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قسم: الإعلام الآلي**

Course Handout:

SOCIAL MEDIA COMMUNICATION

Intended for: third-year students in a professional computer science degree

Specialty: Networks and Web Technologies (NWT)

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Preface

This educational course handbook is titled "Social Media Communication". It is intended for students in the 3rd year of the Professional Bachelor's Degree in Networks and Web Technologies (RTW).

The handbook consists of Four chapters:

Chapter 1, titled "Social Media as Tools for Digital Communication," begins with the introduction of several concepts related to the field of study. It then discusses different types of communication, with a focus on digital communication. The characteristics of social networks are presented, followed by an exploration of three categories of social media: general networks such as Facebook, Twitter, and Instagram; professional networks such as LinkedIn and Xing; and specialized networks dedicated to sharing specific types of content (video, photo, and documents).

Chapter 2, titled "Popular Social Networks: Key Features," provides a more detailed overview of the functioning principles of the most popular social networks based on recent statistics published on the website statistica.com in January 2022. The chapter discusses these networks in descending order of popularity and explores their respective strengths and weaknesses.

Chapter 3, titled "Mastering the Influence of Social Networks," addresses the economic, social, cultural, and technological impact of social media on human life. Solutions are also proposed to overcome their negative impact.

Chapter 4, titled " **Social Media-Based Research: Trends, Techniques, and Applications**" offers an in-depth overview of social media as a research field and highlighting its significant influence on technological domains.

CHAPTER I: SOCIAL NETWORKS AS TOOLS OF DIGITAL COMMUNICATION

1. Introduction

Since the emergence of Web 2.0 in 2004, also known as the Social Web, new methods of using the Internet have emerged. These methods primarily focus on the management and sharing of information in a broader context, where the production of information is not monopolized by specific individuals. Instead, any user with certain computer skills can add various types of content (text, graphics, videos, and audio), annotate it with tags, and thus contribute to the enrichment of the mass of information on social networks.

In recent years, social networks and social media have become undeniable tools for online communication, making them essential for communication strategies. The explosion of the internet has profoundly changed user browsing behaviors. Widely and daily used by practically everyone, these tools have become integrated into human life. This chapter addresses digital communication on social networks (SNs). We begin by presenting some underlying definitions, and then discuss the characteristics of SNs. The chapter also introduces different types of SNs.

2. Networks vs social network

A network is a set of connections or links between distinct entities that enable exchanges or interactions, while a social network is a set of internet users called members who are connected through social ties. We can distinguish two types of social ties, namely:

1. Strong ties, which include familial and romantic relationships.

2. Weak ties, which include thematic, business, or work relationships. Social networks facilitate the exchange of emails, instant messages, and the sharing of various types of information among members.

3. Communication, their objectives, and types

The term "communication" refers to the exchange of information or ideas between individuals or groups. It can take various forms and be carried out through different communication channels such as speech, writing, gestures, facial expressions, images, videos, etc. Factors such as context, culture, level of education, and personality of the individuals involved can have an impact on communication. As a result, communication can have diverse objectives, such as persuading an examination jury in a defense, informing students, entertaining the audience in a show, educating students or children, etc. In the literature, four families of communication are distinguished: verbal and nonverbal communication, formal and informal communication.

3.1 Verbal and nonverbal communication

Verbal communication involves conveying a message through spoken or written words. This includes conversations, speeches, presentations, letters, emails, instant messages, etc. Nonverbal communication involves transmitting messages through other means such as body language, facial expressions, gestures, postures, gazes, tone of voice, etc.

3.2 Formal and informal communication

Formal communication follows established rules and protocols. Communications between employees and hierarchical superiors, communication during meetings, presentations, through

reports, letters, emails, etc., differ in this regard. This type of communication is often structured, professional, and adheres to certain standards.

Informal communication is spontaneous and free, less structured, and often uses a more familiar and relaxed language without strict rules. This includes communications between friends, informal phone conversations, conversations on social networks, etc.

4. Types of communication on social networks.

Communication on social networks has an informal and spontaneous character and can be classified as follows:

4.1 Real-time communication versus asynchronous communication

Instant messages, chats, live broadcasts, and video conferences represent real-time communication methods provided by social networks to enable immediate interaction between users. Social networks also offer asynchronous communication methods such as comments, posts, private messages, stories, and emails. These communication methods allow for delayed interaction between users, providing more time to think about responses and express ideas in a more elaborate manner.

4.2 Public communication versus private communication

Public communication on social networks offers users the opportunity to address a wide audience, such as with wall posts or stories. On the other hand, private communication allows addressing a specific person or a restricted group of people, such as with private messages or discussion groups.

5. Means of communication on social networks

Social networks offer several means of communication between users, including:

5.1 Direct messages: This is a communication method that allows users to send messages directly to another user without it being visible to others.

5.2 Comments: Social networks allow users to comment on the posts of other users and engage in conversations on a particular topic.

5.3 Mentions: Users can mention or tag other users in their posts to notify them and invite them to join the discussion.

5.4 Sharing: It is also possible to share the posts of other users on one's own profile to introduce them to friends and followers.

5.5 Hashtags: These are keywords preceded by the "#" symbol that help group posts around a specific topic. Users can search for hashtags to discover content related to their interests.

5.6 Stories: These are temporary posts that disappear after 24 hours. Users can share photos, videos, or text to tell a story about their day or share an anecdote.

5.7 Live videos: These are real-time videos that allow users to communicate in real-time with their community. Users can ask questions and interact with the host of the live video.

6. Social networks vs. social media

The terms "social media" and "social network" are often used interchangeably, but there is a subtle difference between the two. In fact, the term "social networks" is generally used for platforms that promote social connections and interaction among members (individuals, groups, or organizations). Each member presents themselves on the network through a profile and can belong to one or more communities. The term "social media" refers to all platforms that allow content dissemination without necessarily aiming to connect users. Blogs, forums, and wikis are examples of social media. Social media refers to platforms that enable content dissemination without necessarily aiming to connect users, such as YouTube, Twitter, TikTok, etc.

On the other hand, social networks focus on creating connections between online users. They allow users to follow other users' posts, connect with people who share similar interests, and build online communities. Examples include Facebook, Instagram, LinkedIn, etc.

7. Characteristics of social networks

Social networks possess several key characteristics that define their nature and functionality. Here are eight common characteristics of social networks:

1. Sharing: With the emergence of social networks, users are not only consumers of information but also creators of information. They can participate in content creation by sharing various types of content. Thus, there is a two-way flow of information between the web and users and vice versa.

2. Interactivity: Social media users interact with shared content by expressing their opinions and sharing them with a wider audience.

3. Community: Members of each social network are grouped into communities or groups based on their common interests.

4. Connectivity: One of the key characteristics of social networks is that they are based on and extend through relationships. The spread of information depends on the number of connections a user has, also known as a network of contacts.

5. Conversation: Social media platforms are not just discussion platforms; instead, they offer various entertainment tools such as applications and games, etc.

6. Utility: They are cost-effective communication tools that allow reaching a vast audience with minimal expenses, considering that anyone can join these networks.

7. Simplicity: They are user-friendly tools accessible to everyone, regardless of their level of knowledge.

8. Popularity: Social media improves website rankings and enables individuals and businesses to gain visibility (marketing and advertising). Due to their extensive usage, they facilitate connecting with clients, suppliers, partners, friends, family, etc.

8. Virality Mechanisms: How Ideas Spread in Networked Communities

The phenomenon of virality in networked communities is multifaceted, influenced by social structures, psychological triggers, and technological platforms. Understanding these mechanisms is crucial for researchers and practitioners aiming to harness or mitigate the rapid spread of information.

8.1 Structural Dynamics of Information Spread

The architecture of social networks plays a pivotal role in how ideas disseminate. Research indicates that tightly-knit communities facilitate the reinforcement of behaviors and ideas, leading to more effective diffusion within these clusters. However, for an idea to achieve widespread virality, it must bridge multiple communities, forming a large interconnected cluster that propels its popularity. Moreover, the concept of "structural virality" distinguishes between broadcast diffusion, where information spreads from a single source to many recipients, and viral diffusion, characterized by multi-generational sharing across a network. This distinction helps in quantifying and predicting the reach of information based on network structures.

8.2 Psychological and Emotional Catalysts

Beyond structural factors, psychological elements significantly influence virality. Jonah Berger's research identifies six key drivers: social currency, triggers, emotion, public visibility, practical value, and storytelling. These elements make content more shareable and memorable, thereby increasing its likelihood of going viral (Berger & Milkman 2012). Additionally, emotions such as awe, humor, and anger can enhance the shareability of content. Content that evokes strong emotional responses is more likely to be shared, as individuals seek to elicit similar reactions in others.

8.3 Role of Influencers and Algorithmic Amplification

Influencers, individuals with substantial followings, can significantly impact the spread of information. Their endorsements can introduce ideas to broader audiences, accelerating dissemination. Simultaneously, social media algorithms prioritize content that garners high engagement, further amplifying its reach. This algorithmic curation can create feedback loops, where popular content becomes more visible, leading to increased engagement and further visibility.

8.4 Community Structures and Echo Chambers

While communities can facilitate the spread of ideas, they can also create echo chambers—environments where individuals are exposed predominantly to information that reinforces their existing beliefs. This homogeneity can hinder the introduction and acceptance of diverse perspectives, affecting the overall dynamics of information spread.

8.5 Predictive Modeling of Virality

Advancements in computational social science have enabled the development of models to predict the virality of content. By analyzing early spreading patterns and community concentrations, researchers can forecast the potential reach of information. Such predictive

capabilities are invaluable for strategic communication and marketing efforts (Weng et al. 2013).

9. Categories of Social Networks

Social networks can be classified into several categories, including general-purpose networks, professional networks, and specialized networks.

9.1 General-Purpose Social Networks

These websites enable users to create and expand their circle of friends, such as Facebook and Twitter. They do not have a specific usage focus.

9.1.1 Facebook

Facebook is the largest social network worldwide, with nearly 34 million users in 2022. Through this platform, users can engage in discussions, comment, and publish various content such as photos, links, and texts. They have control over the visibility of their posts. Users can express their support for brands or organizations by becoming fans. Pages and groups allow institutions, companies, or causes to gain exposure and can be accessed by any internet user. According to an article published by statistica.com in January 2022, Facebook is the most visited social network globally. Meta is the parent company of Facebook, founded by Mark Zuckerberg in 2004. Instagram, WhatsApp, and Messenger also belong to the Meta company.

9.1.2 Twitter

Twitter is the simplest social media platform. Users can post free messages, called tweets, with a limit of 140 characters. They can also share images, videos, and comment on any post.

9.1.3 Instagram

Instagram is a visual social network where users can publish and share photos and videos with their online community. Users can follow other users' posts, like and comment on them, and discover new content through recommendation algorithms. Instagram has added features such as Stories (temporary content that disappears after 24 hours), live streams, scheduled posts, and direct messages. Users can use filters and effects to customize their posts. The essence of Instagram is for users to share their life and creativity with their community while allowing others to discover new content and follow their friends and influencers' posts.

9.2 Professional Social Networks

These networks focus on the professional activities of their members and have become essential tools for human resources. Among them, LinkedIn is prominent. There are also specialized professional social networks for specific professions, such as Avocalix, a social network for lawyers.

