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# Exploring the Components of Digital Identity on Social Networks Sites : Identifier, Post, Profile Photo and Selfie

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## Abstract

The digital age has ushered in a paradigm shift in self-expression and identity construction, with social network sites (SNSs) serving as vibrant canvases for individuals to shape and project their digital personas. This article delves into the intricate components of digital identity on SNS, focusing on four key elements: identifiers, posts, profile photos, and selfies.

User identifiers, which can be real names or pseudonyms, offer the initial gateway to establishing an online presence. The choice of an identifier signifies a conscious decision to reveal or conceal one's true identity, reflecting the growing complexities of identity management in the digital realm.

Posts, the textual and visual content shared on SNS, serve as platforms for self-expression, enabling users to convey thoughts, emotions, and beliefs. These posts often undergo text analysis, unveiling the user's personality traits and emotional states, thus contributing to a comprehensive understanding of digital identity.

Profile photos, representing users in a visual form, go beyond mere images ; they are semiotic clues of the individual's personality and appeal, with studies demonstrating associations between facial features and personality traits.

The selfie, a burgeoning digital phenomenon, provides insights into self-perception and a quest for recognition. Research has shown that selfies often mirror genuine personality traits, shedding light on users' self-esteem and emotional inclinations.
This exploration of the components of digital identity in the context of SNS illuminates the complex interplay between user choices, self-expression, and societal interactions in our increasingly interconnected digital world. Understanding these elements is vital for comprehending the multifaceted nature of contemporary digital identities.

**Keywords:** Digital identity, social networks sites, identifier, post, profile photo, selfie.

## Introduction

One of the most important features of Web 2.0 is the involvement of Internet users in content creation and in forging relationships between them. In 2005, the most popular websites in terms of visitors were eBay, Amazon, Microsoft, AOL and others, including e-commerce sites. However, these sites disappeared from the rankings in 2008, in favor of platforms such as YouTube, Myspace, Facebook, Hi5 and Wikipedia. This transformation of the web has been significant. (Cardon, 2011, p 141)

According to Dominique Cardon, the reason for the success of social networking sites rests on the way in which individuals express themselves and reconstruct their sociality through new practices of presentation and exposure. Social networks sites have transformed the vast space of the web into a familiar and navigable space. (Idem, p 142)

Social network sites users present their identity differently. At the beginning, when these digital platforms appeared, people presented their daily lives and revealed their personal interests and tastes to a limited extent. Today, the inverse is observed. Everything is exposed on these platforms, and few people hide their private lives from digital view. The expansion of individuals' visibility on social media is directly related to the hybrid nature of these social networks sites, which represent a combination of networks of friends and thematic networks such as groups and tags. This makes these relational spaces highly heterogeneous and opens the possibility of diverse forms of communication and digital navigation. (idem, p 144)

## 1. Digital identity: An essay of definition

Digital identity is defined as the collection of all the traces we leave when we navigate the Internet, whether consciously or unconsciously. These traces include a wide range of data: writings, audio or visual content, messages exchanged on digital forums, online shopping transactions, specific

names associated with digital identity. It can therefore be said that the model of self-representation refers to the signs that a person adopts to represent themselves (George, 2011, p. 32).

Digital identity can also be defined along three dimensions:

1. The technical dimension : This is the total of digital effects stored in the memory of digital media.
2. The social dimension : It interprets the effects left behind by others as intermediaries for presenting oneself at a distance (remote presence).
3. The cognitive dimension : This concerns the self-image declared in digital media and participation in the construction of the self (Idem, P 33).

Furthermore, the sociologist Dominique Cardon proposes a definition of digital identity as "the result of a process of joint construction between the instructions for use of digital platforms (digital registration interfaces) and the accounts created by users to give them a better image of themselves. In other words, it involves the strategies of digital platforms and the tactics employed by users" (Cardon, 2008/6, P 98) (Péssilier, 2017, P 76).

From another perspective, Péssilier defines professional digital identity as a relational strategy for projecting one's professional trajectory through social media sites (Idem, P 77).

