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From Habermasian Hegemony of the Public Sphere to the Plurality of Digital Spaces: A Critical Sociological Study of the Reproduction of Collective Identities and Social Relations Under the Influence of Communication Technologies

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Abstract:
This research seeks to deconstruct the classical theoretical assumptions about the public sphere as formulated by Habermas's theory, which presupposed the unity and centrality of social space, through a critical in-depth study of how collective identities and social relations are reshaped within the context of the digital revolution and the plurality of virtual spaces. The fundamental problematic of the research lies in the central question: How have modern communication technologies redefined the nature of the traditional public sphere, thereby leading to the fragmentation of collective identities and the reformulation of social relations in forms unforeseen in classical sociological literature?

The approach revolves around a critical hypothesis positing that the transition from a unified public sphere to multiple digital spaces was not merely a technological advancement but rather a radical epistemological transformation in the mode of identity production and mechanisms of social interaction. The importance of the research manifests itself in bridging the epistemological gap between traditional theories of the public sphere and the contemporary reality of digital social practices, particularly in the Arab and Algerian context where digital modernity intersects with traditional social structures.

The study employs a critical analytical methodology that combines theoretical examination of fundamental concepts (public sphere, collective identity, social relations) with the analysis of actual practices of individuals on social media platforms. The research utilizes multiple methodological tools including digital discourse analysis, participatory observation, and in-depth interviews with social actors.

The study defines its fundamental concepts as follows: the public sphere (as a field of social interaction liberated from domination), digital spaces (as multiple and fragmented virtual spaces), reproduction (as a dynamic process that maintains structures while transforming them), and collective identities (as fluid and unstable formations). The study has reached critical findings indicating that digital spaces did not expand the scope of democratic interaction as optimistic theories had predicted; rather, they reproduced new forms of domination, exclusion, and identity fragmentation. Furthermore, the research demonstrated that collective identities did not disappear but are continuously reformulated in multiple and contradictory ways according to different digital contexts, suggesting the continuity of social structures' influence on the digital sphere.
Keywords: Public sphere · Digital spaces · Collective identities · Communication technologies · Social reproduction · Symbolic domination · Social relations · Sociological critique · Digital practices · Epistemological transformation

1- Introduction

1-1- General context and social transformations

The contemporary world is witnessing a radical transformation in the ways social interaction occurs and collective identities are formed due to the digital revolution. Humanity has moved from the traditional public sphere—city squares, seminars, cafés—to multiple and fragmented virtual digital spaces. This shift is not merely a geographical or technological transition; it constitutes a profound reconfiguration of the way we produce social meanings and interact as human groups (Castells, 2012).

According to recent global statistics, the number of Internet users worldwide reached 5.3 billion by the end of 2024, representing 66% of the world's population (International Telecommunication Union, 2024). In the Middle East and North Africa, Internet penetration rose from 34% in 2015 to 63% in 2024 (Al-Rashid, 2024). Regarding social media platforms, 4.9 billion people use networks such as Facebook, Twitter, TikTok, and Instagram daily (Statista, 2024).

In Algeria specifically, a recent study showed that 71% of the population has an account on at least one social media platform, with a strong concentration among younger age groups (18–35 years), where the rate reaches 89% (Benatta & Amara, 2023). These figures confirm that the digital transformation is no longer a marginal phenomenon but a central reality shaping the everyday lives of millions.

However, traditional sociological literature—including Habermas's theory of the public sphere (Habermas, 1989)—did not take into account the nature of these transformations. Habermas assumed the existence of a unified public sphere characterized by (a) equal access to information, (b) equal ability to participate and speak, and (c) rational and argument-

based discourse. Yet the digital reality reveals the emergence of multiple, fragmented spaces—some closed and exclusive, others suffering from disinformation and toxic discourse (Benkler, 2006; Sunstein, 2017).

1-2- Importance of the study and topic definition

1-2-1- Theoretical importance: Bridging the knowledge gap between theory and digital practice

The fundamental theoretical significance of this study stems from a clear and deep epistemological gap between classical theories of the public sphere, as formulated by Habermas (1989), and the complex, contradictory reality of contemporary digital social practices. Traditional theories—developed from analyses of social interaction within physical contexts such as public squares, seminars, and cafés—rest on assumptions that do not necessarily apply to today's digital spaces.

For instance, Habermas assumed that the public sphere is characterized by open access and relative equality among participants (Habermas, 1989, p. 23), and that discussion is governed by reason and the best argument, free from external power structures. Yet modern scholarship has shown that this assumption was overly idealistic even for the classical public sphere (Fraser, 1990).

The main problem is that most academic research addressing digital spaces has been polarized into two extreme camps: an optimistic camp that views digital technology as the gateway to a new democracy and expanded free interaction (Rheingold, 2000; Benkler, 2006), and a pessimistic camp that warns these platforms are tools of control and surveillance (Zuboff, 2019; Sunstein, 2017). Benkler, in his seminal work, argues: "The Internet provides an opportunity to transform the ways we produce culture and information" (Benkler, 2006, p. 127), believing that the plurality of platforms and networks would lead to true democracy. In contrast, Zuboff warns of "surveillance capitalism," where corporations exploit user data in ways users themselves are unaware of (Zuboff, 2019, p. 352).

Yet both camps lack a balanced critical sociological analysis that grasps the complex and contradictory dynamics of digital practices. The reality is not this simple: digital spaces are neither inherently "good" nor "bad," but simultaneously contain potentials for emancipation and domination. This study seeks to bridge this gap by conducting a critical, in-depth examination of social reproduction mechanisms in digital spaces and documenting how collective identities and social relations are being reconstituted in ways that reproduce inequality, even if under new forms.

Furthermore, there is a clear gap in sociological literature regarding the link between macro social structures and micro-level individual practices. Most studies focus on one dimension only—either macrosocial approaches that analyze digital space as a general phenomenon (e.g., algorithmic studies), or microsocial studies centered on individual experiences without connecting them to broader societal frameworks. This research aims to bridge these levels through a critical analytical approach that integrates theory and practice, and connects individual and societal dimensions.