9.2.1 LinkedIn

LinkedIn is a prominent professional network for local business communities. It allows members to create professional profiles, find jobs or recruit new employees, stay updated with industry news, and connect with clients and suppliers. The principle of LinkedIn is to enable users to connect with their existing professional network and establish new connections with people in their field or with similar professional interests. Users can participate in online discussion groups on relevant industry topics, publish articles to showcase their expertise, and follow updates from their connections.

9.2.2 Xing

Xing is a professional social network that enables users to build and expand their professional network. It caters to job seekers, employers, entrepreneurs, and professionals seeking connections within their industry. Xing allows users to create online profiles highlighting their professional experience, education, and skills. Users can participate in online discussion groups on current topics and industries, publish articles to demonstrate their expertise, and search for and connect with individuals who share similar professional interests.

9.3 Specialized Social Networks

9.3.1 Photo Sharing Networks

Pinterest

It is a highly successful social network launched in 2010, based on the concept of "pinning" images and links found on the web to virtual boards. The name "Pinterest" is a combination of "pin" and "interest," reflecting its purpose of providing ideas and inspiration to its audience, particularly in areas such as fashion, home decor, cosmetics, and lifestyle. Over 600 million searches on Pinterest are visual searches, where users take photos of objects to find or purchase them with a few clicks. With over 2 billion searches conducted each month, Pinterest is a prominent platform for B2C brands to showcase their products and ideas.

Flickr

Established in 2002, is a photo-sharing website initially aimed at amateur and professional photographers. It provides an online space for users to store and showcase their photos, whether privately or publicly. While users can keep their photos private, the majority of Flickr members

use the platform to share their work with the public, contributing to a continuously expanding database of visual content.

9.3.2 Video Sharing Social Networks

The proliferation of smartphones equipped with high-quality cameras, along with advancements in digital communication via the internet, has led to the widespread recording and sharing of daily life on video-sharing platforms such as YouTube and TikTok.

YouTube, created in February 2005 and acquired by Google in October 2006 for $1.65 billion, is not only a video-sharing platform but also the most prominent video search engine. YouTube videos are indexed by the Google search engine. Users can share, rate, and comment on the videos they watch.

TikTok, a mobile application launched by Chinese developers in October 2016, has gained popularity among younger users. It allows users to watch, create, edit, and share short musical video clips ranging from 5 seconds to 3 minutes. Currently, TikTok has over 800 million monthly users, with 57% of them located in China. The majority of TikTok content revolves around lip-syncing to popular songs or reenacting scenes from favorite movies. Approximately two-thirds of TikTok users are under 20 years old, earning it the reputation of being a "teenagers' network." User-generated content, celebrity contributions, and influencer content dominate the platform, while brands represent only 3% of the published content.

9.3.3 Document Sharing Networks

These platforms enable users to store, share, and collaborate on documents, presentations, spreadsheets, notes, and projects online. Examples include Google Drive, Scribd, Slideshare, Dropbox Paper, and OneDrive.

SlideShare is an online platform for sharing presentations. Users can upload, discover, and discuss presentations on various topics. It serves as a platform for professionals and educators to publish and share presentations. Users can also discover presentations on relevant and interesting subjects to enhance their knowledge in specific areas.

Google Drive, developed by Google, is an online file storage and sharing service. It allows users to store and share files such as documents, images, videos, and presentations securely and conveniently. Google Drive provides easy access to files from any internet-connected device and enables real-time collaboration by allowing users to share files with others.

9.4 Other Networks

There are other types of social media platforms that are more focused on specific themes or purposes, such as:

o Blogs: Blogger, WordPress, Typepad.

o Social networks for online gaming: Steam, Xbox Live, PlayStation Network.

o Social network for travelers: TripAdvisor, Airbnb, etc.

o Social network for education: Edmodo, Coursera, etc.

o Social network for artists: Behance, DeviantArt, etc.

o Social network for athletes: Strava, Nike Running, etc.

o Social networks for fashion and beauty enthusiasts: Lookbook, Chictopia, Beautylish.

o Social networks for food enthusiasts: Foodie, Cookpad, Yummly.

10.   Conclusion

Social media platforms have become solid digital communication channels that facilitate high interactivity and direct relationships among real and virtual members. Engaging in conversations, sharing ideas, writing comments, and broadcasting events have become daily practices for users.

Social media platforms can be categorized into several types, including generalist networks, professional networks, consumer-oriented networks, and specialist networks. In the next chapter, we will explore in more detail the most popular social media platforms.

CHAPTER II POPULAR SOCIAL NETWORKS: User Guides

1. Introduction

According to statistica.com data in January 2022, Facebook was the most popular social network worldwide with over 2.9 billion users, closely followed by YouTube, WhatsApp, Instagram, Facebook Messenger, WeChat, and TikTok. In this chapter, we will explore the user guides for some of these platforms, highlighting their features, best practices, and the strengths and weaknesses of each network.

2. Facebook

Facebook is a social network that operates with a news feed. It allows users to stay informed by following posts (status updates, videos, photos, etc.) from friends, personalities, magazines, and more. Users can also share information by posting it on their "timeline." Facebook was created by Mark Zuckerberg and a few of his friends in 2004 when they were students at Harvard University in the United States. As of December 2018, Facebook had over 35,500 employees worldwide, and it is considered the largest, most comprehensive, and general social network globally. It is available in seventy languages and represents one out of every five page views on the worldwide web. Its entertaining nature does not prevent businesses from joining and expressing themselves to gain more visibility. The company has expanded its internet activities beyond the social network through the acquisition of Instagram, WhatsApp, and Oculus Rift. According to data published by meta company, 1.78 billion people use Facebook every day to connect with family and friends and explore their interests.

2.1 Being Present on Facebook

There are several ways to participate on Facebook. For individuals, they can create a profile, while businesses can create pages. Followers of a page are called fans, and anyone on Facebook can become a fan of a page. There are no restrictions on the number of fans, but an internal algorithm determines the reach of posted content. Pages are managed by one or more administrators ("admin") and provide access to statistical data and advertising options. Another way to interact and share is through groups.

2.2 Creating a Personal Profile

Registration is completely free and accessible. The registration form can be found on the homepage of the website Facebook.com. Users simply need to fill in the identification fields and follow the instructions. To build a network of friends, users can send friend requests to other members who may accept or decline the invitation. Sharing content through posts and interacting with other users' content using reactions (like, love, haha, wow, sad, and angry) is a way to animate one's account. Figure (1) shows the Personal Profile of Mark Zuckerberg, Facebook creator.
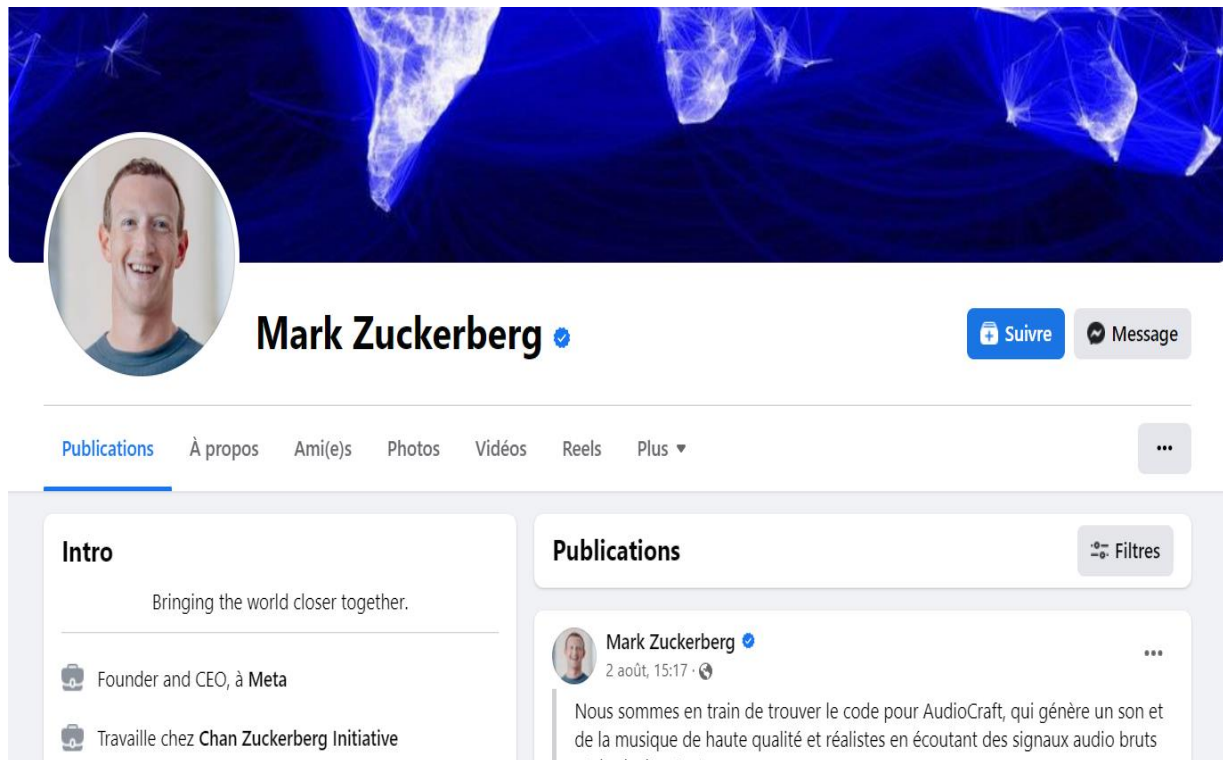
Figure (1) An example of Facebook profile

2.3 Stories, Reels, and Rooms

At the top of the profile, there is an option to switch between stories, reels, and rooms. Let's discover what each of these options entails.

Stories allow users to share moments from their daily lives with their network, including friends, followers, and people they have chatted with on Messenger. Stories are visible for only 24 hours and can be viewed in the story archive. Users can customize the visibility of their stories by modifying privacy settings, limiting who can see their stories on Facebook. If you have multiple high-quality photos, consider adding them to your page's story. One billion stories are shared daily worldwide on Meta technologies, inspiring the world to develop authentic, visual, and interactive narratives.

Reels on Facebook are short videos initially set for a public audience, and users can choose their audience when creating a reel and modify this setting at any time.

Rooms: A room is a video call on Facebook and Messenger. When creating a room, users can configure it so that only invited or authorized individuals can access it. If the room creator broadcasts it on Facebook Live, people who are not part of the room can see what is happening. Rooms can be audio-only live broadcasts on various topics hosted by an organizer and speakers.

2.4 Tabs

The "Wall" tab allows you to publish information that may interest your community or elicit their reactions. This can be an open question, information, promotion, event, etc.

The "Photo" tab allows you to add photos to your wall, visible to your community. You can give them a title, comment on them, or categorize them. Once published, your photos will appear directly in the news feed of your fans.

The "Link" tab allows you to publish articles from friends' blogs or your own blog, as well as any videos from Facebook.

2.5 Other Tabs

• Media: TV shows, movies, music, and books.

• Hobbies: sports and games.

• Interests: heroes, likes, and quotes.

• Identities: photos, names, and emails.

• Demographics: marital status and gender.

• Geographics: time zones, addresses, and location.

• In certain geographical areas: religion, political opinions, and ethnic origin.

