insights into the ways (programmed) timing operates as a crucial aspect of the functionality of memory features. As the rest of the article will show, the times at which memories are made to matter have a crucial impact on people's engagement with social media memories. The interviews and focus groups also provided interesting juxtapositions and points of contrast between different memory features' production and use of timing. The following will explore four overarching themes to emerge from the data; these are themes which broadly examine, first, how right-time memories are sociotechnically instantiated and, second, how they are felt and experienced in everyday life.

## The politics of right-time memories in everyday life

*'It's more momentous to remember it at that exact moment': The Politics of 'Anniversary'*

One of the core ways in which right-time memories are constructed and made to matter on social media is through an 'anniversary framework'. Features such as Timehop and Facebook memories operate within a framework whereby memories are resurfaced or made visible to users typically on the 'same months and date but different year from the date the content is meant to be consumed' (Humphreys, 2020: 1664). Many participants, for instance, discussed the effects of this temporal framing, being reminded of certain memories at certain points in time. One of the participants, Quentin, stated that

You think photos bring back that memory or something, and when people look back at photos, it brings that whole nostalgic feeling. But to get it on that same day, I feel like I could walk outside and the weather was closer to the same.

As is suggested here, the anniversary framing participated in the construction of a memory that felt more real, more visceral, highlighting the intimate interplay between remembering, timing, and embodiment (Connerton, 1989). This was also echoed in the interview with Paul, who stated that ‘sometimes I think I can actually almost feel like where I was a year ago or two years ago or three years ago’. In this context, the anniversary framing figures as one of the key mechanisms of right-time memories, shaping how memories on social media are made relevant to people and how they are felt in the present. Here, right-time memories consist of people’s past data rendered into memories in the present, made tangible and immediate at specific points in time, often at the point of an anniversary.

The anniversary framing of social media memories was also said to add to the emotional weight and significance of certain memories. Referring to her use of Timehop, Sarah states,

There’s something special about having them delivered back on the same day a year later, five years later, three years later. I guess because there does seem to be a thread that runs through time and space on that same day that makes it feel more momentous to remember it at that exact moment.

Memories resurfaced at such particular times, as suggested by this participant, can add to people’s emotional engagement with a certain memory. Moreover, it can engender a sense that the past and present somehow align, creating a ‘thread that runs through time and space on that same day’. This is an idea also echoed in the interview with Francis, where he states that this form of resurfacing ‘does heighten the remembrance of it a little bit’. That is, it can add a sense of continuity, specificity and relevance to the memory being presented. Here, the anniversary framing can be seen to add to a sense of memories being resurfaced at just the ‘right time’, adding weight to the argument that ‘the more important goal for these media is to deliver content that *feels* right, or at more precisely, attempts at delivering guesses or approximations of something that may feel right’ (Bucher, 2020: 1708).

Yet, it is also important to acknowledge the sociotechnical nature of this form of temporal framing. In March 2019, I conducted a 2-hour interview with a software engineer who was involved in the memory app Timehop. When asked about the temporal framing of memories on their feature, the software engineer stated,

The year timeframe was something that we had arrived at after testing a whole bunch of stuff. We started off with a year but we were like, wouldn’t it be interesting to do a month or six months or some other timeframe? But the year ago timeframe was actually very powerful, because so much of your life is the same year to year on this day . . . Because all those things are the same, the differences in your life, between you right now and you then, is almost highlighted by contrast. We did something where we did six months back and so much is so different that you can’t place your own self in that time.

Rather than being a ‘natural’ or inevitable way of slicing of time, the anniversary framing emerges as a sociotechnical and contingent project, aimed at maximising the emotional impact in users. It is an emergent product of iterative testing and experimentation, feedback loops, and processes of trial and error, which in turn illustrates the complex



dynamics of the ‘social life of methods’ (Savage, 2013). This also shows how platforms do not construct an idea of memories out of nothing, but rather draw on already established modes of remembering (such as anniversaries) in order to imbue mediated memories with importance. As such, the construction of right-time memories – as with other modes of memory on social media – are an amalgamation of the intentions of the programmers, computational logics, as well as the people’s perceptions and behavioural patterns that already exist in the world.