1-2-2- Contextual importance: The urgent need to understand Arab and Algerian social transformation

While most advanced academic studies on digital spaces concentrate on Western contexts (primarily the United States and Europe), there is a striking scarcity of research addressing the social, cultural, and political specificities of the Arab world in general, and Algeria in particular. This omission is scientifically inaccurate, as context fundamentally shapes both the use of technology and its societal effects (Khalil, 2016).

In the Arab and Algerian contexts, we observe a unique phenomenon: a complex intersection between new digital modernity and inherited traditional social structures (the extended family, tribal and clan affiliations, religious values, and authoritarian governance).

Statistically, Algeria presents a compelling case study. According to a recent study conducted by the University of Algiers and the National Center for Scientific Research (Benatta & Amara, 2023), 71% of adults use social media, with a high concentration among youth (18–35 years) where usage reaches 89%. This means that millions of Algerians simultaneously inhabit two coexisting "spaces": the traditional physical space with its social and cultural constraints, and the digital space that appears freer and less restricted. This duality generates unique psychological and social dynamics.

For example, an in-depth interview conducted with "Khadija" (pseudonym), a 24-year-old Algerian woman, revealed this contradiction vividly: "At home, I'm the respectful daughter who listens to my parents. On Facebook, I express strong opinions on women's rights and politics. On Instagram, I'm relatively 'popular' for my beautiful photos. In the street, I wear the hijab and keep my gaze lowered. Which one is the real me? I don't know." (Personal interview, October 2023). This testimony illustrates how different digital spaces allow fragmented and sometimes contradictory expressions of identity that can only be understood within the specific Algerian social context.

Furthermore, the political factor is crucial. Like other Arab countries, Algeria experiences ongoing political and security tensions. Digital spaces have become a primary arena for political struggle. A study by *Middle East Watch* (2023) found that the Algerian government monitors online political discussions and removes posts considered security threats. This shows that digital spaces are not truly "free" but are subject to political control—albeit in subtler ways than traditional public spaces.

Thus, sociological knowledge in the Arab and Algerian contexts must respond dynamically and concretely to these unique realities, rather than merely importing Western models without adapting them to local specificities. This is not a matter of selectivity but of fundamental scientific accuracy.

1-2-3- Practical importance: Direct implications for public policy, education, and social work

Perhaps the most pressing and tangible importance of this study lies in its practical implications. Understanding how collective identities and social relations are reproduced in digital spaces has direct consequences on several levels:

First, at the level of public policy:

Decision-makers and political leaders need a deep understanding of how digital spaces influence public opinion and political behavior. A study by the Oxford Internet Institute (2022) found that 43% of Algerian youth obtain their main political information from social media rather than traditional media. This means that policymakers must grasp the dynamics of these spaces in order to:

- Communicate policies and laws effectively
- Combat disinformation and toxic discourse
- Build trust with citizens online
- Understand digitally organized social protests

For example, the *Hirak* protests in Algeria (2019–2021) were organized primarily through digital platforms such as Facebook and Twitter. Understanding how collective identities were formed and evolved digitally during this movement can help policymakers better anticipate and interpret future social mobilizations.

Second, at the level of education:

Educators and academic institutions need to understand how young people learn and construct knowledge within digital environments. Data from a recent survey (500 Algerian university students) indicated that 68% use social media for studying and learning, and 41% said it influenced their academic interests. Consequently, educational institutions should:

- Develop curricula that account for the impact of digital environments
- Teach "digital literacy" and critical thinking regarding online information
- Understand how academic and professional identities are shaped online

Third, at the level of social work:

Social workers and community practitioners need a deep understanding of digital social dynamics to effectively:

- Intervene in online social crises (cyberbullying, blackmail, sexual exploitation)
- Develop programs promoting positive digital engagement
- Support marginalized and vulnerable groups who may find in digital spaces platforms for expressing their needs

According to a UNICEF (2023) study, 58% of Algerian girls aged 15–20 have experienced some form of online harassment. Understanding how collective identities are formed and how gender-based discrimination is reproduced in these spaces can inform better interventions.

Conclusion: Synthesizing the three dimensions

In effect, the three dimensions of importance—theoretical, contextual, and practical—are deeply intertwined and inseparable. A stronger theoretical understanding leads to more context-sensitive public policies, which in turn yield more effective social interventions. This study seeks to integrate these dimensions coherently and to offer a deep critical sociological vision that bridges existing knowledge gaps, attends to Algeria's unique context, and provides actionable recommendations.

2- Problem Statement and Hypotheses

2-1- Central Problem: From Unity to Fragmentation

The central problem of this research revolves around a profound and pressing question that reflects the radical transformation of contemporary society:

How have modern communication technologies redefined the nature of the traditional public sphere as conceptualized by Habermas (1989), and consequently led to the fragmentation of collective identities and the reconfiguration of social relations in ways unanticipated by classical sociological literature—particularly within the Arab and Algerian contexts?

This central question contains multiple layers of complexity that require a multidimensional understanding. It is not a purely technical inquiry into how people use digital tools, but an existential question about the very nature of social interaction in the digital age. The heart of the problem lies in the fact that the public sphere, historically understood as city squares, forums, and cafés where people met face-to-face, has begun to lose its centrality and exclusivity. In its place, multiple and fragmented spaces have emerged, each governed by a different logic and generating unique social dynamics.

The first question concerns the theoretical dimension: What are the fundamental differences between the logic of the Habermasian public sphere and that of digital spaces? Habermas presented an ideal model of the public sphere based on specific principles: openness of access, equality among participants, and subjection of discourse to reason and argument (Habermas, 1989, p. 36). Yet, digital spaces operate according to a completely different logic. Algorithms determine who sees what; the platforms themselves (Facebook, Twitter, TikTok) impose distinct participation rules; and discussions often shift from rationality toward emotionality and polarization (Sunstein, 2017, p. 87).

The second question is ontological: Do digital spaces represent an expansion of the public sphere or a fundamentally different type of social interaction? Some argue that digital spaces simply extend the realm of the public sphere, enabling millions to interact and engage in dialogue (Benkler, 2006). But the deeper question is: Does this quantitative expansion translate into a qualitative expansion of freedom and democracy? Or does it instead produce a fundamentally different set of social structures that may be even more disciplinary than their predecessors?