2.6 Creating a Business Page

For businesses, it is recommended to create a "fan page" on Facebook. The platform offers six categories of pages based on whether it is a local place or business, a company, an organization or institution, a brand or product, an artist, group, or public figure, a cause or community, or an entertainment category. Users can choose the category in which they want to be listed. A fan page helps build a community around a specific interest and is often used to recruit, retain, enhance search engine rankings, and boost visibility. A page can be created directly or based on an existing Facebook profile. It is advisable to avoid using an email address already associated with a profile to minimize the risk of information transfer between the page and the profile.

2.7 Some tips

Give your Page a name that reflects its activity and objectives. For example, if your Page represents an organization, the Page name should be the organization's name or how it is commonly referred to.

Choose a profile picture and cover photo. For the profile picture, you can use your logo, and for the cover photo, you can select an image or video that represents your mission.

Use high-quality images that are visually appealing and display well on both computers and mobile devices.

2.7.1 Editing Page Settings

To optimize your Page, you can modify certain settings. For example, you can block the display of certain words on your page using the profanity filter or page moderation tools. Enabling comment ranking displays comments with the most likes and replies first for faster browsing. Page administrators can also enable or disable messages, set up a welcome message, and configure automated responses.

A fan page consists of multiple tabs, grouped into two categories:

- o Content created by yourself: This includes your own posts, photos, links, videos, and questions.

- o Other content: This refers to content created by other members that appears as a news feed, messages, and events.

2.7.2 Promotion and Advertising

Once your page is created, it's time to invite people to follow it. There are several ways to promote a Facebook page, such as interacting with other pages by leaving comments or being mentioned by a popular page. Inviting friends and contacts to like and follow your page helps introduce it to new audiences. Sponsored advertising is another effective way to reach a specific target audience, and influencer-led advertising can also help increase page visibility. Engaging with page fans by responding to comments and questions, sharing stories, and creating polls is important. Using relevant hashtags helps connect with conversations related to your area of expertise.

Before starting any advertising, it is important to read and understand the Advertising Policies to comply with the allowed advertising content. This will help prevent future ad rejections. Reasons for rejection include personal attributes, adult content, shocking content, and unauthorized use of trademarks.

2.8 Creating a Group

A Facebook group is an online discussion space for members who share common interests or goals. Groups can be created by anyone on Facebook, including individuals and businesses. Groups can be public or private. Public groups are visible to all Facebook users, and members can be added without authorization. Private groups are exclusive, and only members can see the posts and discussions within the group.

2.9 Posts and Privacy

Using Facebook to publish content allows you to communicate important messages to your audience. Hashtags can be used to join ongoing discussions and share current news with fans. Photos are also a great way to share visually appealing content, but it is important to avoid using images with too much text or that may be difficult to view on mobile screens. Additionally, you can organize live video sessions from your Facebook page or share real-time news updates.

Facebook offers various types of posts (photos, videos, text), topics (news, quotes, calls to action, project updates), and original or shared content (links to articles, someone else's posts). Facebook provides six options to customize the privacy of posts:

- o Public: Everyone can access the post, even without a Facebook account.
- o Friends: The post is only visible to friends and appears in their news feeds.
- o Friends except: Certain friends are blocked from seeing the post.
- o Only Me: Only the person who posted it can see the post (private post).
- o Specific Friends: Only selected friends can see the post.
- o Custom: This option allows you to include or exclude specific groups and individuals from seeing the post.

2.10 Games

Facebook Gaming offers several free games, providing entertainment and keeping users engaged for longer periods.

2.11 Marketplace

Facebook Marketplace is the platform for online selling. It allows the sale of various types of products, with the option to use location to view products sold in a specific area. The platform provides pricing guidance by comparing similar products. It is also possible to advertise an item

or a store to reach a wider audience. Interested individuals can contact the seller directly via Messenger. Sellers can set up automatic responses to facilitate communication. Once an item is sold, it can be marked as "sold" to avoid receiving new inquiries.

2.12 Reactions and Comments

Reactions are emoticon icons that allow users to respond to a post without writing a comment. Reactions include the like (heart), sad (tear), funny (laughter), angry (anger), surprised (wow), and loving (heart eyes) icons (see figure (2)).

Figure (2) Different users' reactions

While comments are written messages published under a post that allow users to express their opinions or ask questions about a post. Comments can be liked and shared with other users. Comments can be sorted, and to do this, it is recommended to enable the option to sort comments so that comments with the most likes and replies appear first. One can insert a comment in the form of text, emojis, gifs, or others.

2.13 Security on Facebook

Facebook accounts may be subject to attempts of unauthorized access to sensitive information. Security and privacy on Facebook can be strengthened by taking necessary precautions to protect personal information. To protect your information and presence on Facebook, follow these simple measures:

Make sure your contact details are up-to-date and regularly check the email addresses and phone numbers associated with your account, removing those you no longer use. Also, add accounts you regularly use to facilitate account recovery in case of loss of access.

Secure all your devices and platforms by utilizing available security features: on your mobile phone, use PIN codes and strong passwords. For your email accounts and other online social platforms, enable two-factor authentication to add an extra layer of security.

Enable two-factor authentication on Facebook: this is a security mechanism that requires entering a specific code when logging into your account from an unrecognized device.

Use the security and privacy tools provided by Facebook: Security Checkup allows you to manage unused apps and browsers, handle alerts, and strengthen your password. Privacy Checkup enables you to control who can see your posts and profile information, as well as the settings of apps connected through Facebook.

3. TWITTER

Twitter is one of the most widely used social networks in the world. It was founded in 2006 by Jack Dorsey, Noah Glass, Biz Stone, and Evan Williams. It operates with a news feed that allows its members to discover real-time news related to their favorite personalities or topics. Users choose these topics by following (or subscribing to) different Twitter accounts. As of 2022, it had over 237 million daily active users.

Unlike Facebook, all messages or tweets published on Twitter are public by default, meaning that once you follow a person, you can read all their posts. Tweets are limited to 280 characters and can contain text, images, videos, and links. Users can send private messages or retweet public messages. The more a message is retweeted, the more popular it becomes. There are no age restrictions on Twitter, so it's important to:

- o Think carefully before publishing information on Twitter.
- o Apply the "privacy" option to tweets* to choose who can follow their activity. Their Twitter account then becomes private rather than public.
- o Avoid checking the "add a location to your tweets" option*. If you choose to be geolocated, your followers will know where you are publishing your tweets from.

3.1 Key Concepts of Twitter

The Twitter vocabulary includes several concepts mentioned below. Figure (3) shows the profile of one of the founders of Twitter, Jack Dorsey.

1. Tweet: A short message published on Twitter, limited to 280 characters.
2. Followers: Those who follow you and thus see all your tweets are your followers.
3. Following: Those whom you follow.

4. Handle (Username): The personal address of a user on Twitter, which starts with "@" and can contain up to 15 characters.

5. Hashtag: A word or phrase preceded by "#" that helps categorize tweets and popular topics on Twitter.

6. Famous Hashtag: #FF (Follow Friday)

7. Trending Topics: The most discussed hashtags at the moment.

8. Retweeter: A user who reposts another user's tweet on their own timeline.

9. @ (followed by a username): Allows addressing a tweet directly to a user publicly or quoting them within a tweet.

10. Favorites: A feature that allows a user to mark a tweet as interesting or relevant for later.

11. Mention: A mention of another user on Twitter using their handle, which will appear on their timeline.

12. Direct Message (DM): A private message sent between two Twitter users.

13. Trends: The most popular topics on Twitter at a given moment.

14. Profile: The personal page of a user on Twitter, displaying their basic information, tweets, followings, and followers.

15. TL (Time Line): The timeline or feed of tweets for a user.

16. Verification: A process by which Twitter verifies the authenticity of an account and identifies it as an official or important account. Verified accounts are recognizable by a small blue badge.
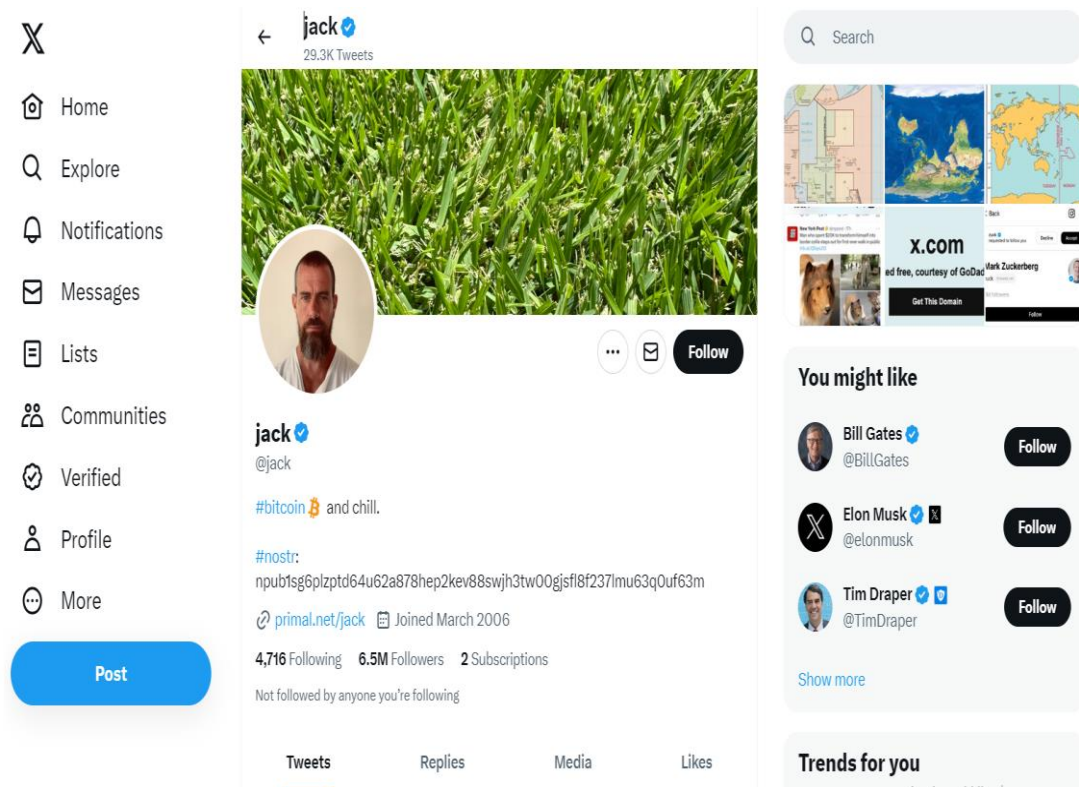
Figure (3) An example of twitter profile

Twitter has over 330 million active users worldwide, constituting a highly engaged and responsive audience. Tweets are displayed chronologically, allowing users to post multiple messages quickly and interact directly with the community. The use of relevant hashtags can also help increase the organic reach of posts.

However, there are some drawbacks to using Twitter. Firstly, the platform can be very addictive, leading to a loss of valuable time. Additionally, despite Twitter's policies against spam, some accounts continue to post unsolicited messages, which can be annoying for users.

The character limit of 280 can also be problematic for users who wish to share detailed information. Moreover, many Twitter accounts are inactive and were created solely to inflate the number of users.

Another potential drawback is related to the large number of active users on the platform. With over 150 million people having active accounts on Twitter, the platform could be susceptible to crashing due to excessive traffic. Lastly, Twitter posts can go viral within seconds, which can be a disadvantage if the content is false or offensive.

4. Youtube

YouTube's powers as a social platform are often underestimated, despite becoming the second most used search engine in the world. YouTube offers numerous advantages for users, including the ability to build a relationship with their audience and interact with them, generate more traffic to their websites, strengthen brand awareness, establish expertise in their field, and increase sales of their products and services. To make the most of YouTube, it is essential to understand how to use the platform effectively and relevantly for your target audience.