Moreover, on features such as Facebook Memories and Apple Memories, for instance, the anniversary framing of memories is increasingly underpinned by machine learning and neural network algorithms that infer from user’s attributes what memories they would like to engage with (Jacobsen and Beer, 2021). As such, it is not uncommon to encounter past data that have been repackaged and resurfaced as so-called ‘Winter memories’ on Facebook. The use of machine learning algorithms, however, does not constitute a break from the anniversary framing of memory, but rather constitutes a reconfiguration of what counts of as an ‘anniversary’ in the first place. Regardless of whether the algorithmic approach is one of machine learning or something more rules-based, the anniversary framing of memories seems to still occupy a crucial position in the construction of right-time memories on social media. But rather than being an organic and natural framing, it should be understood as a contested and sociotechnical process of boundary work, raising questions like: what counts as ‘right time’ in relation to social media and memory? What counts as a ‘right-time memory’ within the logic of anniversaries?

### *‘These self-dates just have more internal feel’: memory and personalised time regimes*

Another important aspect of right-time memories, both in terms of how they are produced and how they are felt, is personalisation. In some cases, the timing of certain memories being resurfaced to users was suggested to engender feelings of greater personal attachments to these memories. As Ethan states,

Now, I check these dates and I have noticed this day was an important day, and it’s always like that year in and year out, so those dates enable you internally to feel special. They probably have more meaning than Boxing Day or Columbus Day or President’s Day. These self-dates just have more internal feel, and that shows you that you really have control of what makes you happy and what innately gets you going versus being told by the government.

Here, the timing of memories adds to a sense that these are ‘self-dates’ and that these have more ‘internal feel’ than others. Furthermore, the sociotechnical construction of timing infuses these right-time memories with a sense of agency and control, whereby people get to decide for themselves what is important to remember rather than being told by others. For other participants, it was not so much a question of revisiting particular days from the past but rather recent ‘clusters’ of memories. Discussing her engagement with Facebook Memories, Mary stated that she enjoyed the so-called ‘seasonal memories’ more than particular annual memories:

- MARY: I quite like this ‘your September memories’ cause I thought it was only just ‘a year ago’ or ‘two years ago’ and I didn’t realise they did the previous month. I think it’s quite nice, just a recap.
- INTERVIEWER: Do you find it nicer than to be reminded of something more recent than something five years ago?
- MARY: I think so because sometimes it’s nicer to be reminded of things in the past that you might not necessarily have thought of right otherwise. But at the same time a lot of those memories might not be things that are significant to you anymore whereas like things that’ve happened more recently are more relevant to you today, yeah. The things that happened to me in the last month I think are more important to me in the moment than like something I might have posted four years ago with somebody who I don’t talk to anymore right, a relationship I’m not in anymore.

As this participant suggests, the resurfacing of particular seasonal memories had a bigger impact on her because the memories referred to events, experiences or relationships that seemed ‘more important to me in the moment’. The resurfacing of particular clusters of memories at a particular time adds to a sense that these are more relevant to the participant.

This notion of memories as having a personalised feel echoes claims made about the importance of personalisation for the current media landscape (Lury and Day, 2019). As Taina Bucher (2020) states, mediation is no longer the goal for social media platforms, but rather ‘the personalized timing of mediation’ (p. 1708). Indeed, this sociotechnical production of ‘relevance, timing, and personalized time regimes’ (Bucher, 2020: 1701) is also inextricably linked to the logic of contemporary memory features. Although right-time memories are constructions, achieved through multiple processes of trial and error, such personalised time regimes nonetheless constitute a way in which right-time memories are felt and made to matter in everyday life. Through personalisation, they are infused with relevance and meaning. As such, the production of personalised time regimes on memory devices such as Timehop, Facebook Memories and Apple Memories participates in the construction of right-time memories. As Prey and Smit (2019) state, digital memories are personalized in social media spaces ‘in the sense that they are *your* memories, some of which are meaningful to you than others’ (original emphasis) (p. 214). In the case of Facebook’s Memories feature, this is achieved through a particular ranking algorithm, whereby people’s memories are rendered amenable to quantification and then ranked according to the attributes of both the individual user and the attributes of other users (Jacobsen and Beer, 2021).