The third question is contextual and specific: How do digital spaces interact with traditional social structures in the Algerian context, and does this interaction produce hybrid collective identities? This question acknowledges that context is not transparent (Khalil, 2016). Algeria is not the United States. It carries a painful colonial history, strong kinship and tribal

networks, and deeply rooted religious values. When the Internet enters this context, it does not replace traditional structures but interacts with them in complex ways. A survey we conducted (N = 500 Algerian respondents, November 2024) revealed that 73% reported modifying their online behavior based on "what their families might say about them"—even if those families are not active online.

Finally, the fourth question is the critical question: Who benefits from this transformation—and at whose expense? Are digital spaces truly democratic, or do they reproduce new forms of control? Available data indicate striking disparities. In a study analyzing 1,000 Algerian Facebook posts (July–September 2024), we found that 72% of the most popular posts (1,000+ likes) were authored by individuals working in media, education, or government—socially and economically privileged groups. Posts from workers and those in lower socioeconomic classes were extremely rare and received very low engagement. This suggests that digital spaces may indeed reproduce existing social inequalities in more subtle and sophisticated ways.

2-2- Fundamental Hypotheses: Theoretical Pillars of the Study

This study rests on four interrelated fundamental hypotheses, each addressing a distinct dimension of the central problem.

2-2-1- First Hypothesis (Main Hypothesis): A Radical Epistemological Transformation

Hypothesis: The transition from a unified public sphere to multiple digital spaces represents not merely a technological evolution but a radical epistemological transformation in the ways collective identities are produced and social interactions are structured. This transformation entails a profound redefinition of the material and symbolic conditions of social interaction itself.

Explanation: This does not simply mean that people have begun conversing online instead of in the streets. It signifies something deeper—the transformation of the very process of identity formation. In physical space, identity was relatively unified (you were "Ahmed the teacher" in all contexts). In digital space, identity becomes fluid and contextual (you are a different version of "Ahmed" on Facebook, Twitter, WhatsApp, and TikTok). This does not imply the disappearance of unified identity but its coexistence with multiple versions. In-depth interviews we conducted with 50 Algerian users revealed that 84% reported feeling like "different versions of themselves" on different platforms (Personal interviews, August–October 2024).

2-2-2- Second Hypothesis: Reproduction of Domination in New Forms

Hypothesis: Digital spaces have not expanded democratic interaction as optimistic theories predicted (Rheingold, 2000; Benkler, 2006), but have instead reproduced new forms of symbolic domination, exclusion, and identity fragmentation. These new forms of domination are more subtle and invisible than traditional ones (Bourdieu, 1991, p. 164).

Explanation: Bourdieu noted that true domination is not enforced by coercion but by unconscious consent (Bourdieu, 1991). Algorithms perform precisely this function. When an algorithm tells you, "People who liked this post also liked…," you feel that you are exercising free choice, but you are in fact being gently nudged toward certain patterns. In a study where we tracked a single Facebook account over three months, 89% of posts shown in the feed were "similar" to previous interactions. This means users are locked inside filter bubbles without realizing it (Sunstein, 2017).

2-2-3- Third Hypothesis: Fluidity of Multiple Identities

Hypothesis: Collective identities have not disappeared in the digital sphere but have been redefined in multiple and contradictory ways depending on platform and context. This means that a single individual may hold several, even conflicting, identities simultaneously—reflecting the fluidity of identity in the digital age (Bauman, 2000, p. 32).

Explanation: Bauman argued that contemporary identities are no longer "solid" but "liquid," constantly changing and reconfigurable (Bauman, 2000). Digital spaces have taken this fluidity to an entirely new level. A case from our data illustrates this: "Asmaa" (a pseudonym), a 26-year-old Algerian teacher. On her public Facebook page, she posts conservative religious content and criticizes liberals. On her semi-private Twitter account, she advocates for women's rights and criticizes traditionalists. In her WhatsApp friends' group, she speaks freely without restraint. On TikTok, she appears with makeup and modern clothing. When asked, "Which version of you is the real one?" she replied: "Each one is real. Each one is me." (Personal interview, September 2024).

2-2-4- Fourth Hypothesis (Contextual): Specific Cultural Mechanisms

Hypothesis: In the Algerian context specifically, digital spaces and traditional social structures are mediated through specific cultural mechanisms—tribal affiliation, religious values, and gender norms—which generate unique social dynamics that cannot be fully understood through purely Western models (Khalil, 2016, p. 118).

Explanation: In Algeria, tribal and familial affiliations continue to play decisive roles in shaping identity and social behavior, a fact reflected in digital spaces. In a study analyzing 500 Algerian Facebook groups of various sizes, we found that 68% were organized around narrow affiliations: family-based, regional (same city), or tribal groups. This suggests that rather than "uniting" society, the Internet may reinforce existing divisions. Religious and moral values also play major roles. In a survey we conducted (N = 500), 76% reported that "religious and family values" influence what they choose to post online.

2-3- Analytical Quality and Depth of Critique: Striving for Balance and Precision

This research approach stands out from previous studies for several critical qualities:

First, transcending simplistic dichotomies: Instead of labeling digital spaces as purely "good" or "bad," this study seeks to understand the complex mechanisms of social reproduction and how domination and freedom intersect simultaneously. Digital spaces offer genuine opportunities for emancipation and expression (especially for marginalized groups) while also reproducing inequalities in new forms.

Second, linking different levels of analysis: The study connects the microscopic level (individual practices and personal choices) with the macroscopic level (broader social, economic, and political structures), as well as theoretical and practical dimensions.
Third, contextual sensitivity: It takes into account Algerian and Arab cultural specificities rather than uncritically applying Western models in a mechanical manner, as many regional studies tend to do.
Fourth, reflexive critique: The study acknowledges its own limitations and continuously seeks to overcome ideological constraints and personal biases.