4.1 Key Concepts of YouTube

o   Video: A publication on YouTube that can be of different lengths and may include audio, video, images, and text.

o   Channel: A personal space on YouTube for publishing videos and organizing content.

o   Subscription: A feature that allows a user to subscribe to a channel and receive a notification whenever a new video is published.

o   Views: The number of times a video has been viewed by users.

o   Likes and Dislikes: A feature that allows a user to express their opinion on the video by clicking the "like" or "dislike" button.

o   Comments: A section where users can write comments on the video and interact with other users.

o Playlist: A feature that allows a user to group similar videos into a playlist for later viewing.

o Recommendations: Videos suggested to a user based on their viewing history and subscriptions.

o Monetization: A feature that allows a creator to earn money by placing ads on their videos.

o Sponsored Content: A form of advertising where a company pays a creator to include their product or brand in a video.

4.2 Creating a YouTube Channel

YouTube offers users the opportunity to create and manage their own channels, and the process involves several steps summarized below:

1. Create a Google Account: To use YouTube, you need to first create a Google account.

2. Access YouTube: Once you have a Google account, you can log in to YouTube and click on the profile icon in the top right corner of the screen.

3. Create a Channel: Click on "Create a Channel" to start customizing your channel.

4. Choose a channel name and ensure it's unique.

5. Customize your channel's appearance, including the channel icon, links to your profiles on other social networks, and customize the banner. You can also add a channel description.

6. Publish Videos: Click on "Upload" to upload a video. Make sure to follow YouTube's content guidelines and choose an eye-catching title and description for the video. When uploading your thumbnail, YouTube lets you preview how it will look on different devices, ensuring it adapts to various screen sizes.

7. Promote Your Channel: To gain visibility for your channel, use social media and video-sharing platforms to promote your channel and attract new subscribers.

8. Engage Your Audience: Interaction with your channel's subscribers, responding to their comments, and regularly posting videos are ways to draw attention to your channel. You can also organize contests and events.

9. Monetize Your Channel: Once you have a significant audience, you can start monetizing your channel. Monetizing your YouTube channel doesn't guarantee a stable or high income; it depends on the number of views your videos receive and the ads displayed. You can also advertise for other companies or sell your products.

Figure (4) shows the channel of Chad Hurley, one of Youtube fondators.
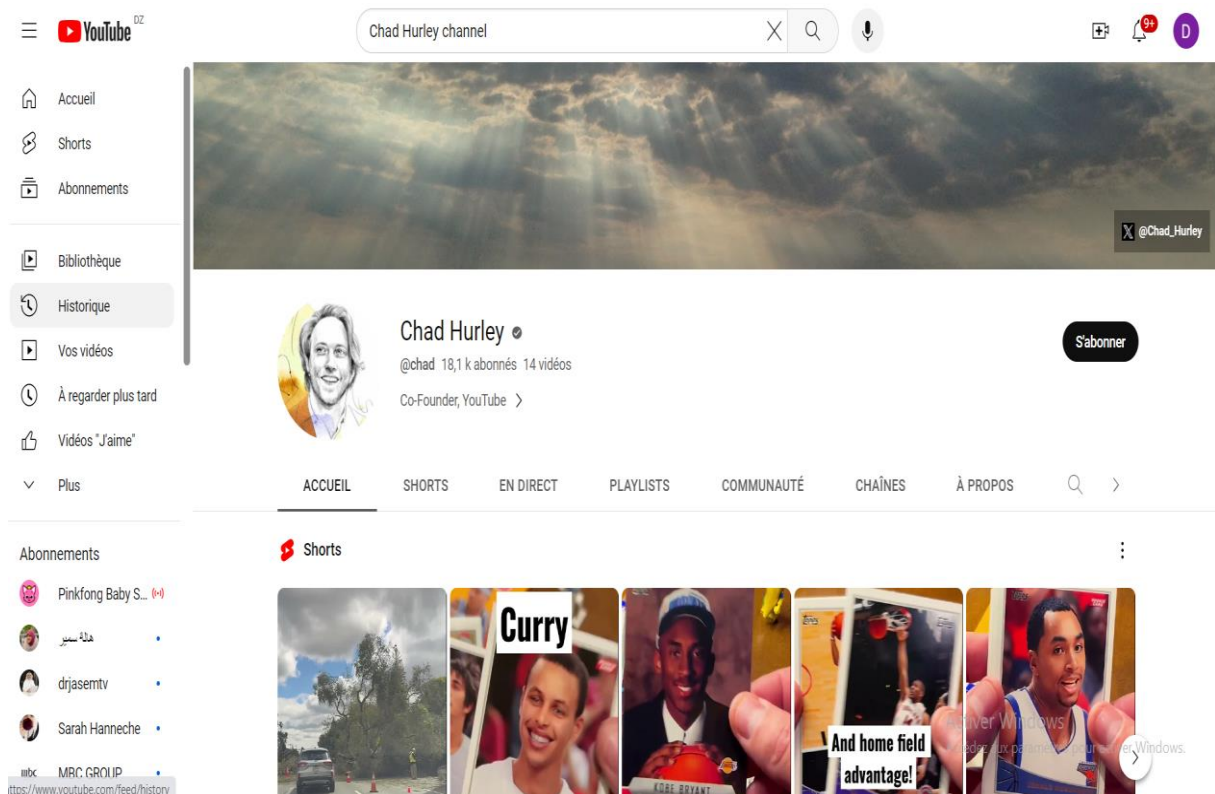
Figure (4) An example of Youtube Channel

4.2.1 Managing the Channel Together: You can name up to 50 administrators for a channel. Only the owner can name or remove them. The owner of the Google account can name a new owner among the administrators; this is the transfer of channel ownership. You can create up to 50 channels with the same Google name, which you can browse by clicking on "All My

Channels" at the top right of the screen. It is also from this section that you can add a new channel, whether or not it is associated with the same Google profile.

4.2.2 Video Publication: You can import videos or create them directly as slideshows or by recording with a webcam. You can choose between three privacy levels for your video:

"Public": The video is accessible via the search engine.

"Unlisted": The video does not appear in search results, but anyone with the URL link can access it.

"Private": It can only be shared with a maximum of 50 people who have the link and whose YouTube username or email address you entered.

4.2.3 Choosing Metadata: YouTube metadata is additional information you can add to your video to help viewers find and understand it better. It is essential to take the time to fill out all the metadata of your video in a relevant way. This will improve the visibility of your video on YouTube and attract a wider audience. The main metadata you can add to your YouTube videos are the title, description, keywords, and tags.

1. Video Title: The title should be clear, concise, and eye-catching. It should include relevant keywords to help viewers find your video in search results.

2. Video Description: The description should give a detailed overview of the content of your video. It is essential to include relevant keywords and links to your websites or social media.

3. Keywords: Keywords are terms or phrases that describe the content of your video. They help viewers find your video in YouTube search results. Choose relevant and specific keywords for your video.

4. Thumbnail: The thumbnail is the preview image that appears when your video is found in search results or on the YouTube homepage. It should be attractive and relevant to the video content.

5. Tags: Tags are additional keywords you can add to your video to help YouTube "understand" and rank it in its search system. Therefore, it is essential to choose your tags carefully.

4.2.4 Comments: YouTube comments allow viewers to interact with the content and its creators. These comments can be seen by a wide audience, including children and vulnerable individuals, and they have been criticized for their often negative nature. In an effort to combat hateful comments, harassment, and cyberbullying on its platform, YouTube has implemented policies that allow content creators to moderate comments on their videos using tools such as keyword filtering and manual moderation.

4.2.5 Copyright: Copyright on YouTube is a means for content creators to protect their videos. Any content protected by copyright cannot be used on YouTube without the permission of the copyright owner. Using copyrighted content without authorization can lead to legal action and significant damages to be paid. Additionally, YouTube can remove your video or delete your account for copyright infringement. There are several ways to use copyrighted content on YouTube while respecting copyright:

o Use copyright-free content, such as music and images available under Creative Commons licenses.

o Seek permission from the copyright owner.

o Use content within the scope of the fair use criterion for short quotations.

o Use content that has been made available by the owner under a license.

Creative Commons (CC) licenses are free licenses that allow creators to choose how they share their work with others. There are several different CC licenses, each with its own restrictions and conditions of use. It is important to understand the differences between CC licenses and choose the one that best suits your copyright needs.

4.3 Monetizing Your YouTube Channel: YouTube offers content creators the opportunity to generate revenue from their videos by displaying ads and participating in the YouTube Partner Program. The YouTube Partner Program, launched in 2011, involves paying revenue to video creators through their broadcasting channel via Google Adsense. To benefit from monetization, you must meet certain conditions and follow the steps below:

o   Meet the eligibility requirements: To participate in the YouTube Partner Program, your channel must have at least 1,000 subscribers and 4,000 hours of watch time in the last 12 months.

o   Enable monetization: Once you meet the eligibility requirements, you can enable monetization for your channel in YouTube's settings. To do this, you'll need to link your AdSense account, which is a Google advertising account that allows website and YouTube channel owners to earn money by displaying ads on their content. Advertisers pay to display their ads on videos, and content creators receive a share of the advertising revenue based on the number of views and clicks on the ads.

o   Create Quality Content: YouTube encourages content creators who produce high-quality content and adhere to community guidelines by featuring them on the platform's homepage and recommending them to users. To increase your ad revenue, it's important to create high-quality content that attracts and retains a large audience.

o   Promote Your Channel: To attract new viewers and increase both your audience and ad revenue, you can implement various strategies, such as sharing your videos on social

media, using relevant keywords and descriptions to help users find your channel on YouTube, and using paid promotion tools to increase the visibility of your content.

o Keep Your Channel Active: To maintain your YouTube channel, it's essential to regularly remove videos that are no longer relevant. To promote your recent content, you can link your channel to a Facebook page or Twitter feed to follow trends and share the latest discoveries you've made.

o Boost Your Views: Increasing the number of views can be achieved by carefully choosing a customized thumbnail that is easily identifiable among the results displayed after searching for a keyword in the YouTube search engine. Adding subtitles to your videos, publishing them on days when traffic on your channel is highest to reach the maximum number of people—YouTube offers an analytics tool for viewing traffic statistics on your YouTube channel (consult the Creator Studio, then Analytics, then Views). Sending proactive notifications to your list when you publish a new video, asking them to watch, click "Like," and leave their feedback and comments under the video. If your video receives many comments and "Likes" shortly after being uploaded, YouTube will consider it popular and promote it in search results.

o 4.4 YouTube Ads: While watching a video on YouTube, it may be interrupted by the launch of advertisements, which can come in various types, including:

o Skippable ads: These ads can be skipped after a few seconds. They can be played at the beginning, middle, or end of a video.

o Non-skippable ads: These are mandatory video ads that are played before (pre-roll) or during (mid-roll) the video.

o Overlay ads: These are ads displayed on top of the video content. They are often shown at the bottom of the screen and disappear after a few seconds.

- o Sponsored ads: These are ads that appear in the user's playlist or in YouTube search results.

- o Bumper Ads: These are short video ads (less than 6 seconds) that cannot be skipped. They are often used to increase brand awareness.

- o Display Ads: These are graphic ads that appear either next to the video or in the right column of the YouTube page. They can take the form of banners, squares, or rectangles.