Consequently, the process of digital self-presentation consists in revealing signs that bear witness to the individual's civil, professional and social identities, which are intertwined. These include certificates obtained, the university where they studied, but also signs that reveal an active personal identity, such as the display of personal or professional network profiles, or certain attributes indicating the personal skills used to carry out specific activities. (Péssilier, idem, P 77) (Caardon, idem, P 101)

Web 2.0 has transformed modes of self-presentation and display. Self-presentation is no longer composed exclusively of signs declared by the user himself, but also of signs produced by other users and the nature of the information system in which they find themselves. These include, for example, comments and all the activities a user conducts when navigating the Internet. The following figure highlights the impact of the technical system on the user when constructing their digital identity. (George, 2011, P 39)

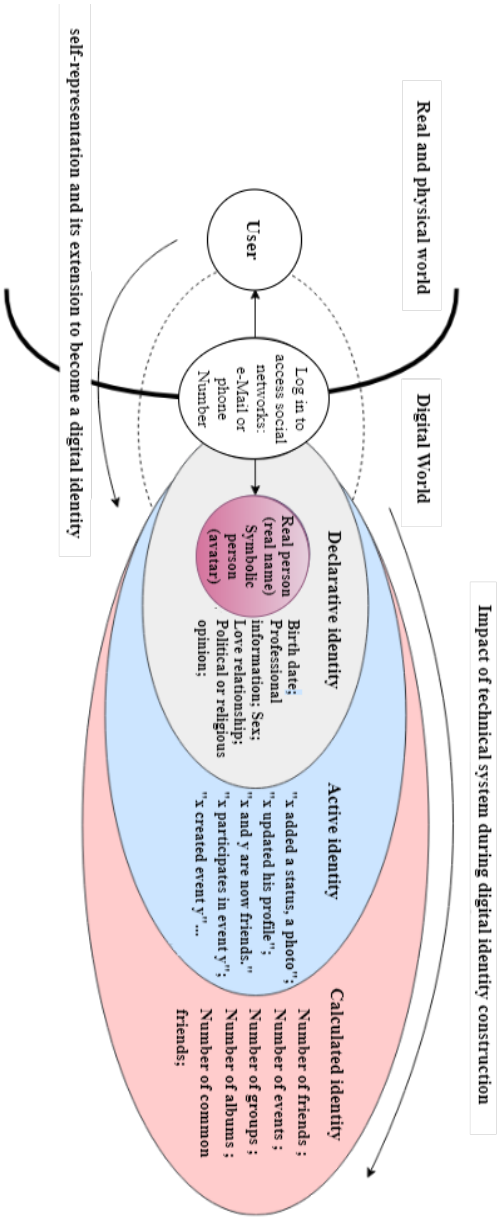


**Figure 1.** Self-representation and digital identity construction (George, 2011) (El Yazidi, 2022)

Figure 1 shows the technical framework within which digital identity is constructed. It demonstrates that digital identity is made up of three integrated elements: declared identity, active identity and digital identity. At the same time, this figure shows that control over digital identity and self-

presentation passes from the user to the information system. As soon as a user starts the process of constructing their digital identity, they gradually begin to lose control of their self representation to the information systems (George, 2011, p. 39).

It is important to note that one of the characteristics of Web 2.0 is the shift from interaction with machines via the screen (interactivity) to interaction with individuals (social interaction) and the contribution to the construction of networks based not only on the exchange of information but also on the sharing of knowledge (Quoniam, Lucien, 2009). It can be said that the development of technological structures has greatly contributed to the advancement of social structures (Idem).

**Table. 1.** The different categories of digital identity

| Categories | Characteristics |
|---|---|
| Declarative identity | ● Birth date;<br>● Professional information ;<br>● Sex;<br>● Love relationship;<br>● Political or religious opinion; |
| Active identity | ● "x added a status, a photo";<br>● "x updated his profile";<br>● "x and y are now friends."<br>● "x participates in event y";<br>● "x created event y";<br>● "commented/tagged y";<br>● "x posted in group y";<br>● "received a message from y."<br>● "has been tagged/commented by y";<br>● "used the y application." |
| Calculated identity | ● Number of friends ;<br>● Number of events ;<br>● Number of groups ;<br>● Number of albums ;<br>● Number of common friends; |

(George, 2011) (El Yazidi, 2020)

Table 1 explains in detail the component elements of each category of digital identity. But these three categories do not contradict each other: the same information can be processed in each of them. For example, with regard to the "friends" component: the user declares that he/she has a friendly relationship with another individual (declarative identity), the system notifies him/her on his/her profile page (active identity) and records it on the profile (calculated identity). (Georges, 2011, p 40) (El Yazidi, 2020) It is important to note that the same process is found and repeated on various social media platforms.