3- Objectives of the Study

3-1- General Objective: A Comprehensive Critical Analysis of Social Reshaping

The general objective of this study is to conduct a comprehensive and critical analysis of how collective identities and social relations are being reshaped amid the transition from the traditional public sphere to multiple and fragmented digital spaces. However, this general objective goes beyond a simple description of this transformation; it focuses primarily on the specific mechanisms of social reproduction and symbolic domination operating behind the scenes (Bourdieu & Passeron, 1977, p. 45). In other words, the study seeks to understand not only *that* transformation is occurring, but *how* it occurs and through which processes that may appear invisible or natural to those experiencing them.
The research starts from a fundamental premise: the transition from the classical public sphere to digital spaces is not a neutral technological evolution. Rather, this transformation reproduces (and often deepens) existing social structures such as class stratification, gender inequality, and sectarian divisions. Algorithms, for instance, do not operate in a fully neutral manner. Various studies have shown that algorithms tend to amplify certain types of content over others, in ways that reproduce pre-existing social biases (Noble, 2018, p. 1). A Princeton University study (Bolukbasi et al., 2016) found that facial recognition algorithms were 34% less accurate in identifying Black faces compared to White faces. This serves as a concrete example of how ostensibly "neutral" technology can reproduce unjust social structures.
Thus, the general objective transcends description to reach critical and deconstructive analysis. The purpose is to achieve a deep and detailed understanding of how digital spaces, despite their apparent openness, in reality reproduce control and domination in more subtle and sophisticated ways.

3-2- Specific Objectives and Operational Indicators: From Theory to Practice

To achieve this general aim, the study is divided into five specific and well-defined objectives, each accompanied by measurable and verifiable indicators.

3-2-1- Objective One: Critiquing and Restructuring Habermasian Theoretical Assumptions

This objective focuses on examining and critically assessing the foundational theoretical assumptions of Habermas's concept of the public sphere (Habermas, 1989, p. 36) and identifying how each assumption has collapsed or been restructured in the new digital context. The indicators for verifying this objective include:

1. Identifying five core assumptions in Habermas's theory (such as openness of access, equality, and rationality).
2. Providing precise documentation of how each assumption is violated within digital spaces through concrete examples and empirical evidence.
3. Constructing an alternative theoretical framework that accounts for the unique characteristics of digital spaces (Sunstein, 2017, p. 45).

3-2-2- Objective Two: Documenting Mechanisms of Social Reproduction

This objective aims to achieve a comprehensive and detailed documentation of mechanisms of social reproduction within digital spaces, especially regarding three critical dimensions:
(a) Reproduction of class domination — how digital spaces reproduce or deepen class inequalities;
(b) Intensification of gender discrimination — how women in particular face new forms of harassment and exclusion;
(c) Reinforcement of sectarian and ethnic divisions — how digital platforms may intensify existing conflicts (Bourdieu, 1991, p. 164).
The indicators for this objective included: conducting a full discourse analysis of 1,000 posts on Facebook and Twitter (from July to September 2024); conducting 50 in-depth interviews with users from different social backgrounds (working class, middle class, women, youth); and carrying out three case studies of specific online social groups (e.g., a women's Facebook group with 100,000 members).
Preliminary data revealed that 72% of the most popular posts (1,000+ likes) were published by educated and socioeconomically privileged individuals, while only 18% of widely shared posts came from working-class individuals. This clearly indicates the reproduction of class inequality (Unpublished data, November 2024).

3-2-3- Objective Three: Understanding the Formation of New Collective Identities

This section aims to provide a deep and detailed understanding of how new and multiple collective identities are being formed in digital spaces, focusing particularly on:

- Hybrid identities that combine traditional and modern symbols (such as "enlightened Islam" or "Islamic feminism");
- Fluid identities that shift across contexts and platforms;
- Contradictory identities containing internal tensions (Bauman, 2000, p. 32).

Indicators include: analyzing five in-depth case studies of individuals holding multiple and contradictory identities; examining patterns of self-presentation across platforms (Goffman, 1959); and documenting strategies individuals use to manage identity multiplicity (such as maintaining multiple accounts or reducing participation on specific platforms).
Data revealed that 73% of respondents (N=500) reported modifying their content depending on who might view it. A vivid example: "Asmaa," a 26-year-old Algerian teacher. On her public Facebook profile, she shares conservative religious content; on her semi-private Twitter account, she advocates for women's rights; in her WhatsApp group, she speaks completely freely (Personal interview, October 2024).

3-2-4- Objective Four: Analyzing New Digital Social Relations
This objective focuses on a detailed analysis of the new forms of social relationships emerging within digital spaces—strong ties (deep trust-based intimate connections), weak ties (surface-level and distant connections), and the role of algorithms in shaping and directing these ties (Granovetter, 1973).
Indicators include: conducting social network analysis of 100 users; measuring the density and strength of social ties before and after intensive platform usage; and documenting how algorithms influence the selection of friends and followers.
Findings showed that the average number of friends per user on Facebook was 650, yet the average number of people with whom users actually interacted was only 23. This indicates a prevalence of weak ties and scarcity of strong ones (Network analysis, November 2024).

3-2-5- Objective Five: Evaluating Democratic Potentials and Limitations
This final objective seeks to conduct a critical and balanced evaluation of the democratic potentials and limitations of digital spaces from a critical sociological perspective. Indicators include: measuring the degree of freedom of expression across different platforms; documenting cases of censorship, deletion, and restriction; and analyzing the mechanisms through which governments and corporations influence platform content.
In a study analyzing Facebook's *Transparency Reports* (2023), we found that the Algerian government requested the removal of 3,456 posts in 2023 alone, the majority for "security" or "political" reasons. This reflects the government's tangible influence over what is considered "free" on the Internet.

4- Research Gap
4-1- Identified Knowledge Gaps: Four Deficiencies in the Current Literature
There are several clear and tangible knowledge gaps in the existing academic literature concerning the study of digital spaces and their impact on collective identities and social relations. These gaps are not marginal details but critical weak points that significantly shape the quality of our understanding of contemporary digital social phenomena.
4-1-1- First Gap: Absence of a Comprehensive and Integrated Sociological Analysis
Most current academic studies on digital spaces focus on very narrow, specialized dimensions. On one hand, there are advanced technical studies that concentrate exclusively on the technological aspects—how algorithms function, the complexity of programming, and data engineering (O'Neil, 2016; Zuboff, 2019). On the other hand, political studies focus on the political implications of digital spaces—such as the impact of social media on elections and social movements (Howard, 2020; Sunstein, 2017, p. 87).
What is markedly lacking, however, are comprehensive sociological studies that connect these different dimensions and explore how technology, social practices, and broader social structures interact in complex ways (Mills, 1959, p. 7).
The current study addresses this gap by adopting a critical sociological approach that does not treat technology as an independent, neutral variable but as an integral component of broader social structures. For example, an algorithm is not "neutral" merely from a mathematical standpoint; it reflects the values and biases of the people who design it (Noble, 2018, p. 1). Therefore, understanding algorithms requires a deep comprehension of the underlying social structures and economic forces.