5. LINKEDIN

LinkedIn is a professional social network that allows users to connect with other professionals and build their online professional network. It offers various types of relationships, including first, second, and third-degree connections, as well as people belonging to the same LinkedIn groups.

For example, imagine Mohamed, a marketing manager, joins LinkedIn to expand his professional network. He connects with his current colleagues and peers, forming his first-degree connections. Through these connections, he can access their professional updates, job experiences, and endorsements.

LinkedIn also allows John to connect with people who are connected to his first-degree connections, forming second-degree connections. These individuals might work in similar industries or have common interests.

Additionally, LinkedIn offers groups where members with similar professional interests or from the same industry can join and interact. For instance, John joins a "Digital Marketing Professionals" group, where members discuss the latest trends, share insights, and post job opportunities related to digital marketing.

Moreover, LinkedIn serves as a platform for businesses to promote their products and services, post job openings, showcase their company culture, and announce projects. For example, a software company might share updates on new product launches and receive feedback from its followers.

LinkedIn offers different account types, including the default "Basic" account, which allows users to search and view profiles, send connection requests, and receive an unlimited number of InMails, among other features. On the other hand, there are Premium accounts tailored to

specific needs, such as job seekers, sales and marketing professionals, recruiters, and more. The

profile linkedIn of Reid Hoffman, one of the linkedIn fondators in presented in figure (5).
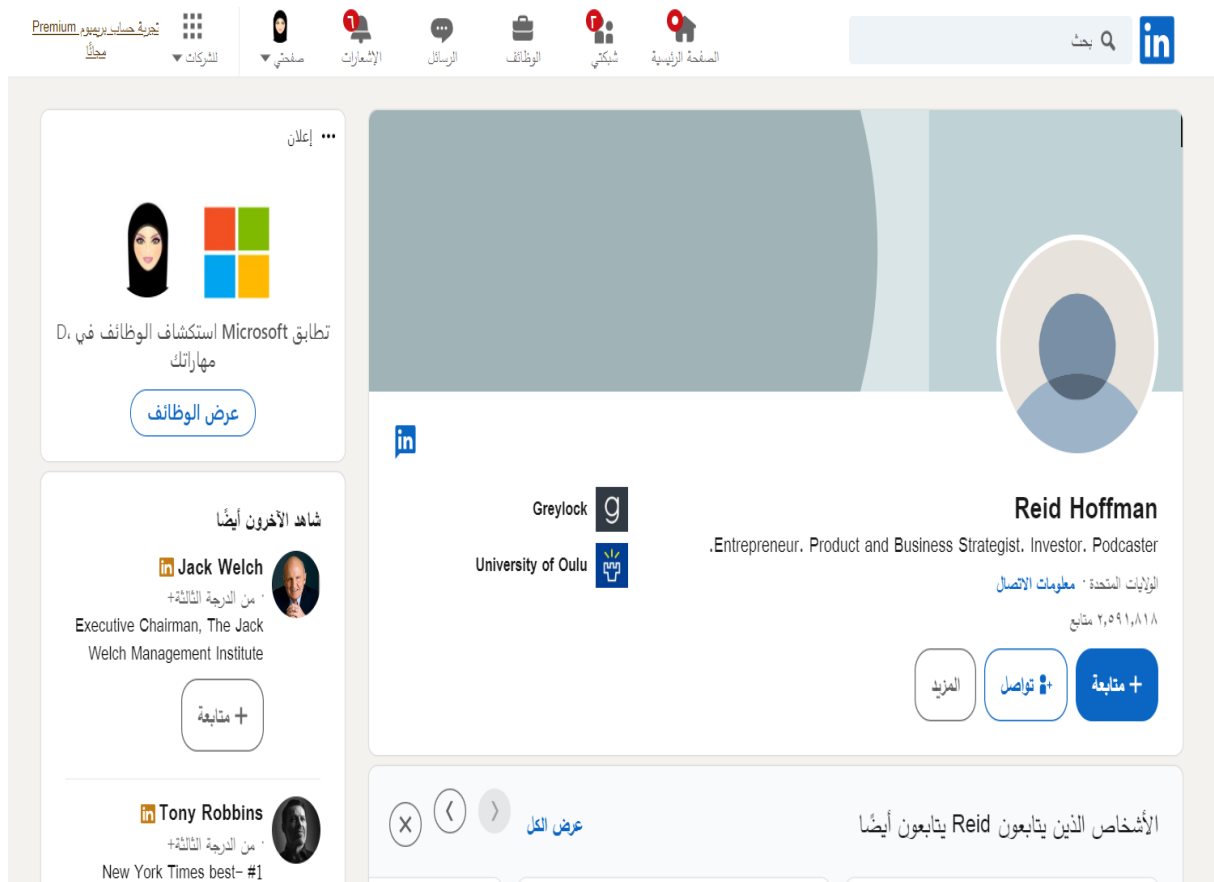
Figure (5) An example of LinkedIn profile

6. INSTAGRAM

Instagram is a social network originally created as a mobile application dedicated exclusively to smartphone users. The very concept of the site relies on a smartphone-specific feature: the ability to take photos and share them instantly through an Internet connection.

To use Instagram, you must start by installing the application and then create an account using an email address. Users can also sign up on Instagram by connecting their Instagram account with Facebook. In this case, the app suggests a list of Facebook friends who are already using Instagram. Similarly, Instagram proposes to use your address book to find users to follow. Lastly, you will discover popular profiles. Click on "Follow" to add those you wish to subscribe to.

Instagram users can publish photos and videos, use hashtags, like, comment on, and share photos/videos.

Instagram is a highly visual social network, making it extremely appealing to users. Images and videos can capture users' attention more effectively than text, which can help increase a brand's visibility.

The platform's massive popularity and diverse user base offer brands a wide reach and the ability to connect with various audiences.

Various means of interaction with users, such as comments, mentions, polls, questions, and direct messages, help establish strong customer relationships.

Instagram is an effective advertising platform for businesses, as it allows targeting ads based on users' interests and behaviors.

Although Instagram is very visual, it mainly focuses on photos and videos, limiting businesses' ability to provide detailed information or share links to web pages.

Moreover, content posted on the platform tends to have a relatively short lifespan as it is quickly replaced by new content. Thus, posts can easily be overlooked by users who haven't seen them immediately.

On Instagram, it can be challenging to achieve high engagement since it is flooded with content, and users can be quite selective about what they choose to follow or interact with.

Instagram's content ranking algorithms can impact the reach and visibility of content, which can be difficult for businesses to predict or control. Figure (6) shows an example of Instagram profile.
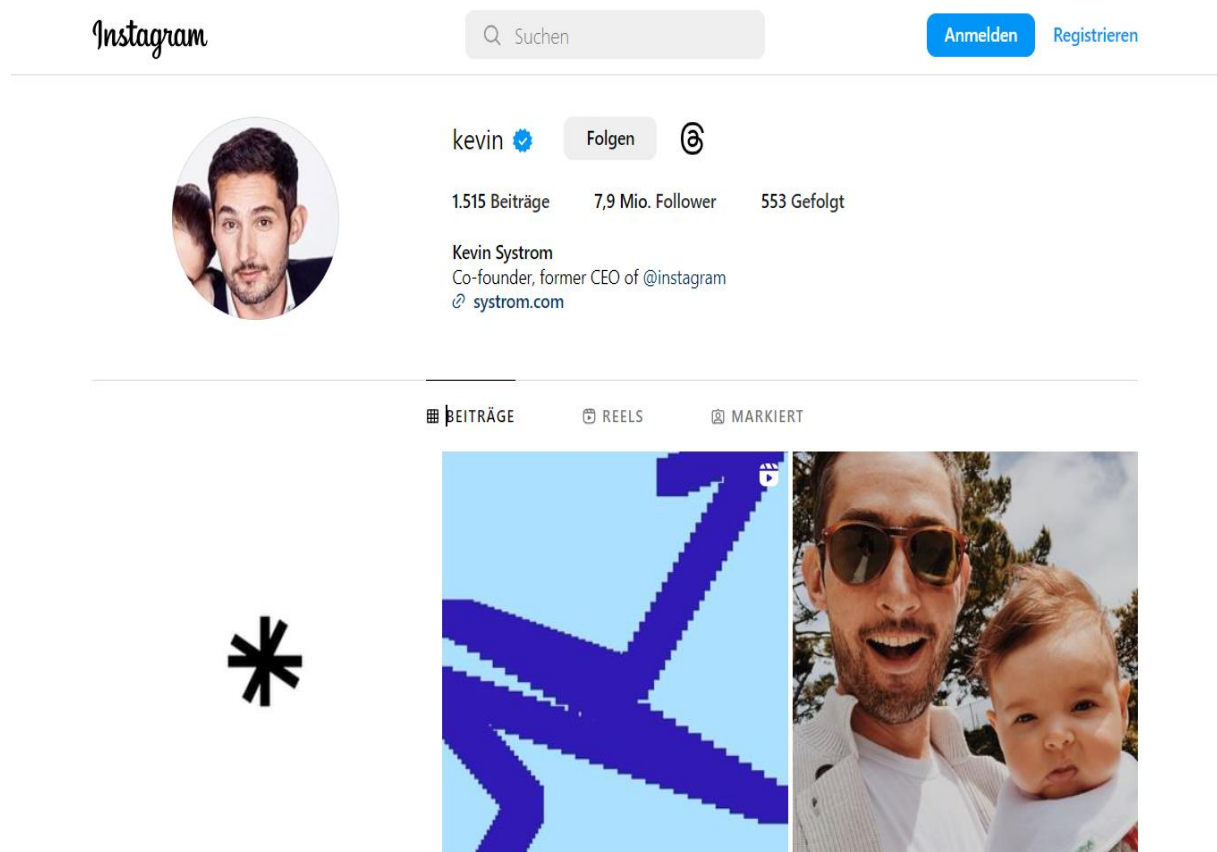
Figure (6) Example of Instagram profile

7. WhatsApp

WhatsApp is a cross-platform instant messaging application owned by Facebook Inc. It allows users to send text messages, voice and video calls, as well as multimedia files such as photos and videos, using an internet connection.

The term "WhatsApp" is a play on words from the English expression "What's up?", which means "What's new?". The application was founded in 2009 by two former Yahoo! employees, Brian Acton and Jan Koum. It was first launched on Apple's App Store in 2009 and later on Android in 2010.

7.1 Strengths and Weaknesses

Initially, WhatsApp was a simple text messaging application, but it quickly added features such as voice and video calls, as well as the ability to send multimedia files. It became very popular among users worldwide, especially in developing countries where phone communication costs are high.

In 2014, Facebook acquired WhatsApp for approximately 19 billion dollars, making it one of the largest acquisitions in the history of the technology industry. Since then, WhatsApp has continued to evolve, adding features such as group calls and disappearing messages.

However, the application has also faced controversies, particularly concerning user privacy and data security. In 2021, WhatsApp updated its privacy policy, raising concerns about the collection and sharing of user data with Facebook. These changes sparked a negative response from users and led some to seek alternatives to WhatsApp.

8. Other Networks

8.1 Foursquare

 It is the most well-known social network based on geolocation. It is a mobile application (for smartphones, tablets, and connected devices like the Apple Watch) that utilizes built-in location features to allow members to indicate their current location, thus recommending places to go out, visit, restaurants, shops, etc. These visits are called "check-ins" or records.

