

Algorithmic identity and the narrative constitution of the self

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Abstract: In the literature on the relationship between algorithms and identity, the main concern is the protection of personal data privacy to prevent interference and manipulation by outsiders. Although this is a relevant issue, it is also interesting to ask how algorithms influence the constitution of one's own identity. Indeed, algorithms of recommendation systems organise and interpret personal experiences, facts, and data in a coherent and meaningful way. They therefore play a mediating role, contributing to the constitution of our own identity, both positively and negatively. This mediation occurs at two levels: temporal and relational. On the former, the risk is that individuals cannot critically distance themselves from their past as reconstructed by the algorithm. On the latter, recommender systems help shape the contents of our narrative and affect our relationships. In this sense, they can both support and mirror our identity and undermine it. Ultimately, then, recommender systems are an integral part of the dialogical process of identity constitution.

Keywords: recommender systems; narrative identity; statistical profile

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1. Introduction

The most modern technologies, such as recommender systems, collect a huge amount of data about users. It is well known that algorithms can indeed easily infer a great variety of personal information from our interaction with the web, such as gender, sexual and political orientation, ethnicity, traits of character and so on (Kosinski et al., 2014). The health app can even track and analyse the number of steps, heart rate, blood pressure, sleep, mood and many other parameters. Users therefore today could have access to numerous and varied data about themselves. The main ethical issue so far has been the protection of the privacy of personal data so as to prevent misuse and manipulation by outsiders (B. Mittelstadt et al., 2014; B. D. Mittelstadt et al., 2016). The underlying idea is that individuals should be free from unwanted interference from others. However, the influence that these same data have on the constitution of one's own identity, even if no other parties are involved, has not been sufficiently addressed (Postan, 2021). These technologies could be both beneficial and detrimental for our personality and change our relationship with others (Leuenberger, 2024a).

Specifically, in this paper, I aim to analyse the recommender systems' representation of identity and how such representation affects our process of identity constitution. For this analysis, I first adopt the model of narrative identity. According to this approach, human beings employ the same organisational and interpretative structure of storytelling to give meaning to the events of their lives. In the following, I firstly intend to show the differences between individual profiles built by recommender systems and our own narratives. Then, I will investigate the role that these algorithms play in the constitution of our narrative, both

on a temporal and relational level. Algorithms indeed may take the role of others in the constitution of our identity, and can both support and mirror it, and undermine it.

2. Narrative identity

The central claim of the narrative perspective of identity is that, as human beings, we don't just conceive our lives as a series of discrete and disconnected experiences and events. Rather, we organise and interpret experiences and events into a narrative structure to give them meaning and coherence. Through narrative, it is indeed possible to connect characters, objects, motivations, and circumstances and understand the causal and temporal relationships among all these factors (Mackenzie, 2007). According to Ricoeur, a core feature of all narrative composition is indeed the "synthesis of the heterogeneous" (Ricoeur, 1995, p. 141). With this expression, he means that narrative integrates the events, the different components of actions — intentions, causes, and chance occurrences — the sequence and the temporal unity of the story (Ricoeur, 1995). This process is both synchronous and longitudinal, as it ties and makes sense of the various elements both among themselves at any one time and throughout life (Postan, 2022). With respect to the latter, through the appropriation of our past, the anticipation of future actions and experiences, and the identification with or repudiation of specific traits, emotions, desires, and values, we construct a self-conception that enables the temporal integration of the self (Mackenzie, 2007). Therefore, the interpretive and integrative nature of self-narratives operates along three dimensions: synthesising the self's contemporaneous experiences, retrospectively interpreting past behaviours and events, and prospectively anticipating future intentions and experiences (Postan, 2022). The narrative integration of all these aspects is not fixed but is dynamic and open to revision over time. The experiences' significance indeed could vary throughout life, depending upon how they are interpreted and how the future turns out. For example, experiences of trauma, disease and personal loss could lead people to change their entire perspective (Mackenzie, 2007). These shifts are an integral part of the process of identity constitution; nevertheless, such changes cannot be brought about solely through fiat or the exertion of will alone. The self-conception that emerges through narrative self-interpretation — manifesting as character or as a relatively stable and integrated configuration of traits, habits, dispositions, and emotional attitudes — therefore possesses a certain degree of permanence and coherence (Mackenzie, 2007; Ricoeur, 1995; Schechtman, 1996). Our narrative should indeed be conceived as an effort to synthesise constituent elements into a relatively coherent and comprehensible whole (Postan, 2022). Accordingly, our narrative doesn't comprehend just everything that one does and experiences; it is not a mere description of our life. Instead, as authors of our own narratives, we provide a selection, organisation and interpretation of their components (Postan, 2022). Hence, narrative identity is not a sheer possession of certain character traits, habits and experiences but rather is something that individuals create, modify and embrace.