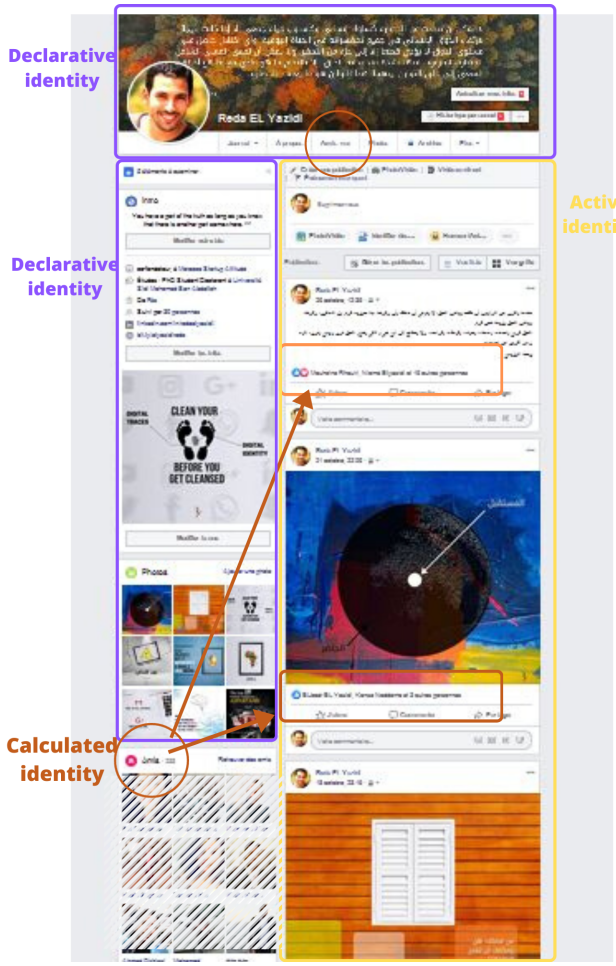


**Figure 2.** The personal profile page on the Facebook social network

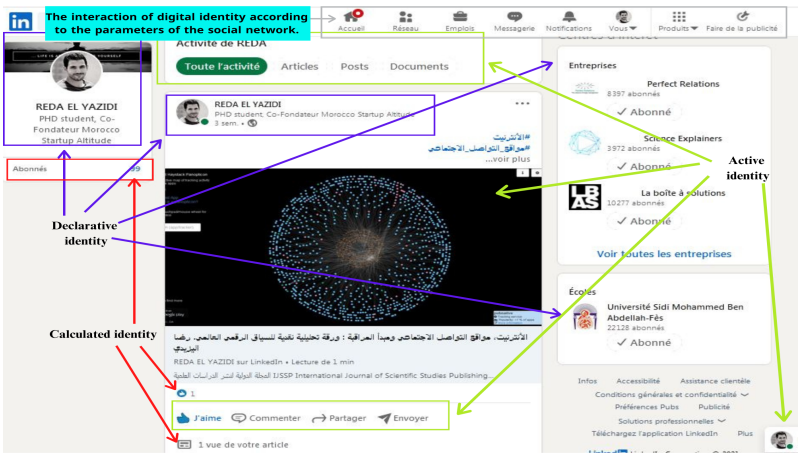


**Figure 3.** The personal profile page on the LinkedIn social network

Figures 2 and 3 represents the user profile page interface on facebook and LinkedIn, which are among the largest and most famous social media networks in the world. Facebook, for example, had around 2.98 billion monthly active users in the first quarter of 2023, (Statista). LinkedIn, meanwhile, reports around 930 million users in its latest statistics (LinkedIn, 2023).

It is clear from the user profile page interface that these platforms include various categories of digital identity, making them an excellent platform for constructing digital identity. They do not only allow users to express themselves, create relationships and introduce themselves, but also offer them the opportunity to discover themselves and be recognized by others. They provide a continuous process for producing social links, effects, interactions and, most importantly, interpretations.