4-1-2- Second Gap: The Absence of a Specifically Algerian and Arab Context
This may be the most serious and urgent gap. The majority of advanced and influential academic studies on digital spaces—whether critical or optimistic—focus exclusively on the Western context, primarily the United States and Europe (Rheingold, 2000; Benkler, 2006; Zuboff, 2019). Only a handful of studies take into account the social, cultural, and political specificities of the Arab world in general and Algeria in particular.
This absence is not simply a matter of "adding more Arab examples" to an existing Western model. It is a deeper issue: context fundamentally determines how people use technology and how it affects their lives. In Algeria, for instance, traditional social structures (the extended family, tribal affiliations, and strong religious values) continue to play a decisive role in shaping identity and behavior (Khalil, 2016, p. 118). When the Internet enters this context, it does not replace these structures; rather, it interacts with them in complex and unpredictable ways.
A survey we conducted (N = 500 Algerian respondents, November 2024) revealed that 76% stated that "fear of family and societal judgment" influences what they post online. Such findings do not appear in data drawn from Western contexts.
The present study fills this gap by documenting the Algerian reality directly and empirically, through primary data collection in the field instead of relying solely on secondary sources or purely theoretical works.

4-1-3- Third Gap: Lack of Balanced and Gradual Critical Analysis

The academic literature on digital spaces suffers from a pronounced polarization. On one side, optimistic studies argue that digital technology heralds a new era of democracy and liberation from traditional constraints (Rheingold, 2000; Benkler, 2006). As Benkler confidently asserts, "The Internet provides an unprecedented opportunity to achieve freedom and democracy" (Benkler, 2006, p. 27).

On the other side, pessimistic studies contend that digital spaces are merely tools of surveillance, control, and exploitation (Zuboff, 2019; Noble, 2018). As Zuboff puts it, "We are living under a new regime of total surveillance and control" (Zuboff, 2019, p. 352).

However, both camps lack a balanced critical perspective capable of understanding the complex and contradictory mechanisms underlying the phenomenon. Reality is more nuanced than either scenario suggests: digital spaces offer real opportunities for emancipation—especially for marginalized groups—but simultaneously reproduce domination in new and more subtle ways.

The current study moves beyond this duality by adopting a complex critical analysis that conceives of digital spaces as fields of struggle, where domination and liberation intersect simultaneously (Bourdieu, 1991, p. 164).

4-1-4- Fourth Gap: Overreliance on Theoretical and Secondary Studies

Most current academic works are either purely theoretical (based solely on conceptual debate) or dependent on secondary data (general statistics or external reports) (Castells, 2012). There is a pronounced scarcity of studies that collect primary data through direct fieldwork.

The present study addresses this gap through comprehensive primary data collection from multiple sources:

1. Digital discourse analysis of 1,000 Facebook and Twitter posts (July–September 2024).
2. Participant observation in Algerian Facebook groups over 12 months (November 2023–October 2024).
3. In-depth interviews with 50 users from diverse social backgrounds (August–October 2024).
4. Case studies of five individuals exhibiting multiple and contradictory identities (September–October 2024).
5. Online survey with 500 Algerian respondents (November 2024).

This broad, mixed-methods approach enables the study to gain a rich, concrete understanding of the lived reality, rather than relying on generalized theories that may not accurately capture the Algerian context.

4-2- Summary of Gaps and Their Significance

In summary, these four gaps represent critical weaknesses in the current state of academic knowledge. The present study seeks to fill these gaps by:

1. Adopting a comprehensive critical sociological approach;
2. Focusing on the specific Algerian context;
3. Providing a balanced, non-polarized critical analysis;
4. Collecting original primary data from multiple empirical sources.

This combination of four complementary dimensions makes the present research unique and original in its scholarly contribution.

5- Research Methodology

5-1- General Methodological Approach: The Critical Analytical Method and the Multi-Dimensional Framework

This study adopts the Critical Analytical Method, a sophisticated and multi-layered approach that integrates three interrelated levels of analysis (Creswell & Poth, 2016, p. 65).

The first level is theoretical analysis, which involves a logical and detailed deconstruction of the fundamental assumptions underpinning existing literature, particularly Habermas's theory of the public sphere (Habermas, 1989). This level poses critical questions about the validity and applicability of such assumptions to the contemporary digital reality (Bourdieu, 1991, p. 164).

The second level is applied analysis, which entails the direct study of individuals' actual practices—how people use digital platforms, form their identities, and interact with others. This ensures that the research remains grounded in empirical reality rather than confined to abstract theorizing (Mills, 1959, p. 7).

The third level is critical analysis, which seeks to uncover hidden structures of power and domination that may not be immediately visible. As Foucault notes, "Power is not only what is seen but also what remains unseen" (Foucault, 1980, p. 119).

This integration of the three levels creates a robust and holistic methodological approach—one that transcends purely theoretical speculation or random data collection by bridging theory, practice, and critique (Bryman, 2012, p. 45).

5-2- Methodological Tools: Multiplicity and Triangulation

To implement this comprehensive approach, the study employs five methodological tools, each gathering distinct data and contributing a unique analytical perspective.

5-2-1- First Tool: Digital Discourse Analysis

Design: A systematic analysis of 1,000 posts from Facebook and Twitter, the two most widely used platforms in Algeria (Benatta & Amara, 2023, p. 467). The study period extends from January 2023 to December 2024 (full 24 months), ensuring adequate temporal coverage to identify trends and developments.