The community aspect is reinforced by a system of points and badges earned with each interaction, and a "game" in which the most frequent visitors of a location become its virtual "mayor."

8.2 Snapchat

 Snapchat is based on ephemeral videos lasting from 10 to 60 seconds that can self-destruct one second after being viewed. This social network is particularly popular among young users, who are attracted by the offered filters. Some B2C brands also use it to enhance their visibility by generating buzz through quirky videos. They involve their consumers by encouraging them to create videos and participate in various amusing challenges, like taking selfies with a product or performing choreographies. This is known as "user-generated content" (UGC), where it is the users themselves who create the brands' content. Snapchat has thus become a true haven for UGC.

8.3 Kickstarter

Kickstarter is a social network and crowdfunding website, also known as "crowdfunding" or "crowdsourcing," that allows project creators to raise funds for their projects. The projects can cover a wide range of categories, including music, film, video games, technological gadgets, design projects, and more. Project creators set a funding goal and a duration for the fundraising campaign. Contributors can then financially support the project in exchange for rewards offered by the project creator. If the minimum funding goal is reached during the campaign duration, the project is successfully funded. However, if the minimum funding goal is not met, contributors are not charged, and the project receives no funding. Kickstarter takes a commission from successfully funded projects. Since its inception in 2009, Kickstarter is considered one of the largest crowdfunding platforms globally and has contributed to the funding of thousands of projects.

8.4 Twitch

Twitch is the essential community platform for video game enthusiasts, also known as "gamers." It allows users to live stream videos of their gaming sessions, attracting millions of viewers who enjoy watching other players in action. While anonymous gaming sessions are also broadcasted, the most popular broadcasts are competitive eSports events featuring top players, drawing audiences of tens of millions of viewers. As a result, Twitch has become the go-to platform for gaming enthusiasts and professional gaming competitions.

8.5 Yahoo ! Answers

 The community website Yahoo! Answers allows its members to ask questions on a variety of topics and answer questions from others. Questions can be posted under one of the 26 available categories, and members are free to respond and rate the posted answers. The question's author can close it at any time and select the best answer from those provided. However, it should be noted that the best answer is often determined by the votes of other users rather than its accuracy or technical correctness. Original, funny, or unexpected responses tend to be preferred.

8.6 Yelp

 Yelp is a platform that allows users to find and recommend establishments in their city or neighborhood. The emphasis is on the social aspect, where Yelp aims to provide reliable and authentic information about local businesses, including restaurants, hotels, hair salons, etc., to help users make informed decisions when choosing a place to eat, drink, relax, or simply spend time. Yelp also encourages users to interact with the community by sharing their experiences and leaving reviews and ratings to help other members find the best places.

8.7 Clubhouse

 Clubhouse is a voice-based social media application that allows users to participate in live discussions, create chat rooms, and listen to conversations hosted by other users. The application is currently available on iOS only and operates on an invitation-only basis. Users can choose to join chat rooms on topics of their interest or create their own chat rooms to discuss subjects

they care about. The advantages of Clubhouse are that it enables users to connect with like-minded individuals and engage in discussions without being limited by geographical distance. It can also be used for professional purposes, such as organizing online events or conferences.

However, Clubhouse may also present some drawbacks, such as difficulties in moderating conversations and preventing hate speech or online harassment. Additionally, the exclusivity of the application may make it less accessible to some users and limit its growth potential.

8.8 Telegram

It is an instant messaging application that allows users to communicate securely through text, voice, or video messages. It was created in 2013 by the Durov brothers and is available on various devices such as smartphones, tablets, and computers. Telegram's reputation comes from its security, user-friendliness, and flexibility in sharing files of all sizes. The application also enables the creation of discussion groups that can accommodate up to 200,000 members. It can be an excellent resource for learners as it allows them to join groups and channels on specific topics. Learners can connect with like-minded individuals and discuss relevant subjects. Groups can also be helpful for asking questions and getting quick answers. Furthermore, Telegram also offers learning features, such as language bots for practicing a foreign language or quizzes to test knowledge on a specific topic. There are also dedicated channels for broadcasting educational content, such as conference videos and articles on relevant subjects.

However, Telegram has been criticized for its use by extremist groups for communication and coordination of illegal activities. Additionally, it can also be a source of misinformation or fake news, so it is important to be critical and verify sources before believing or sharing information.

9. Other social media

Social media and social networks can be employed in comparable ways; however, there exist distinctions between them, as elaborated earlier. In this section, we provide definitions for various forms of social media.

1. Blogging is a publishing tool that allows anyone (individuals, groups, businesses, etc.) to exchange, comment, and share content according to their own editorial line.

2. Forums are dedicated spaces for discussions, with archived discussions enabling asynchronous communication. There are forums on various topics, themes, and passions.

3. News aggregators like Digg allow internet users to share news they found online, comment on them, or vote for their preferred content. The most popular items appear on the front page to reach a wider audience.

4. Social bookmarking sites like Delicious, Blogmarks, and StumbleUpon enable users to tag, save, manage, and share web content. Users can save favorite websites and categorize them by themes and keywords.

5. Wikis allow a group of people to collaboratively develop a website even without knowledge of HTML or other programming languages. Anyone can edit the pages. The most well-known wiki is the online encyclopedia Wikipedia.

6. Virtual worlds like Second Life or Habbo are personalized 3D environments that allow users to play and virtually meet through their avatars.

10. Advantages and disadvantages of social media

Social media now play a significant role in our daily lives, with each platform having its own advantages and disadvantages. The choice of platform depends on the objectives and strategies of each user.

- Facebook is the most popular platform with over 2.8 billion monthly active users. It is useful for targeted advertising, building communities, and organizing events. However, Facebook is also criticized for its lack of privacy and the spread of misinformation.

- Instagram is particularly popular among young people and is ideal for visual marketing. However, users can become obsessed with presenting a perfect image, leading to mental health issues.

- Twitter is valued for its immediacy and quick information dissemination, making it useful for journalists, public figures, and businesses. However, its character limit can be a disadvantage for some users, and it can also be very addictive.

- LinkedIn is the ideal platform for professionals, entrepreneurs, and job seekers. It offers networking and career development opportunities. However, some may find that LinkedIn lacks user-friendliness and authenticity.

- TikTok is the latest trendy social media platform, appreciated for its short and entertaining videos. It is popular among young people and offers growth potential for brands. However, it is often criticized for inappropriate content and lack of user safety.

- YouTube is the second most used search engine in the world after Google. It is ideal for content creators, brands, and businesses looking to reach a wide and engaged

audience. However, the competition is fierce on YouTube, making it challenging to stand out.

11. Conclusion

Social media have become omnipresent in our daily lives, with several popular platforms such as Facebook, Instagram, Twitter, LinkedIn, TikTok, YouTube, and many more. Each of these platforms has its own strengths and weaknesses, which have been described above. The chapter presented some of the most popular platforms, including Facebook, Instagram, Twitter, LinkedIn, TikTok, YouTube, etc. Each social network has its own strengths and weaknesses, and we have tried to summarize them to allow users to understand and use each platform effectively and safely.

CHAPTER III: MASTERING THE INFLUENCE OF SOCIAL MEDIA

1. Introduction

The influence of social media can be defined as the ability to change users' attitudes, behaviors, and opinions, as well as to influence their decision-making in areas such as consumption, political engagement, community participation, and many other aspects of their lives. Influence can be exerted through interactions with content published on social media (comments, shares, likes). Social media influencers, i.e., individuals with a large audience and strong influence on social media, can also play a significant role in social media influence. In this chapter, we will discuss the concept of an influencer, how to measure their influence, and the criteria for choosing a good influencer. We will also explore different dimensions of influence, including social, cultural, economic, and political influences, whether positive or negative.

2. What is an Influencer?

An influencer is a person with an extensive network in your research domain, which can offer you a competitive advantage by providing direct contacts, advice, job interview opportunities, invitations to professional events, and more. Measuring influence mainly relies on the ability to mobilize and elicit reactions from others. When an influencer speaks, they generate "likes," "retweets," or shares from their followers. This is why brands seek out these individuals, as a message relayed by an influencer is more credible and impactful than a message directly disseminated by the brand. Various tools, such as Klout or Kred, are available to measure online influence.

3. Measuring Online Influence

Measuring influence on social media allows for the evaluation of the relevance of actions, as a criterion for return on investment or business development. There are several tools available to measure influence. For example, the Klout Score is an indicator that evaluates a user's influence online on a scale of 1 to 100, based on their profiles on various social networks such as Twitter, Facebook, LinkedIn, Google+, Foursquare, Instagram, YouTube, Tumblr, etc. It is used for various purposes, such as boosting one's ego, evaluating the relevance of actions, measuring return on investment, or developing business. To calculate the score, interactions such as retweets, mentions, likes, comments, and +1's are taken into account. The Klout score is a combination of the number of people reached, the amplification, and the influence of people in the user's network.

Unlike Klout, Kred only considers Twitter accounts to evaluate online influence. It is based on mentions and retweets to establish a user's influence score on this platform. However, there is also a specific version for brands called "Kred for brands," which allows for the identification, prioritization, and engagement of the best brand fans based on their activity on Twitter. This can help businesses better understand how their audience interacts with their content and improve their online marketing strategy.

4. Methodology and Tips

The list of influencers is not static; it can evolve over time. It is rare for a person to be influential in an absolute sense. Influence often depends on the field of activity. In some cases, specialized agencies can be consulted to identify and interact with the most relevant bloggers for a given campaign.

The question arises whether to prioritize quantitative or qualitative targeting. This decision will depend on the context. For example, a salesperson might resort to quantitative targeting, while

an agri-food engineer might prefer qualitative targeting. Each situation is unique and requires in-depth analysis to determine the best approach.

5. Criteria for Choosing an Influencer

The impact of an influencer can be measured on social media platforms such as Twitter and Facebook by observing the number of retweets and backtweets (a credibility index), as well as the number of likes and fans. The number of links pointing to their content, the number of comments and shares on their blog, and the frequency of content updates are also indicators of their online influence. Additionally, the number of recommendations on LinkedIn can give an idea of an individual's influence on that professional platform.

6. Economic Influence

Social media have had a significant impact on the economy, both in terms of creating new business opportunities and influencing consumer behavior, among other factors. This influence can have positive or negative effects, which we will summarize below.

6.1 Positive Impacts:

- Social media have created new opportunities for businesses to promote their products and services. Targeted ads on social media can reach a broader and more specific audience than traditional advertisements, which can lead to increased sales.

- Targeted product recommendations through user-social media interaction, which allows understanding their behavior and preferences.

- Social media have also enabled the emergence of new e-commerce platforms, such as Instagram and Facebook Marketplace.

- The rise of social media platforms specialized in crowdfunding, such as Kickstarter and Indiegogo, has allowed entrepreneurs and project creators to raise funds directly from their online communities.

- The significant amount of data provided by social media users has opened up new opportunities for data analysis and market research.

- A new form of marketing has emerged, called influencer marketing, where companies can collaborate with individuals who have a large following on social media to promote their products or services.

6.2 Negative Impacts:

Despite their benefits in economic development, social media have facilitated the spread of false information and rumors on a largescale. This can have serious economic consequences, particularly when it comes to false information about companies or significant economic events. Misleading information can lead to financial market instability and disrupt investor confidence.

Moreover, guaranteeing users' freedom of expression without restrictions can lead to the deterioration of a particular company's reputation if it becomes the target of viral criticism.