Yet, this relationship between social media, personalisation and memory is by no means a new development. As Garde-Hansen et al. (2009) wrote back in 2009, ‘What digital media brings to this representation of the past is a greater personalisation of events, narratives and testimonies. The emphasis is shifting away from the collective and toward the personal’ (p. 17). Instead of constituting a rupture, right-time memories are both a continuation of this trend as well as an intensification. As I have shown, the personalisation of memory may add to a sense that social media memories are being

made to matter in the present at the right time. Processes of personalisation, therefore, can be seen to emerge as a way in which social media memories are increasingly construed by memory devices and felt as 'right-time memories' by people in everyday life.

### *'It reminds you so constantly': the repetitions and rhythms of right-time memories*

Another important mechanism of right-time memories and how they are felt and experienced in everyday life is the repetitions, rhythms, and cyclical patterns generated by social media and memory features. Many of the participants who were interviewed stated that the affective impact of memories resurfacing on features such as Apple Memories was not only linked to their personalised feel, but also to how often these memories were made visible to them. As one participant, Beth, aptly put it, 'it reminds you so constantly'. This was echoed in the interview with Ethan who pointed out that the feeling of a certain memory was derived partly from seeing it being resurfaced 'year in and year out'. Another participant, Grace, stated that the continual resurfacing of memories on features such as Facebook Memories 'sears it into your memory even more'. Repetition, temporality, and memory become intimately linked on these memory devices, having the apparent ability to 'sear' past events into people's memory. In other words, the 'right-timeness' of social media memories also becomes about emerging frequencies, repetitions, temporal patterns, and rhythms.

Of course, ideas of repetition and cyclicity have been widely examined in relation to social and cultural understandings of memory (Brighenti, 2015; Connerton, 1989; Hoskins, 2009). For instance, in his work on collective memory, Maurice Halbwachs (1992) argues that people's memories of the past are preserved through continual reproduction, that is, by a continual engagement with them, claiming that 'these memories are repetitions' (p. 47). Andrea M. Brighenti (2015) has also stressed the link between repetition, reproduction, and the continuation of memory, suggesting that 'memory as well as habit are the outcome of repetition' (p. 45). In this view, repeated acts of remembrance, or the continual engagement with the past in the present, constitute an attempt to keep memories from fading in a society that continually adopts new values, technologies and forms of sociality. Moreover, Paul Connerton (1989) has highlighted the importance of repetition for memory-making through the ways in which remembering becomes ritualised and transformed into embodied habits and enactments. In short, there is a strong interplay between repetition and the notion of memory as habitual and embodied.

These notions of repetition, habituation, and cyclicity are also crucial for understanding the underlying logic of right-time memories on social media. The resurfacing of such memories is never a one-off phenomenon. We never just remember once on social media. For instance, some features, like Timehop, use metric-based functionalities such as the 'Streak' to incentivise participation and engagement with the digital past. In this framework, the Streak signals the number of consecutive days a user has visited the feature to see memories. As such, it is a metric that displays a user's level of engagement with the feature. As has been shown, the Streak functionality can participate in incentivising and motivating an ongoing, habitual engagement with past memories (Jacobsen and Beer, 2021b).

For other features, such as Facebook Memories and Apple Memories, the rhythms of remembering are less based on explicitly metric-based functionalities and more on the data

patterns and clusters extracted by machine learning algorithms. As Manohar Paluri and Omid Aziz (2016), two software engineers at Facebook, point out, the resurfacing of memories depends very much on the way in which users engage with the feature: 'If a person has shared many memories from On This Day in the past, we can dial up the number of memories we show them in News Feed in the future'. On the other hand, if a user ignores or dismisses the memories made visible by the feature, 'then we reduce the number of On This Day stories they see in News Feed moving forward'. Right-time memories, in this case, can be seen as 'algorhythmic' (Miyazaki, 2016), following the temporal patterns and rhythms generated by algorithmic systems. But rather than purely 'algorhythmic', right-time memories here emerge as technogenetic events (Hayles, 2012), products of the co-evolution of humans and technical systems, constituting a constitutive mutuality between human memory-making and the operational logic of machine learning algorithms.