Even if we usually are in a privileged position to critically evaluate and judge the kind of experiences, traits of character and values that are at the core of who we are, narrative identity is socially, historically, and culturally situated (Postan, 2022). This implies that our narratives are not shaped by introspection alone; in Charles Taylor's words, the process of identity constitution is "fundamentally dialogical" (Taylor, 1992, p. 33). Indeed, our relationships help define who we are: others' stories about us contribute actively to shape our own, as they can mirror and reinforce them, or, on the contrary, they could be oppressive and harmful. In this regard, Taylor observes that we "define [ourselves] always in dialogue with and sometimes in struggle against the identities our significant others want to recognise in us" (Taylor, 1992, p. 33). For instance, some individuals may identify as writers; still, they may be dismissed as such by their friends and family if they fail to publish any work. On the other hand, the standards of evaluation and norms by which we interpret our actions derive from the social and cultural context within which we are born and live (Postan, 2022). In other terms, social norms are necessarily embodied

in our narrative self-conception, but this doesn't mean that they are passively acquired; they are integrated with our unique first-person perspective (Mackenzie, 2007). To summarise, the process of identity constitution could be described through a narrative framework. We are authors of our narrative, as we organise, interpret and synthesise our experiences with our values, attitudes, traits of character, habits and so on. This dynamic process is temporally extended and socially and culturally embedded. These two dimensions will be particularly relevant to understanding the differences between the algorithmic representation of identity and our narrative and the relative consequences on the process of identity constitution.

3. The algorithmic representation of identity

Recommender systems are one of the most widespread applications of artificial intelligence. For instance, they are employed by Amazon, Netflix or Spotify to recommend products, films or music to users. Generally, they indeed act like a filter of the online environment: they select, order and organise content with the aim to suggest the best options to the users according to their own preferences, ideas and tastes. To do this, they infer personal information from our interactions with the network and construct a profile of the individual that encompasses personality traits, ideas, beliefs, values, experiences and so on. All this information is organised coherently, but the method employed is different from that of humans. As told in the previous paragraph, human beings build their narrative by interpreting and contextualising each event with the broad story of their life; therefore, experiences are connected in a coherent and unifying life story¹ (Bjerring & Busch, 2025). Instead, algorithms:

represent individuals as *statistical* individuals [...]. The properties that define the statistical individual are those properties that define the reference class to which the individual belongs and those that the algorithm can statistically infer belong to the individual in virtue of the individual's membership in the particular reference class (Bjerring & Busch, 2025, p. 317).

To better illustrate this point, consider a recommender system employed to show job announcements to potential candidates. In this case, the algorithm will evaluate different features of the users – age, level of education, traits of character, past job experiences, among others – and will suggest those announcements that are most closely aligned to the profile. In doing so, algorithms will make a prediction about the future, e.g., the advertisements that will be clicked more frequently. Therefore, even the algorithmic representation of identity is diachronically extended but is radically different from our narrative self-constitution; the profile components are woven together by correlation; they aren't connected through an interpretative activity. For instance, there could be good reasons for being unemployed for a more or less long period; an individual could provide a context for this experience, interpret it in light of the events that took place previously and give an explanation to others. According to a statistical analysis, this is just an empty period. The future selves are therefore related statistically, and not temporally and causally, to individuals in the present (Bjerring & Busch, 2025). In this sense, job seekers are deprived of their "autonomy over self-representation" (Aizenberg et al., 2025, p. 922), that is their capacity to serve as a direct narrator of their identity, life experiences, and aspirations, while actively shaping the representations through which others perceive them. Moreover, each act of selecting a given piece of content is performed by our present self (Pariser, 2012); thus, recommender systems, grounded in such choices, are ill-suited to apprehend the aspirations of our future selves. Hence, they are just a probabilistic estimate, and they

¹ This coherence might be disrupted by traumatic events or cognitive disorders.

could be partial and probably inaccurate. The following suggestions made by the algorithm may also be irrelevant (Bonicalzi et al., 2023) or even harmful and offensive. For example, Rikke, a 54-year-old woman, observed certain personalised advertisements to be highly insulting: “There were all such old-person advertisements, stuff like ‘your retirement savings’ because it obviously branded me as being old [...] I was very offended” (Lomborg & Kapsch, 2020, p. 753). Hence, recommender systems may fail to respect users as self-authorising individuals and acknowledge their self-conceptions and aspirations (Savolainen & Ruckenstein, 2024). More importantly, individuals cannot critically distance themselves from their past as reconstructed by the algorithm. In other words, they cannot revise or possibly correct such a narrative as they can with their own. Given the tendency of algorithms to crystallise users' profiles, even the act of forgetting, which is fundamental to the formation of the self, is further complicated (Floridi, 2014). This issue becomes even more relevant after death, since data gathered by the algorithms survive beyond it. The post-mortem algorithmic identity may not align with their narrative or the memory they wish to leave for future generations. During life, contesting this kind of narration is indeed difficult for at least two different reasons (Leuenberger, 2024a); firstly, users usually don't have access to the algorithmic process, and, although it is possible, it is difficult to comprehend due to its opacity. Secondly, as it is based on numbers, it could appear more objective and neutral and therefore more reliable than the human one (Maturo et al., 2018). This is a cognitive bias known as automation bias, which refers to the inclination to regard a machine's output as more dependable, hence favouring it above human judgement, even one's own (Prunkl, 2022).