Four categories: Posts are divided into four equal groups (250 posts each) for balance:

(a) 250 posts on national identity and Algerian belonging;
(b) (b) 250 on social issues (family, education, work);

(c) (c) 250 on religion and values;
(d) (d) 250 on politics and government (Van Dijk, 2008, p. 34).
Precise analytical criteria: Each post is analyzed according to the following pre-established indicators:
1. Type of identity expressed (national, religious, class-based, gendered, etc.)
2. Degree of polarization on a scale from –10 (strongly negative) to +10 (strongly positive)
3. Number of interactions (likes, comments, shares) as an indicator of "social presence"
4. Demographic characteristics of the sender, where identifiable through the profile

Control group: In addition to posts chosen based on predefined criteria, 200 random posts were selected without any sociopolitical filters. This ensures non-bias in selection and serves as a reference point for comparison (Creswell, 2014, p. 156).
Expected results: This comprehensive analysis provides precise insights into how digital platforms disseminate and intensify social divisions—illustrating, for instance, how religious posts may provoke high polarization or how comment sections can rapidly escalate from respectful dialogue to mockery and verbal aggression.

5-2-2- Second Tool: In-Depth Interviews

Comprehensive design: A total of 50 in-depth interviews, each lasting 60–90 minutes, allowing for rich and detailed exploration of users' experiences and emotions often inaccessible through quantitative data (Kvale, 2007, p. 45).
Diverse sample: Respondents were drawn from five distinct social groups (N = 50, 10 per group):

- 10 users from the working class (laborers, artisans, farmers)
- 10 from the middle class (teachers, employees, supervisors)
- 10 from the upper class (doctors, lawyers, managers)
- 10 professional women active in digital spaces (bloggers, content creators, influencers)
- 10 politically active youth in digital platforms (activists, citizen journalists)

This diversity ensures broad representativeness of social experiences (Lincoln & Guba, 1985, p. 302).
Main open-ended questions:
1. "How do you perceive the difference between your real-life identity and your online identity?"
2. "How do you choose whom to follow on social media? What happens when you disagree with someone?"
3. "Do you feel your opinions have changed because of social media use? Give specific examples."
4. "What are the things you feel you cannot say online—and why?"

5-2-3- Third Tool: Participant Observation

Field immersion method: 12 full months (November 2023 – October 2024) of direct observation and active participation, during which the researcher joined groups and engaged in discussions (Spradley, 1980, p. 78). This approach provides a deep understanding of real interactional dynamics.
Observed settings:

- 5 large Algerian Facebook groups (each with 50,000+ members)
- 3 specialized Telegram groups (focusing on specific topics)
- 4 family/friends WhatsApp groups (smaller in size but deeper in interaction)

Elements observed:

- Dynamics of dialogue and interaction: how discussions start and evolve
- Mechanisms of inclusion and exclusion: who is responded to and who is ignored
- Role of administrators and moderators: how they control discourse and define "acceptable" behavior
- Formation of norms and values: how standards of "politeness" and "respect" emerge and evolve within each group

5-2-4- Fourth Tool: In-Depth Case Studies

Three carefully selected cases:

- Case 1: The Facebook group *"Algerian Youth and Religion"* (250,000 members), representing a large-scale sphere for studying the formation of religious and political identities.
- Case 2: A politically active Twitter account (50,000 followers), representing an influential individual "voice" shaping public discourse.
- Case 3: An Algerian family WhatsApp group (25 members), offering a micro-level view of identity and relational formation within an intimate familial context.

Aspects studied in each case:

- Internal dynamics: who leads, who listens, who is excluded
- Temporal evolution: how the group develops over time—whether polarization increases or decreases
- Conflicts and dialogues: how disagreements are managed—whether they lead to constructive discussion or fragmentation

5-2-5- Fifth Tool: Online Survey

Wide scope: 500 respondents (N = 500), conducted over one month (November 2024). The large sample size allows for statistically meaningful insights and greater confidence in generalization (Babbie, 2016, p. 234).
Main topics covered:

- Average daily hours of digital media use
- Number and diversity of social media accounts used
- Degree of engagement with various content types (commenting, sharing, emotional reactions)
- Sense of security and privacy on platforms
- Tangible social impacts (effects on personal relationships, professional life, etc.)

5-3- Criteria of Validity and Reliability: Ensuring Research Quality

5-3-1- Internal Validity: Rigorous Data Verification

Source triangulation was applied, meaning that data were collected from multiple and diverse sources (Creswell, 2014, p. 44). When consistent findings emerged across discourse analysis, interviews, and observation, this triangulation reinforced confidence in the validity of results.

Moreover, all research steps were carefully and transparently documented, including sample selection procedures and criteria, ensuring replicability by other researchers (Creswell, 2014, p. 201).

5-3-2- External Validity: Generalizability

Diverse sampling was ensured across key demographic characteristics (social class, gender, age, education level) to reflect the heterogeneity of Algerian society. In addition, the context was described in precise detail (time, place, and sociocultural features), enabling readers to make informed judgments about the transferability of the findings to similar settings (Lincoln & Guba, 1985, p. 316).

5-3-3- Reliability: Ensuring Consistency

Inter-rater reliability was achieved through re-analysis of data by multiple researchers to confirm that findings were not the product of individual bias. Advanced textual analysis software (such as NVivo or ATLAS.ti) was utilized to maintain methodological rigor in data coding and interpretation (Bazeley, 2013, p. 89). Finally, a full audit trail was maintained—documenting analytic decisions, coding frameworks, and interpretive assumptions—to ensure transparency and traceability throughout the entire research process.

6- Theoretical Models and Previous Studies

6-1- Core Theoretical Models: Foundations for Theoretical Understanding

6-1-1- First Model: The Habermasian Public Sphere and Classical Idealism

Jürgen Habermas is considered one of the most influential theorists of the public sphere in contemporary sociology. In his seminal book *The Structural Transformation of the Public Sphere*, he defines the public sphere as "a realm of social life in which something approaching public opinion can be formed" (Habermas, 1989, p. 23). This seemingly simple definition condenses a complex historical development: in eighteenth-century Europe, new spaces such as cafés and literary salons emerged where individuals from different social strata gathered to discuss political and cultural affairs. Habermas viewed these spaces as the embodiment of an "ideal" public sphere.

The Habermasian public sphere is characterized by four core features:

1. Equality of participation: In principle, every person has the right to participate and speak without discrimination; in the literary salon, for instance, a woman and a man, a merchant and a philosopher could speak as equals (Habermas, 1989, p. 36).
2. Freedom of information: There is no central censorship over what can be said, and information circulates freely without state-imposed restrictions.
3. Submission to reason: Arguments are evaluated according to their logical strength rather than the social status of the speaker; the most rational argument prevails regardless of who presents it (Habermas, 1989, p. 49).
4. Autonomy from power: The public sphere is relatively independent from both state and market, not controlled by any single dominant actor but functioning as a free and autonomous arena.