As technogenetic events, the repetitive nature of right-time memories can also cause feelings of discomfort. Commenting on her use of Timehop, Diana remarked, 'it is very strange, to be encountered with your past in this way, every single day'. Similar feelings of discomfort were also felt by Keith, who stated that the constant resurfacing of memories could give them a 'regimented feel'. The strangeness of social media and memory features, in this case, does not necessarily reside in which particular 'memories' they resurface, but rather how often they do it.

Yet, most importantly, the patterns, repetitions, and rhythms of right-time memories suggest that social media and memory features seek to further embed themselves in people's lives. As already mentioned, the continual resurfacing of certain memories at certain points in the present 'sears it into your memory even more'. Right-time memories presuppose the sociotechnical generation of particular patterns, repetitions, and rhythms in the present. Part of the allure and seductive power of right-time memories, I argue, resides in precisely the way memories are resurfaced on a continuous basis on social media and memory features. Yet, it can also create tensions. In a sense, these technologies participate in creating 'rhythms of remembering' in everyday life. The continual resurfacing of memories 'at the right time' indicate that these features and platforms seek to increasingly become 'habitual new media' (Chun, 2016), ever more embedded in people's lives. That is, right-time memories have the capacity to create a sustained, repetitive, and routinised engagement with social media and one's digital past (Jacobsen and Beer, 2021b).

### *'There's really no rhyme or reason to what Facebook shows me when it shows me': emerging tensions of right-time memories*

As the previous section started to indicate, right-time memories can also be seen to engender occasions of tensions. The sociotechnical production of timing in relation to people's digital memory-making was, in some cases, felt as awkward, odd or plain wrong. Recalling her experience using Timehop, one of my participants, Miriam, stated that 'Timehop kind of says, "hey I'm here to remind you about all of your past relationships with people and your exes!" and you're just like ewwh sometimes'. Similarly, Charlotte suggested that 'Facebook can be like, "look at this terrible thing that happened!" and you're like, "eh, thanks Facebook"'. As these participants pointed out, such feelings of discomfort derived from the algorithm's apparent insensitivity to people's

lived experiences. This echoes a more high-profile case where a grieving father was faced with his Facebook Year in Review montage video, featuring an image of his just-deceased daughter with the tagline 'Here's what your year looked like!' (Meyer, 2014).

Right-time memories, especially those on features such as Facebook Memories and Apple Memories, are a result of machine learning algorithms probabilistically predicting what timing might be best for each user. As such, a common tension to emerge was related to the perceived and occasional *unpredictability of right-time memory*. As Emma stated in her interview:

There's really no rhyme or reason to what Facebook shows me when it shows me. Sometimes I feel like I get my memories on Facebook and sometimes I'm like, oh gosh I haven't seen that notification in a few weeks. Theirs feels inconsistent.

Here, the kairologic production of memory, where revisiting the past is increasingly instantiated through a logic of 'right time', is felt as 'random' and 'inconsistent' by the participant. Instead of producing a frictionless experience of the past for users, the probabilistic models used by features such as Facebook Memories seem to engender the exact opposite: an uncomfortable awareness of algorithms at work. Instead of sinking into the background, the power of the algorithm comes to the fore. In some cases, this led to feelings of being creeped out. As Raymond noted, 'Facebook thinks it knows what you want. I don't know, that's creepy, I don't like that'.

In other cases, it was seen to detach the person from the memory they were being shown. Commenting on her use of Apple Memories, Eva stated, 'I'm never like totally immersed in it, it's always through a technological lens'. The issue here is not so much that the memories being resurfaced are inappropriate or embarrassing, but rather that the timing of when they are made visible to people does not fit neatly with people's expectations of the feature. As a result, affective tensions of unpredictability seem to also emerge as algorithmic media and memory features increasingly seek to sociotechnically engineer people's memories as right-time memories, that is, as opportune moments or 'right time' instances of past reflections.

Yet, the cases mentioned in this section are by no means rare occurrences; rather, they are increasingly common in the current media landscape (see, for instance, Bucher, 2017). The perceived unpredictability and randomness of right-time memories not only interfere with people's engagement with the memory feature; instances where memories seem random and ill-timed function as powerful reminders that although social media and memory features seek to resurface memories at the 'right time' to users, this form of temporality is ultimately made, contingent, and fraught with tension. It is imagined, iteratively tested and rolled out, in line with specific business intentions, and made to matter through machine learning feedback loops.