In fact, In fact, modern information and communication technologies have become capable of identifying each individual, classifying him, and identifying his differences and personal and behavioral characteristics. Thus, this process establishes the starting point of what

Ertzscheid called: "The new documentary body of a global informational environment (...) explaining that a person has become a document (digital information) like other documents, and he no longer has his own identity and has no control over its exposure/visibility except to a slight/limited extent". (2009, pp.33-40).

## 2. Definition of Social Networking Sites

Within just a few years, social networking sites (SNS) have acquired a central position in different types of Internet use. These include sites such as Facebook, Twitter, YouTube, Myspace, LinkedIn, Instagram and TikTok. On Facebook, for example, the average number of friends a user has in their network is 120. Users spend around 55 minutes a day on this platform, sharing around 90 types of digital content a month, including links, images, videos, comments, posts, likes etc. In addition, the site is available in over 70 languages and operates in 190 countries (Vrignaud, 2015, p. 6).

In terms of definition, the concept of social networking sites refers to a vision that considers the internet as a distinct social space, one whose primary function is to allow users to interact with each other to ensure the ongoing production of content that takes the form of digital traces (digital identity), and not just a space for distributing documents and other digital content, as had been the case with internet 1.0 (Zammar, 2012, p 88).

Dana Boyd and Nicole Ellison have defined social networks as Internet services that enable individuals, firstly, to create a public or semi-public profile through a specific interactive system. Secondly, they allow the creation of networks by users who, in turn, have other networks through

which they view, exchange and forge relationships. The nature and denomination of these links can change from one site to another (Boyd, 2007, p 1) (Boyd & Ellison, 2008, p. 211) (Cardon, 2011, pp 141-142).

Social networking sites are also defined as digital applications that allow users to communicate by creating personal profiles, inviting friends and colleagues to access these profiles and sending instant messages to each other. These personal profiles can contain any type of information, including photos, videos, audio files and blogs (Kaplan & Haenlein, 2010, p 61).

In fact, social networks have have ended up merging in language (Mercier, 2008). Today, many terms are used by the media and researchers: social networking sites, digital social networks, social media, social web, online community, web 2.0 and the interactive web (Zammar, 2012, p 62). It should be noted that there is still no clear and specific universal definition of these terms. However, they revolve around a set of principles and practices, with two principal dimensions: the technical dimension and the social-relational dimension (Idem, p. 63).

Actually, social networks sites can be divided into two opposing categories: the first category requires users to provide their real name, their real email address, which leaves no margin for anonymity. In contrast, the second category insists that users' identities must not be revealed, limiting themselves to usernames or digital avatars for interacting with other users inside the network (Tisseron, 2011, p. 103) (Cardon, 2008). Consequently, it can be said that social networks have provided spaces for self-representation and projection by offering a variety of symbols and relational tags (Péssilier, 2017, P 76).

It is also important to mention that not all social networks sites were created in the same way as we know and observe today. For example, the ***QQ*** network began as an instant messaging service in China, ***LunarStorm*** began as a private community website, ***Cyworld*** began as a discussion forum for interaction in South Korea, and the French website ***Skyrock*** (formerly ***Skyblog)*** began as a personal blog service before it developed and added some of the features of contemporary social networks. ***Classmates.com***, which was originally a guide made for schools containing lists of students , it started later adding a large number of friends lists after updated to kepp up with the structure of current social networks. In addition, ***AsianAvenue, MiGente and BlackPlanet***, which were originally ethnic sites, quickly emerged on the social networking scene, but had limited use until they were reinvented in 2005-2006 with new digital structures (Boyd & Ellison, idem p 213).

The following is a timeline of the emergence of the world's most famous social networking sites:

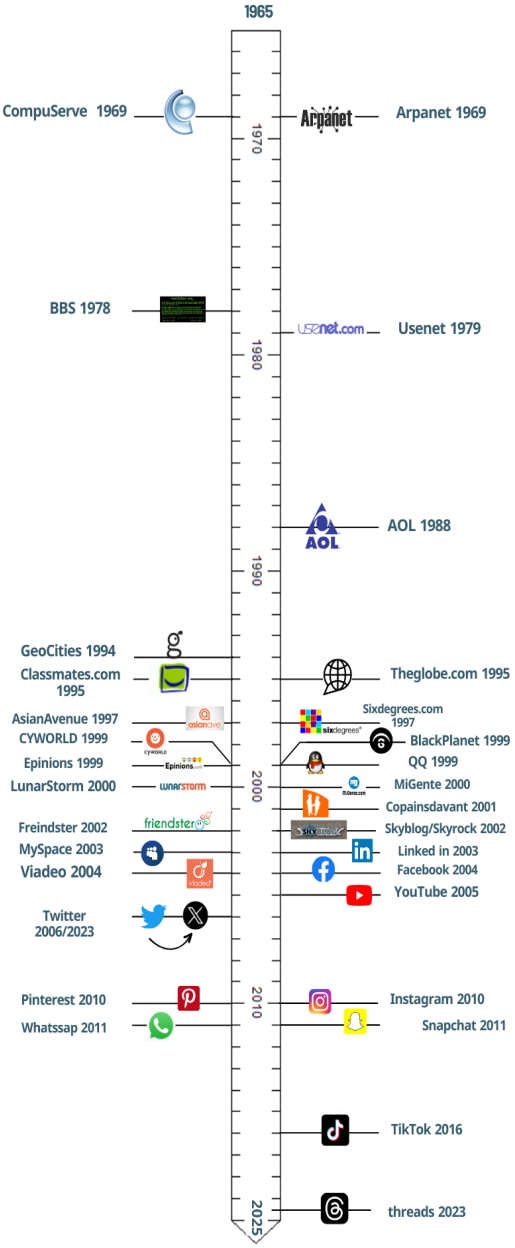


**Figure 4.** A timeline of the most popular social networks sites
(By Author)

Nowadays, one of the characteristics of new information and communication technologies is the reconstruction of relationships between individuals in space and time. As a result, the question of the evolution and sustainability of social links has been renewed with the emergence of social

networks sites, from which users derive new forms of collaboration and interaction through the digital medium. As a consequence, the traditional form of social links, that requires geographical proximity, has become a subject of discussion due to the use of the internet and social networking sites. These sites encourage the renewal of social links. There is also a shared space, although not always in real time (Zammar, idem, p 88).

We can therefore describe social networks as a set of applications based on the principles of social Internet 2.0, established on ideological and technological foundations that enable the exchange and sharing of user-generated content (Kaplan & Haenlein, idem, p 61).

The functional uses of social networks sites can be summarised into seven basic categories:

**Table 2.** Functional Uses of Social Networking Sites.

| Functional Uses of Social Networking Sites | |
|---|---|
| Presence and assistance | The extent to which users are aware of the presence of other users for communication purposes. |
| Sharing | The extent to which users exchange and share content. |
| Relationship building | The extent of links between users. |
| Identity | The extent to which users reveal their true personality and identity. |
| Reputation | The extent to which users are aware of the social status of others and the quality of the content they provide. |
| Conversations | The extent to which users communicate with each other. |
| Group/community creation | The degree to which users are organised or form groups/communities. |

(Kietzmann, 2011, p 243).

Based on all the above mentioned elements, we can conclude that social networks sites are:

- An information infrastructure integrated into the Internet system, the later is in turn connected to another information infrastructure.
- A global communication infrastructure that affects all areas of human activity.
- An information infrastructure that is invisible to users, such that these digital media hide behind their uses, applications and designs (Zammar, idem, p 67).

### 3. Components of digital identity on social networks sites : identifiers, posts, profile photos and selfies

*"What are you doing now?", "What's on your mind?", "What's new?"*, "Express yourself": based on these “leading” questions, contemporary social networks sites aim to capture every idea about the self of users in order to feed and expand information flows in the form of a wall, a news feed or a profile. This mode of self-expression that individuals find themselves confronting takes the form of an empty writing frame, promising to present every visual or pictorial interaction and every written statement as something we say 'now' through unlimited notifications to other members of the network. (Gomez, 2016, pp 65-66) As a result, every interactive moment within this social framework leaves digital traces linked to memory and history, forcing us to revisit them constantly.

It can therefore be said that the design of social networks sites has a compelling force in guiding users on both the expressive and behavioral level (Péssilier, 2017, p 78). The following is an illustrative example of what can be found when we access social networks sites such as Facebook, LinkedIn and Twitter, in an attempt to engage users to express their “self” and personality.