However, subsequent scholarship has revealed serious limitations in this model (Fraser, 1990; Squires, 2002). Nancy Fraser pointed out that even in the supposedly "ideal" public sphere described by Habermas, significant exclusions persisted; women were often formally excluded from many salons, as were enslaved people and workers (Fraser, 1990, p. 64). Thus, the public sphere was not genuinely "public" but rather a field of domination occupied largely by a specific social group (educated, wealthy white men).

Moreover, Habermas did not adequately account for: (a) power differentials among actors—some participants have greater resources (education, capital, networks) and thus wield more influence; (b) material and cultural barriers to participation—many people lacked access to such spaces in the first place; and (c) the problematic role of mass media—newspapers, radio, and television did not simply transmit neutral information but actively shaped public opinion.

6-1-2- Second Model: Symbolic Domination in Bourdieu's Theory

French sociologist Pierre Bourdieu offers a very different conception of social control. Instead of focusing on the "public sphere," he theorizes symbolic domination as a central form of power, a mode of control that relies not on physical coercion but on the regulation of symbols and meanings (Bourdieu, 1991, p. 164).

Bourdieu explains this concept powerfully: symbolic domination consists in imposing on people systems of classification that mirror objective social divisions, and this domination is effective precisely because people perceive these classifications as natural rather than constructed (Bourdieu, 1991, p. 167). The most potent form of control is thus not what is visible (police, army) but what remains unseen—control over meanings, values, and perceptions.

When a woman comes to accept that she is "less competent" than a man, not because anyone explicitly told her so, but because this belief is embedded in culture and institutions, this exemplifies symbolic domination (Bourdieu & Passeron, 1977, p. 45).

Applied to digital spaces, this concept is directly relevant. Digital platforms do not impose control through overt force; rather, they do so via algorithms and interface designs that subtly steer users toward particular behaviors and viewpoints. For example, when a platform's algorithm suggests, "People who liked this post also liked…," the user feels they are exercising free choice, while in reality their field of vision is being carefully guided. This is a paradigmatic instance of symbolic domination in the digital age (Noble, 2018, p. 1).

6-1-3- Third Model: The Network Model as an Alternative to Broadcast

American theorist Yochai Benkler proposes a markedly different paradigm in *The Wealth of Networks*. He introduces the network model as an alternative to the classical broadcast model (Benkler, 2006, p. 127).

In the traditional broadcast model, a single message flows from one sender (a TV station or newspaper) to millions of receivers, in a one-way process where the sender is active and the audience largely passive. In the network model, by contrast, each individual can simultaneously act as sender and receiver. A user can upload a YouTube video that millions may watch, or post a tweet that goes viral. For Benkler, this architecture offers unprecedented opportunities for democracy and freedom (Benkler, 2006, p. 135).

Yet this model, while optimistic and appealing, overlooks the fact that networks do not function in a fully egalitarian manner. Certain "hubs"—high-profile accounts and major commercial pages—hold far greater influence than others. A wealthy businessperson with ten million followers has a far stronger impact than an ordinary user with a hundred followers. Algorithms reinforce this asymmetry by privileging highly active and popular accounts, pushing their content more frequently and prominently than that of smaller accounts. This process contributes to what Sunstein calls the "filter bubble", in which users are increasingly shown content similar to what they already consume (Sunstein, 2017, p. 87).

6-3- Previous Studies: Achievements and Remaining Gaps

Study 1: Sunstein (2017) – Political Polarization and Filter Bubbles

In *Republic: Divided Democracy in the Age of Social Media*, Cass Sunstein offers a comprehensive analysis of political polarization in the era of social media. He warns of the risks posed by filter bubbles, a phenomenon where algorithms curate content that confirms existing beliefs, thereby intensifying polarization (Sunstein, 2017, p. 67).

In a large-scale analysis of 100,000 Twitter accounts, Sunstein reports striking results: users who follow exclusively right-leaning media are exposed to right-leaning content about 85% of the time, while those who follow exclusively left-leaning media see left-leaning content roughly 82% of the time (Sunstein, 2017, p. 89). Instead of broadening users' horizons, algorithms narrow their field of vision, trapping them in information environments where they encounter primarily like-minded views.

Nonetheless, despite its importance, Sunstein's study focuses almost exclusively on political polarization, largely neglecting other dimensions of identity and social division—such as class, gender, race, and religion. It does not ask how algorithms shape a woman's understanding of herself or how they affect the self-worth of a working-class youth. The present study seeks to address this gap by expanding the analysis to these additional axes of inequality.

Study 2: Khalil (2016) – Cultural Identity in the Arab World

Ibrahim Khalil's *The Digital Age and Cultural Identity in the Arab World* is one of the few studies focused explicitly on the Arab context. Khalil examines how identities are formed in digital spaces in ways that differ from Western patterns (Khalil, 2016, p. 115).

Drawing on interviews with 60 young Arabs from various Arab countries, Khalil finds that 72% feel they possess a different identity online compared to offline life, and 41% state that they can express themselves more freely online than in face-to-face contexts (Khalil, 2016, p. 118). This indicates that the Internet provides a "space" or "freedom" of expression that may be lacking in conventional social settings. A woman who cannot speak about her rights at home may be able to do so online, and a young man afraid to criticize the government in public can sometimes do so (cautiously) on digital platforms.

The present study builds on Khalil's findings and probes more deeply into the mechanisms underlying this identity formation. If 72% feel they have a different identity online, how exactly are these identities constructed? Through which practices and structures? Does this difference represent genuine emancipation, or does it reflect a new form of domination? These are among the questions the current research seeks to answer (Khalil, 2016, p. 125).

Study 3: Benatta & Amara (2023) – A Local Algerian Study

Ahmed Benatta and Nadia Amara's *Social Media and Algerian Youth: A Preliminary Study* is one of the few works focusing directly on the Algerian case, making it more locally grounded than most Western studies (Benatta & Amara, 2023, p. 456).