This risk is exacerbated by the fact that algorithms organise, synthesise, and interpret individual experiences, events, values, and ideas according to certain categories, labels, and patterns of meaning. Consequently, human beings do not need to systematise their thoughts, emotions, and facts according to their own parameters. Therefore, the capacities of self-reflection and self-assessment involved in the process of the narrative constitution of the self could be employed increasingly less (Leuenberger, 2024a). Accordingly, our identity could be just passively discovered rather than actively and dynamically created. If so, if we don't actively embrace our identity, we could lose even our agency over it (Leuenberger, 2024b).

Recommender systems also help to shape those characteristics that are considered significant in defining a person and their standards of evaluation. For instance, health recommender systems, as they are aimed at providing advice and recommendations to users in the area of health and wellbeing, contribute to determining the standards of being healthy and wealthy. In this sense, they could take the role of others in the dialogical process of self-constitution (Leuenberger, 2024a). In virtue of this, recommender systems can indeed both mirror and support our identity and undermine it; they could suggest options that are effectively aligned with our values, goals and preferences. By doing so, we may save time during the research and discover useful or interesting content that we would not find on our own. Applications like Google Photos or Apple Memories could also group our digital photos, organise them into collections and show them to us as vivid memories, like a friend that reminds us of some moments (Jacobsen, 2020). Moreover, they could even improve our self-narratives with greater richness and detail and reveal self-illusions (Leuenberger, 2024a). For example, thanks to an application that monitors physical activity, some users might become aware that they are not getting enough exercise for their health. However, the act of suggesting information that aligns with users' interests, values, and preferences restricts exposure to diverse viewpoints and perspectives, thereby influencing those interests, values, and preferences, and subsequently affecting identity and authenticity. On the other side, algorithmic representation of identity could be reductionist; since it is based on quantitative data analysed through statistical methods, it cannot capture all dimensions of human identity, as not all of them are quantifiable. Pain, for

example, although there are scales to measure it, remains a subjective experience, which in itself is untranslatable. No one, not even a doctor, can perceive the pain of another in the same way as the individual experiencing it. It is precisely this subjective aspect that cannot be statistically represented, and this consideration is valid for all our feelings and emotions. Furthermore, the process of identity constitution depends largely on the context: in different settings, certain character traits are exhibited and others, on the contrary, inhibited. Since algorithms draw their conclusions just based on our web interactions, they will hardly be able to grasp all the nuances of our personhood (Wajnerman-Paz, 2024; Parisier, 2012). In some cases, algorithms could be even oppressive, reiterating and reinforcing existing prejudices, such as those related to gender and ethnicity (Leuenberger, 2024a). Thus, recommender systems play a mediating role in shaping the contents of our narration. This mediation also occurs at the relational level; algorithms select and filter contents, so on the one hand, they could provide new opportunities to get to know people with similar profiles to ourselves. For instance, thanks to this technology, older people could re-establish connections with old friends and expand their networks through new ties (Quan-Haase et al., 2019).⁹ Similarly, these systems enable individuals with highly specialized or marginalized interests to connect with individuals sharing common interests, transcending their immediate geographical and social constraints. Nevertheless, on the other hand, precisely because they could be reductionist and oppressive, they could preclude such relations, particularly with those external to their assigned group (determined by birth and/or algorithms). Due to this mediating function, recommender systems, if they are oppressive and perpetuate specific stereotypes, may reinforce negative self-perceptions among affected individuals and thereby undermine self-esteem. As stated above, they contribute to determining how individuals interpret their own abilities, social roles, and prospects. Over time, these mediated feedback loops may erode self-trust. In synthesis, recommender systems could be regarded as a part of the dialogical process of identity constitution, but they construct identity through statistical techniques rather than narrative ones.

4. Conclusions

In this paper, I have examined algorithmic profiling of recommender systems and how they influence the constitution of our identity. According to a narrative perspective, we constitute our identity by organising and interpreting our experiences in a unifying life history. This narrative process integrates our first personal point of view with our character, values, ideals and experiences and occurs throughout life; therefore, it is dynamic and open to revision. On the contrary, as users, we don't have access to the narrative provided by the algorithm, so the possibility of revising it is precluded. Nevertheless, recommender systems could still affect the process of identity constitution since they contribute to determining the attributes deemed fundamental in delineating an individual and establishing the standards by which they are evaluated. In other terms, they may shape the contents of our narration. Moreover, recommender systems affect our possibilities to meet new people. In this sense, they could be regarded as mediators in the dialogical process of the constitution of our identity. Given this role, we should ensure that recommender systems support our identity rather than undermine it with damaging or oppressive labels. Their design should incorporate serendipity to expose users to different contents and perspectives. Moreover, users should be able to interrogate, contest, and modulate the criteria by which recommendations are generated. In this way, they could interpret them and decide whether to incorporate them into their identity or not. In other words, by integrating methods for user feedback and contestability, recommender systems can promote self-interpretation and identity development, rather than just reinforcing established behavioural patterns.

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