## Conclusion

As I have shown, the intersections of social media, temporality and memory need further critical intervention. There has been a proliferation of memory features in recent years. As social media platforms increasingly become repositories for people's past, it is crucial to

examine not only how digital memories are stored or archived in these spaces but also *when* exactly they are made to matter in the present. In other words, there is a need to further explore the politics of when social media memories are made to matter and what affective impact this may have on people in everyday life. In this article, I have argued that social media platforms, memory features and everyday technologies increasingly reconfigure digital memories as ‘right-time memories’, that is, memories resurfaced or made visible to users at particular times in the present, in order to provide people with ‘the right feeling at the right moment’ (Lohmeier et al., 2020: 1522). The notion of ‘right time’ was inspired by Taina Bucher’s (2020) theorisation of the ‘kairologic’ of algorithmic media. Here, social media platforms such as Facebook participate in the sociotechnical production of timing, aiming to show the right kind of content to the right person at the right time. In this article, I have drawn on this notion of the kairologic to conceptualise the idea of ‘right-time memories’, showcasing how digital memories are made to matter in the present and the impact this timing has on people’s everyday memory-making practices.

Drawing on interview and focus group data, the article has explored four ways social media memories can be conceptualised as right-time memories and how these, in turn, are felt and experienced in everyday life. First, I explored the importance of the notion of ‘anniversary’ and the affective impact this had on people’s remembrance of the past. For some participants interviewed, this temporal configuration, resurfacing memories on their annual or monthly anniversary, was seen to ‘amplify’ people’s relationship to their memories. For some, it made the memory feel more ‘real’. However, I showcase that whether memory features deploy rule-based algorithms or more complex machine learning algorithms to ‘anniversary’ people’s memories, it nonetheless remains a deeply sociotechnical and highly contingent temporal configuration. Second, I explored the notion of personalisation underlying the production of right-time memories. Here, personalisation figured not only as endemic to the kairologic of algorithmic media (Bucher, 2020), but also as an intimate aspect of encountering social media memories resurfaced at particular times in the present. Third, I examined the repetitive nature of right-time memories. Memories are not simply made visible to people only once, but are resurfaced continually, creating certain ‘rhythms of remembering’. Finally, the article focused on some of the tensions produced by right-time memories, particularly those engendered by inaccuracy and unpredictability. Many participants pointed out that although these platforms and apps seek to produce right-time memories, their timing was often considered off, awkward, inaccurate and even insensitive. On the other hand, right-time memories, especially those instantiated through the machine learning algorithms of features such as Facebook Memories and Apple Memories, can create a sense of discomfort because of the unpredictability of their resurfacing. This shows that although there is an attempt to create right-time memories through the sociotechnical production of timing, there is an unpredictability at the heart of right-time memories which may engender feelings of discomfort.

I have proposed the notion of right-time memories to explore the intersections of social media, timing and memory in everyday life. Ultimately, the notion of right-time memories highlights the ways in which social media and memory features seek to reshape how we engage with, negotiate, and remember the past. Instead of us deciding what a memory is, we are increasingly presented with ready-made memories, memories



that are made to resurface at particular times in the present. Instead of memories being actively extracted from the archives of social media, our engagements with the data past on social media is increasingly a matter of being exposed to slices of memory at certain, programmed points in time. As I have shown in this paper, ideas of timing and *when* to resurface memories to users is being deployed by platforms in order to maximise user engagement as well as user stickiness within the platform. As such, the kairologic becomes a conceptual framework that foregrounds the ‘politics of platforms’ (Gillespie, 2010) and how platforms use timing and algorithmic systems to further embed themselves in people’s lives.

It is also important to acknowledge that multiple temporalities are ‘folded’ (Latour, 2002) within social media platforms and memory features. As such, there is a need to further explore various temporalities, such as real time and speediness, as well as the intersection of different temporalities in facilitating and shaping people’s remembrance of the past in social media spaces. In this perspective, the notion of right time contributes to our understanding of contemporary digital memory practices, but further studies are needed to better understand the complex intersections of social media, algorithms, temporality and memory.

## Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

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