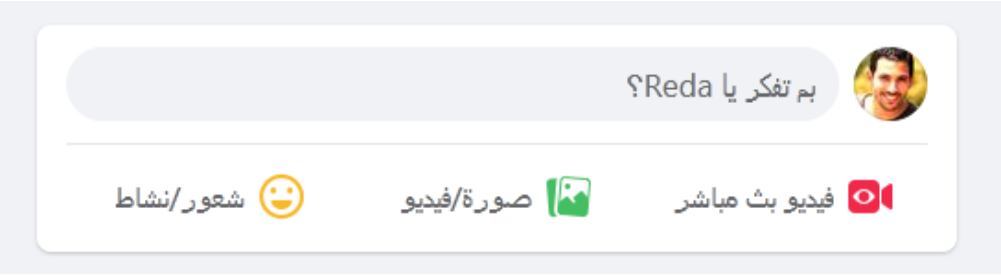


**Figure 5 .** Picture captured from Facebook wall

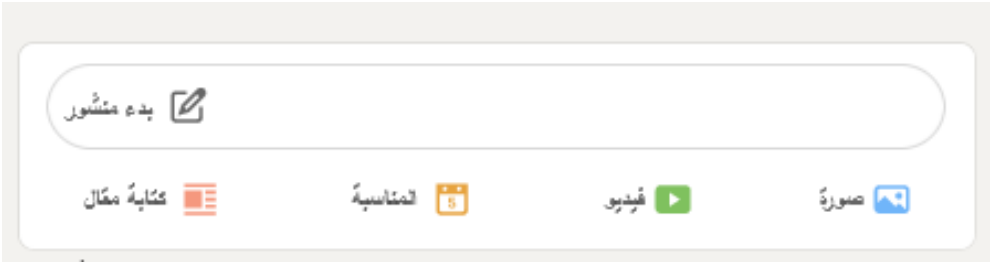


**Figure 6.** Picture captured from X (twitter) wall


**Figure 7.** Picture captured from Linked-in wall

In addition, the profile photo is considered as one of the elements indicating the identity of an Internet user. It forms part of both declarative identity and active identity, but not in the sense of the personal photos appearing on national identity documents or passports, the dimensions of which are defined in an administrative or official manner. It is also part of active identity as a type of choice made by each Internet user. This choice is constantly linked to the self-image that we want to share with others. This is why we observe that users' profile photos change considerably depending on their self-image, which in turn changes depending on the user's emotional state. (chagdali, 2017)

Some recent studies have shown that personal photos contain significant indicators and signs that can be used to identify an individual's personality. (Nestler, Egloff & Back, 2012) they concluded that the trait (factor) of extroversion is linked to facial attractiveness, the trait of openness is linked to the size of the lips, and the trait of conscientiousness is linked to the femininity of the face, as these signals and signs are mainly linked to facial features, and cannot be changed by the user when taking pictures (Lin Qui and al, 2015, p 444).

While other studies used spontaneous photographs taken by the experimenters, they found that the extraversion factor was associated with happiness and smiling, (Borkenau & al, 2009; Naumann & al 2009) while narcissism was associated with attractiveness and flashy clothes and women wearing make-up. They also noticed that extroverts posed in more active ways while introverts posed in more tense ways in full-body photos (Naumann & al, idem)

It should be noted, however, that the photos used in these studies contain cues that can be manipulated by participants (e.g. facial expressions and body positions) since they were not taken in a spontaneous/ natural environment for the purpose of self-expression.

In the same context, we notice that in several cases the use of personal photos is a way of presenting current events or expressing personal and sometimes even collective convictions of Internet users. Moreover, not showing one's real profile photo on the Internet and using alternative images is a behavior aimed at navigating the Internet without revealing the user's real identity. (Chagdali, idem, p 6)

The following are some examples of profile photos on social networking sites:


**Figure 8.** A sample of profils photos from Facebook

In addition to the profile photo, which can be used to determine a user's identity, there is another indicator that reveals a user's active identity: their identifier. As many as people who use their real names in their social networking profiles, there are others who use fake names or pseudonyms to avoid revealing their identity to other users. (Chagdali, idem, p 7)

It is well known that major internet companies such as Google and Facebook have long sought to establish policies in their services related to adopting the real names of their users, and they have indeed implemented these policies in practice. Therefore, how can we explain these measures if we do not interpret them within the framework of the ideological and political dimension of the use of social networking sites, that is, monitoring, tracking, and surveillance of all users of social networking sites.