Increased competition has led to an increase in advertising spending. In other words, to attract consumers' attention on social media platforms, businesses must invest more and more in online marketing.

7. Social Impacts

Social media have had a considerable influence on society, ethics, and moral values. Below, we mention their positive and negative impacts on society (Arnaud 2012).

7.1 Positive Impacts:

- Changes in communication methods: Social media have allowed people to connect instantly with others from all around the world.

- Information dissemination: Social media have facilitated the rapid spread of information and the creation of communities of interest. This can have advantages, such as the ability to quickly mobilize people for important social causes.

- Social media have also led to more vibrant and accessible online public debates. This can lead to constructive discussions on social and moral issues.

7.2 Negative Impacts:

- Influence on society's moral values, where prohibited acts become popular, influencing societal norms and values.

- Affordable public debates on social media can also lead to hateful behavior and online abuse.

- Social media can cause depression, anxiety, jealousy, and insecurity due to constant comparison with others, online harassment, and pressure to maintain a perfect online image.

- They have hindered relationships by allowing the concealment of truth and creating excessive dependency on social media to maintain relationships.

- They can be a breeding ground for online cyberbullying.

- Excessive reliance on social media has hindered the ability to focus and establish relationships with people in real life.

- Social media can be used to spread false and misleading information, causing confusion and fear.

- They have also led to privacy breaches by sharing personal information online.

- They have provided a new form of communication that has changed how people interact with each other, affecting social norms and moral values.

8. Technological Impacts

Social media have also had a significant influence on technological development. Below are some ways in which social media have influenced this development.

- Improvement of user-friendliness: Social media were designed to be user-friendly and easy to use. Technology companies have adopted this approach to improve the user experience of their products. This has led to improved user-friendliness of technological products in all sectors.

- Use of big data: Social media produce massive amounts of data. Technology companies have learned to utilize this data to enhance their products. The collected data can help predict trends and personalize user experiences, which is beneficial for both businesses and consumers.

- New technologies: Social media have created new opportunities for technology companies to develop innovative technologies. Social platforms have stimulated the development of natural language processing, face and voice recognition, artificial intelligence, blockchain, and virtual reality technologies.

- Launching new startups: Social media have also contributed to the creation of new startups. Social platforms have provided a showcase for entrepreneurs to launch ideas and products, and have allowed new businesses to connect with potential investors and customers.

9. Health impacts

The harmful consequences of excesses apply to various aspects of life, including the use of social media. Recent studies have highlighted the potential risks of hyperconnectivity, leading to a condition referred to as "Cyberdependency." Caplan and Young provide a definition for this condition, describing it as the "problematic use of the Internet and new technologies," leading to persistent and recurrent utilization of online platforms, causing difficulties for individuals at psychological, social, or professional levels. Cyberdependency brings about distress and various challenges in one's life.

The World Health Organization (WHO) is on the verge of recognizing Cyberdependency as a psychiatric disorder. The primary symptoms of this condition include carpal tunnel syndrome, dry eyes, chronic headaches, neglect of personal hygiene, back pain, irregular eating habits, insomnia, and disruptions in sleep patterns. It is crucial to be aware of these potential health impacts when engaging with social media platforms.

10. Countermeasures

Against all the negative influences mentioned before, it is essential to take measures to manage and reduce their impacts. In this context, limiting the use of social media is a primary countermeasure to implement. In this regard, customizable and adjustable applications are already developed to measure the time spent on social media and notify the user when they overuse it.

Social media can be a significant source of virality when your content is shared from wall to wall. Monitoring what is shared online is a solution to combat any content considered negative, such as hate speech, rumors, and false information. On the other hand, interesting, informative, and entertaining content should be emphasized.

People who spend a lot of time on social media can become dependent on this activity. This can lead to time wasting, decreased productivity, and social isolation. Engaging in activities outside of social media, such as physical activities, community involvement, or finding a passion, can help reduce excessive online engagement. Disabling notifications can also reduce the urge to check social media accounts constantly.

Often retouched images and subliminal messages can give a false idea of the "perfect" body or life, leading to self-esteem issues. Raising awareness and following healthy and realistic accounts can help combat this.

11. Social Media Mistakes to Avoid

In his book titled "Les outils de la communication digitale," the author summarizes the mistakes to avoid as a social media user in 10 essential points. Here they are:

o Absence of a profile picture: Having an appropriate profile picture on social media is essential as it can reflect your personality and commitment. An anonymous or extravagant profile picture might not be well-received. If you have personal or privacy concerns about displaying a profile picture, you can replace it with an illustration, a landscape, or an aesthetic photo related to your activity.

o Maintaining a ghost account: If you can't invest time in managing your social media account, it's better to assign this task to a member of your company, outsource the service, or delete the account altogether. An inactive account can be more detrimental to a business or brand than having no account at all. It may indicate an inability to adapt to social media and be perceived as a lack of commitment.

o Sharing overly personal content: It's essential to exercise caution when sharing content on social media, as it can have long-term negative consequences. For example, a personal or compromising photo can harm your chances during a job interview with a

recruiter. Similarly, inappropriate behavior during an event can damage your professional reputation, especially if you work in a field that requires restraint, such as lawyers, experts, or consultants. The same caution should apply to a professional account to avoid any content that could be detrimental or misinterpreted in relation to the company's values.

o Making offensive remarks: It's crucial to remain calm and composed at all times on social media. Avoid reacting defensively, regardless of the tone or provocation of the interlocutor. Offending your interlocutor will only worsen the situation, and your negative attitude might be perceived unfavorably in public. Adopting a cool-headed attitude is a basic rule for community managers.

o Deleting a comment: In general, it is not recommended to delete a negative comment unless the language used is genuinely insulting. In such cases, it's important to explain why the message was deleted. Sending a private message to the author can also be a useful way to supplement your response. It is crucial to avoid ignoring or dismissing the comment entirely, regardless of its tone or content.

o Responding publicly to a private question: It's essential to consider that responding publicly to a private message may be perceived negatively by your interlocutor. Respect your correspondents' need for confidentiality. When someone contacts you via private messaging, it is clearly intended to preserve the privacy of your exchanges. The rule is simple: respond using the same channel that was used to contact you.

o Excessive advertising:

o It's tempting to promote products on social media. However, it's essential to avoid constant advertising on your wall or feed. This can push away your fans and readers. It's better to stand out with your expertise and design your messages in a way that offers genuine opportunities to your community. Additionally, you always have the option to

develop an e-commerce activity by creating an online store accessible via a tab on your Facebook page.

o Prolonged absence: Many businesses struggle to maintain a regular and engaging presence on social media. It's crucial to understand that an extended absence might make you forgettable, push your fans to look for other sources, and force you to start over from scratch. Managing a community account requires endurance, as your community lives by the rhythm of your publications and updates. It's essential to be consistent in your efforts to maintain engagement and interest in your community.

12. Conclusion:

Social media have a profound impact on our society, with positive and negative consequences for individuals, relationships, and communities. This chapter aims to explain the positive impacts of social media to enable responsible use while avoiding negative influences. To do so, several strategies have been proposed, including limiting time spent on social media, avoiding sources of stress, comparisons, and dubious information, and practicing conscious usage. By following these strategies, it is possible to master their influence responsibly.

CHAPTER IV: SOCIAL MEDIA-BASED RESEARCH: TRENDS, TECHNIQUES, AND APPLICATIONS

1. Introduction

Social media has emerged as a dominant force shaping communication, culture, and commerce in the 21st century. As a multifaceted phenomenon, it serves not only as a platform for social interaction but also as a rich and dynamic data source that fuels diverse research fields. The explosion of user-generated content enables novel methodologies for studying human behavior, opinions, and network dynamics. Researchers employ advanced machine learning and natural language processing (NLP) techniques to extract meaningful insights from vast social media datasets, uncovering patterns in sentiment, information diffusion, and community structures. Simultaneously, the rise of generative AI models, including large language models, has revolutionized content creation and dialogue systems, while also raising ethical considerations around privacy and misinformation.

Beyond its technical and social dimensions, social media plays a transformative role in the global economy. It drives e-business innovation, empowers digital marketing strategies, and catalyzes new economic models such as social commerce and the gig economy. Furthermore, emerging technologies like augmented reality (AR) and virtual reality (VR) integrated with social platforms are redefining user engagement and interaction in immersive digital environments. This chapter explores these interconnected aspects, providing a comprehensive overview of social media as a research domain and its profound impact across technological, social, and economic spheres.

2. Social Media as a Data Source

Social media platforms have emerged as rich repositories of user-generated data, providing unprecedented opportunities for studying human communication and social behavior. These platforms host diverse content types — including text, images, videos, and metadata — allowing researchers to analyze communication patterns, social interactions, and emergent phenomena on a large scale. The volume and velocity of data generated in social media environments enable real-time monitoring and large-scale empirical research (Boyd & Crawford, 2012).

However, extracting meaningful insights from social media data requires navigating challenges such as data quality issues, incomplete or noisy information, platform-specific biases, and privacy concerns (Murthy, 2018). Despite these complexities, social media remains an essential data source for disciplines such as communication studies, computer science, sociology, and psychology (Papacharissi, 2010).

3. Research Methodologies

Research methodologies in social media studies are diverse and interdisciplinary, blending computational, quantitative, and qualitative approaches. Computational methods include data mining, machine learning, and natural language processing (NLP), which enable the automated extraction of sentiment, topics, and social dynamics from large datasets (Lazer et al., 2014). These methods help identify trends, community structures, and influential actors within social networks.

Network analysis is a critical tool for mapping relationships and understanding information diffusion mechanisms, employing graph theory to characterize connectivity and cluster formation within online communities (Wasserman & Faust, 1994). Qualitative methodologies,

such as content analysis and ethnography, complement these techniques by providing rich contextual insights into user behavior and discourse (Hine, 2015).

Ethical considerations, including user consent, anonymization, and data stewardship, have become central to social media research, especially given the public yet personal nature of the data (Markham & Buchanan, 2012). Researchers are increasingly integrating ethical frameworks to responsibly manage and report findings while respecting participant privacy and platform policies.

4. Machine Learning and NLP Approaches

Machine learning (ML) and natural language processing (NLP) have become foundational methodologies in analyzing social media data. The vast scale and complexity of user-generated content — including informal language, slang, emojis, and mixed languages — require advanced computational techniques capable of extracting meaningful patterns, sentiments, and insights.

ML algorithms enable the automatic classification, clustering, and prediction of social media content by learning from labeled or unlabeled data. Supervised learning methods, such as support vector machines, random forests, and, more recently, deep learning models, are widely applied to tasks including sentiment analysis, topic detection, and spam filtering (Manning, Raghavan, & Schütze, 2008). Deep neural networks, particularly recurrent neural networks (RNNs) and transformers, have demonstrated significant improvements in understanding contextual and sequential information in text (Jurafsky & Martin, 2020).

NLP techniques provide the tools for preprocessing and transforming raw text into analyzable forms. This involves tokenization, part-of-speech tagging, named entity recognition, parsing, and semantic analysis (Bird, Klein, & Loper, 2009). Additionally, recent advances in pretrained language models — such as BERT (Bidirectional Encoder Representations from Transformers)

— have greatly enhanced the ability to capture linguistic nuances and improve downstream social media tasks like sarcasm detection and user intent classification (Devlin, Chang, Lee, & Toutanova, 2019).

One critical challenge is dealing with the noisy and highly informal nature of social media text, which often deviates from standard language norms. Domain adaptation techniques and the creation of specialized lexicons or embeddings for social media language are common strategies to address this issue (Eisenstein, 2013). Moreover, multimodal approaches that combine text with images, videos, and metadata are increasingly explored to provide richer representations of social communication (Baltrušaitis, Ahuja, & Morency, 2019).

Finally, interpretability and ethical considerations are essential in ML and NLP applications on social media data. Researchers must ensure that models do not perpetuate biases and respect user privacy, especially when deploying automated systems that influence public discourse or decision-making (O'Neil, 2016; Bender et al., 2021).

5. Opinion Mining Across Cultures

Opinion mining, commonly known as sentiment analysis, involves extracting and interpreting subjective information from text data. However, sentiment landscapes vary significantly across cultural and linguistic contexts, posing unique challenges to universal models. Social media platforms host a rich diversity of voices, each shaped by cultural norms, idioms, and expressive styles that influence how emotions and opinions are conveyed (Liu, 2015).

Cross-cultural sentiment analysis requires adapting NLP models to understand local vernacular, sarcasm, irony, and culturally specific references (Pang & Lee, 2008). For instance, words or phrases that signal positive sentiment in one culture may carry neutral or even negative connotations in another (Törnberg, 2018). This phenomenon complicates sentiment

classification and demands careful data annotation practices and multilingual resources tailored to regional language use (Cambria & White, 2014).

Moreover, the emotional valence and intensity of expressions can differ due to sociocultural factors such as individualism versus collectivism, or high-context versus low-context communication styles (Hofstede, 2001). Incorporating cultural awareness into sentiment analysis systems can improve accuracy and reduce biases, enabling more nuanced insights into public opinion on global social networks (Ramasamy, 2020).

6. Generative AI in Social Spaces: GPT-Driven Communication & Risks

The emergence of generative AI models, such as OpenAI's GPT series, has transformed social media communication by enabling automatic content generation, dialogue systems, and personalized interaction agents (Brown et al., 2020). These models harness large-scale pretrained transformers to produce human-like text, fueling new modes of engagement but also raising complex challenges.

On one hand, GPT-driven communication can enhance user experiences by providing instant responses, aiding content creation, and supporting multilingual interactions (Radford et al., 2019). However, the widespread deployment of generative AI also poses risks including misinformation dissemination, deepfake text, and the amplification of harmful stereotypes embedded in training data (Bender et al., 2021).

Ethical considerations about transparency, accountability, and control over AI-generated content are critical for social platforms (Floridi et al., 2018). Researchers emphasize the importance of developing robust detection tools, clear disclosure policies, and participatory governance to mitigate misuse (Zellers et al., 2019). The dual-edged nature of generative AI

demands interdisciplinary approaches combining technical innovation with social responsibility (Crawford, 2021).

7. Social Media and Augmented Reality (AR)

Augmented Reality (AR) enhances social media by overlaying digital information and graphics onto the physical environment, creating interactive experiences that blend real and virtual worlds. On platforms integrating AR, users can share location-based content, use filters that modify real-time images or videos, and participate in immersive advertising or gaming. This fusion supports richer social interactions, contextual engagement, and new forms of creative expression. Research continues to improve AR's usability and accessibility, as well as address challenges related to device limitations and user safety (Milgram & Kishino, 1994).

8. Social Media and Virtual Reality (VR)

Virtual Reality (VR) extends social media into fully immersive environments where users can engage as avatars within virtual spaces, fostering a strong sense of presence and community. VR social platforms enable collaborative work, virtual events, gaming, and socializing in 3D worlds, unrestricted by physical location. These experiences expand the boundaries of social communication, offering novel forms of interaction and entertainment. Ongoing research explores optimizing VR for scalability, reducing motion sickness, and addressing privacy and psychological effects within virtual social networks (Steuer, 1992).

9. Conclusion

The study of social media spans an extensive range of disciplines, reflecting its complex influence on modern society. By harnessing social media as a data source, researchers unlock rich insights into human communication, sentiment, and community dynamics through sophisticated machine learning and NLP methods. The advent of generative AI and large

language models amplifies the possibilities for automated content generation and interaction, while simultaneously posing significant ethical challenges.

From an economic perspective, social media has revolutionized e-business, enabling companies to engage consumers in unprecedented ways and fostering innovative commercial models such as social commerce. Technologies such as AR and VR further enhance social media's immersive potential, shaping the future of digital communication and interaction.

As social media continues to evolve, its multifaceted role demands interdisciplinary research that balances technological advancement with societal well-being, economic development, and ethical governance. This chapter underscores the importance of a holistic approach to understanding social media's past, present, and future impacts.

Appendixes

Glossary

1. AdSense: is an advertising program run by Google that allows website owners and content creators to monetize their online content by displaying relevant and targeted ads on their websites or YouTube videos.

2. Affiliation: A principle where a website offers a network of partner sites to promote its products or services through banners or text links.

3. Agregator: An Internet site or system that gathers web content, such as news headlines, blogs, tweets, and podcasts from various sources, and disseminates them. It uses an RSS feed or another type to automatically find and download content as it becomes available to users.

4. Augmented Reality: A technique that allows real-time insertion of 2D or 3D elements into a real image.

5. Backlinks: Inbound links coming from an external site. The quantity and quality of these links are considered by Google in the implementation of its PageRank (see definition below).

6. Blogroll: A list of blogs that a blogger claims to read regularly and provides links to on their own blog.

7. Brand newsroom: A place and team responsible for implementing marketing decisions in real-time during an event or special operation.

8. Buzz: The famous word-of-mouth marketing technique used to create excitement around an event, a new product, etc. Different from viral marketing, as it involves controlling the content.

9. Buzzword: A popular word on the web at a given time, used repeatedly to attract attention.

10. Cartography: A visual representation of a brand's digital ecosystem, including the spaces where it is mentioned and the individuals expressing opinions about it.

11. Cloud: Literally "cloud." The concept of transferring data/files to remote servers for "cloud computing."

12. Community Management / Community Manager: Involves animating and managing an online community of users.

13. CPC: Cost Per Click. A payment model where advertisers pay for each click on a banner or sponsored link by a user.

14. CPM: Cost Per Mille. A payment model based on the number of page views by internet users.

15. Curation: A technique used to select, filter, organize, comment, and share links with internet users.

16. E-reputation Management and Buzz Monitoring: Work involving monitoring online conversations about a company, product, or service, either periodically or regularly.

17. Content Sharing Communities: Sites like YouTube, Flickr, Slideshare, and Issuu that allow users to share content such as videos, photos, presentations, and documents.

18. Content: The collection of productions, articles, videos, images, infographics, quizzes, disseminated on the web.

19. CMS: Content Management Systems are software designed to facilitate the creation of blogs or websites and allow for quick updating of online content.

20. Digital CRM: The set of online channels used for customer relationship management. It can include social media, contact forms, and chat systems, for example.

21. Crowdsourcing: A phenomenon where a specific problem or challenge is entrusted to a large, loosely organized group of people on the internet. This approach allows for

contributions to be gathered regarding a future product or ideas for an upcoming advertising campaign, for example.

22. Display: Traditional internet advertising that involves buying space and using graphic or visual elements (banners).

23. Earned Media: Exposure that a brand receives on social media without using a Social Ads campaign.

24. Digital Ecosystem: The collection of media, sites, blogs, social networks, video platforms, forums where internet users express themselves about a brand and/or product.

25. E-reputation: The reputation of a person, company, or brand on the web.

26. Fact-checking: A technique of verifying the statements and facts of personalities, press articles, etc., using web archives.

27. Flux: Data format used to provide internet users with frequent content updates, such as blog articles.

28. Gamification: The practice of incorporating game mechanics into real-life applications (e.g., Foursquare).

29. Guest Blogging: The invitation of an external contributor to write an article for your website or blog. It allows you to benefit from their influence and establish a privileged relationship with the influencer in question.

30. Hashtag: A keyword preceded by a # symbol used to easily find all posts shared on a specific social media platform that include the same keyword.

31. Hoax: A variant of urban legends, referring to false information or false alerts spread on the web, via emails, and social media.

32. Influencers: Major users of the web and social media whose influence generally stems from their large audience or the quality of their online statements and analyses.

33. Infographic / Data Visualization: A method of visualizing a set of data grouped into a didactic visual creation to facilitate understanding of the expressed figures.

34. IRL: In Real Life, referring to the physical real-world.

35. KPIs: Key Performance Indicators or Key Success Factors are quantifiable elements used to measure whether the objective of a digital strategy has been achieved.

36. Micro-blogging: Derived from blogging, micro-blogging involves publishing short articles. The main platforms are Twitter and Weibo.

37. Motion Design: A method of graphic design in motion, used to create videos with animated images.

38. Newsjacking: A strategy aimed at leveraging current news to gain visibility on social media.

39. Tag Cloud: A group of keywords used to visualize the different contents of a website. The size of the keywords indicates their popularity.

40. Opt-in: A legal term referring to the process in which an individual gives prior consent to receive marketing communications. It is a legal requirement that typically takes the form of a checkbox to be ticked.

41. Opt-out: A process (illegal when targeting email addresses of individuals) involving the collection of information based on the individual's implied consent.

42. PageRank: An index used to measure the popularity of web pages indexed by the Google search engine and, therefore, their ranking.

43. Personal Branding: An online communication strategy applied to an individual to control and improve their image on the web.

44. Podcast: An audio program that can be listened to online or downloaded, inspired by radio shows.

45. Posts: Messages disseminated by a user on a social network to all or part of their followers or contacts.

46. Pure Player: A company or media operating exclusively on the web.

47. Reach: The percentage of internet users reached by a publication or advertisement compared to the total target audience.

48. Rich Media: Integration of various media (audio, video, photo) using animations in an advertising format.

49. Social Media: Generally refers to all internet sites that enable individuals to build a network of friends and/or professional contacts and communicate or exchange with them.

50. SEO: Search Engine Optimization. A practice that optimizes a website's ranking in search engines based on its content and information organization.

51. SMO: Social Media Optimization. A method used to improve visibility on social media. SMO is similar to SEO as it also enhances visibility on search engines.

52. Social Ads: The set of advertising formats present on social networks.

53. Social Media Monitoring: Monitoring and listening to opinions across all social networks and participatory spaces.

54. Social Media Strategy: A communication strategy on social networks aimed at achieving defined, realistic, and measurable objectives while ensuring brand message consistency.

55. Timeline / News Feed: An information feed present on a social network that allows the user to follow all the accounts and pages they have subscribed to.

56. Twittosphère: The collective universe of Twitter, encompassing all users and interactions on the platform.

57. Vloggers: Bloggers who solely use video as their medium of expression and are typically present on the web through a YouTube channel.

58. Social Web: The concept where the internet becomes a social space where users interact with each other, shifting from being a mere information transmission medium.

59. Webzine: A digital version of a magazine, a webzine is a website that gathers articles and other content produced by amateurs, employees, etc.

60. Widget: A combination of "window" and "gadget." It refers to a small "gadget" application that provides specific information (such as weather, stock prices, TV programs, etc.).

61. Wiki: A website where users can modify the content of pages. Wikipedia is the most well-known example.

62. Web 2.0: A term describing a set of innovative approaches to use the internet in new ways. The Web 2.0 paradigm allows users to access and distribute information from various sites simultaneously, enabling independence from the producers of that information or the sites hosting it.

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