Antonio Casilli considers that the adoption of fake names by users may reflect a desire for a degree of independence in the use of digital platforms. Many users have several pseudonyms to avoid registration processes and digital tracking. (Casilli, 2012, p 17)

The following are examples of user identifiers on social networking sites:

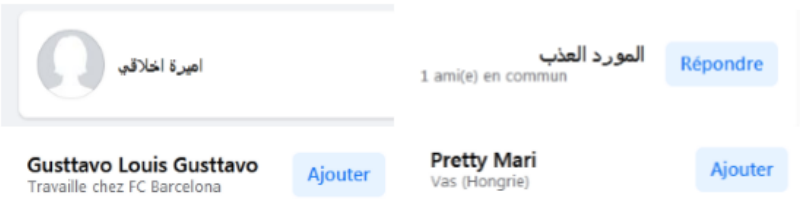


**Figure 9.** Examples of certain user identifiers from Facebook

The active identity of social media users can also understood from the concept of “Posts” which refers to the act of expressing, publishing and sharing thoughts with others. Chagdali, explains that through studying the various posts shared by Moroccan users of social networks sites, it is possible to capture and understand the active identity of these users based on the ideas they express in various fields, from philosophy to the smallest details of everyday life. (idem, p 7)

Indeed, natural language can now be used to build a computational model of personality traits. Several studies (Golnoosh and al, 2013) (Schwartz and al, 2013) (Tal Yarkoni, 2010) (Golbeck and al, 2010) (Hirsh, Peterson, 2009) (Chen and al, 2014) have attempted to extract the big five factors of personality traits from writings and messages shared by social network users on their personal accounts, which are constantly updated. These studies have shown significant associations between the use of natural language and personality traits. (Zheng & Wu, 2019, p 59)

It is also possible to understand the digital identity of social media users and their personalities by analyzing personal photos they have taken and which are often published on social networks. We are talking about the phenomenon of “selfies”, where people take photos of themselves and share them. From a psychological point of view, these selfies reflect a person's self-image, but they are also posted for others to recognize and appreciate “the self”. (chagdali, idem, p 7)

In this regard, Chagdali explains:

> “Sharing an individual's values, choices and even imagination on social networks has become a personal way of doing things, unique to each Internet user. It's a way of expressing who they are, and what they believe, which makes it an implicit declaration of their digital identity. This identity is no longer constant or stable; it evolves with the virtual time spent navigating the digital world”. (idem, p 8)

The following are examples of selfies published on social networks sites:

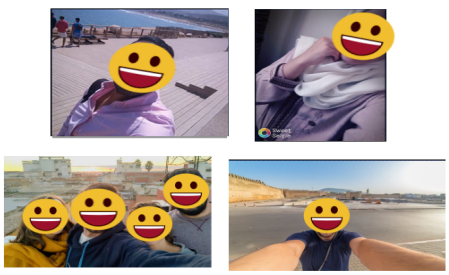

**Figure 10.** Examples of selfies

**Conclusion**

In conclusion, we have attempted to explore different aspects, from profile photos to users' identifiers, as well as the evolving dynamics of social media platforms. It is evident that the 2.0 transformation of the internet has enabled individuals to actively create and share their identities, bridging the gap between real-life relationships and the online world. Today, users express themselves extensively on social media platforms, blurring the boundaries between personal and digital lives.

However, this transformation has also created new challenges. Users are now engaged in a competition to attract as many digital friends as possible, forge a positive self-image and strategically manage their personal online networks. Reputation management on social media further exacerbates social and cultural disparities.

In addition, individuals sometimes engage in role-playing and self-presentation, which are more pronounced in chat rooms, as these platforms offer a space for textual and visual interaction, allowing a sense of liberation from conventional social rules.

The exploration of digital identity reveals a rapidly evolving scene, where users navigate complex online identities, balancing freedom and self-presentation. The essence of digital identity is constantly evolving and dynamic, reflecting the fluidity of the digital world, transcending traditional boundaries and allowing users to express their multiple facets.

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