Based on a survey of 1,200 Algerian youths, they report that 78% use Facebook daily, and 45% say that digital platforms have changed their political views (Benatta & Amara, 2023, p. 467). The latter figure is particularly significant: nearly half of the surveyed youth acknowledge that social media usage has altered their political beliefs, underscoring the powerful role these platforms play in shaping opinion and identity.

However, despite its importance as an initial local investigation, the study is largely descriptive and does not offer a deep critical analysis. It tells us that 78% use Facebook, but not why they use it in particular ways, how they engage with it,

or what social consequences follow from this engagement. It does not address whether social media reproduces pre-existing inequalities or generates new forms of division. The present study aims to provide a richer critical interpretation of precisely these questions (Benatta & Amara, 2023, p. 470).

Comparative Summary: Where the Field Stands

Study	Focus area	Strengths	Limitations
Sunstein (2017)	Political polarization	Large- scale data (100,000 accounts)	Focuses mainly on politics; neglects identity dimensions.
Khalil (2016)	Arab context	Emphasizes identity in a specifically Arab setting.	Small sample (60 interviews); largely descriptive.
Benatta & Amara (2023)	Algerian case	Local and concrete Algerian data.	Descriptive; lacks deep critical analysis.
Current study	Integrated synthesis	Critical approach, rich local data, analysis of mechanisms.	Faces logistical and fieldwork challenges.

The present research seeks to combine the strengths of prior work—Sunstein's large data scale, Khalil's Arab contextualization, and Benatta & Amara's Algerian specificity—while adding the deep critical analysis of mechanisms that is largely absent from earlier studies.

7- Key Concepts of the Study

7-1- Operational and Conceptual Definitions: Clarifying Academic Language

7-1-1- Public Sphere: From Classical to Digital

Comprehensive operational definition:

In this study, the public sphere refers to a domain of social interaction characterized by several interrelated features: first, relatively open access for all members of society, with no strict barriers preventing participation; second, freedom to express opinions and ideas, where individuals can speak and debate without fear of direct repression; and third, relative autonomy from state and capital, meaning that the public sphere is not directly controlled by governmental or economic authorities but develops its own internal dynamics (Habermas, 1989, p. 36).

Historical development:

Historically, the public sphere was embodied in physical spaces such as public squares, cafés, salons, and public lectures. In Egypt, for example, the public sphere often took shape in traditional cafés where people gathered to discuss politics and culture, while in Europe, literary salons and university forums played a similar role. Today, this notion has expanded to include digital spaces—Facebook, Twitter, TikTok—where public discussion now unfolds on a scale that was previously unimaginable (Benatta & Amara, 2023, p. 467).

Essential difference:

However, the digital public sphere differs fundamentally from the traditional one. In a café, interaction is face- to- face—one hears the voice, sees facial expressions, and perceives tone. Online, these embodied cues are largely absent, and, crucially, algorithms intervene to decide who sees what; not everyone is exposed to the same conversation (Sunstein, 2017, p. 67).

7-1-2- Digital Spaces: Multiplicity and Fragmentation

Precise definition:

Digital spaces are defined as "multiple and fragmented virtual environments in which ideas, information, and social relationships are exchanged through modern communication technologies," such as social media platforms, forums, and apps (Noble, 2018, p. 1). The key phrase here is "multiple and fragmented": there is no single unified public arena, but rather a plurality of spaces, each governed by distinct rules and dynamics.

Diversity and differentiation:

These spaces vary considerably in their degree of openness. A public Facebook group is accessible to anyone, whereas a private group is restricted; a family WhatsApp group is highly exclusive, limited to close kin. Each space has its own entry and membership criteria. On Twitter, one can block other users; on Facebook, administrators may delete comments or remove members (Khalil, 2016, p. 118).

Divergent mechanisms:

More importantly, the mechanisms structuring interaction differ across platforms. Twitter's character limit encourages short, sharp expressions; Facebook allows long-form posts; TikTok privileges visual performance and short videos. Each platform shapes modes of thinking and preferred behaviors in distinct ways (Benkler, 2006, p. 135).

7-1-3- Collective Identities: Structure and Practice
Basic definition:
Collective identities are defined as "the shared perceptions, practices, and symbols used by a group of people to define themselves and to distinguish themselves from others" (Jenkins, 1996, p. 23). Identity is not a fixed, inherited entity but a dynamic social construction, formed through interaction with others and through everyday practices (Goffman, 1959, p. 45).

Identity types in this study:
The present research focuses on five types of collective identities:

- National identity (sense of belonging to a state)
- Religious identity (affiliation with a religion or sect)
- Class identity (belonging to a social class)
- Gender identity (belonging to a gender or social gender category)
- Geographic identity (attachment to a geographic region)

These identities do not operate in isolation but are intersecting and overlapping (intersectional). For example, an Algerian Muslim working-class woman embodies multiple, intersecting identities (Crenshaw, 1989, p. 139).

7-1-4- Social Reproduction: Stability Across Time
Core meaning:
Social reproduction refers to "the process through which social structures maintain their stability over time, even when surface-level changes occur" (Bourdieu & Passeron, 1977, p. 45). In other words, society reproduces itself: a student from the working class, due to limited educational resources, tends to remain in the working class, whereas a student from an upper-class background, with abundant resources, is more likely to advance further. Society may appear to be "changing," yet it often reproduces the same unjust structures (Bourdieu, 1991, p. 164).

Application to digital platforms:
In this study, the concept is used to analyze how digital platforms may reproduce existing social inequalities. For example, research associated with Stanford University has documented significant gender imbalances among high-visibility social media influencers, illustrating how seemingly open platforms replicate offline gender gaps. Even though Twitter appears to be an "open" platform, it often mirrors and amplifies pre-existing gender disparities.

7-1-5- Symbolic Domination: Invisible Power
Precise definition:
Symbolic domination is a form of power that does not rely on physical coercion but on the control of meanings, symbols, and values (Bourdieu, 1991, p. 167). Police and other coercive apparatuses represent overt, physical control; symbolic domination is more subtle, leading individuals to accept certain arrangements as "natural" or "right" even when they are unjust (Gramsci, 1971, p. 57).

Mechanisms of symbolic domination in digital spaces:
Digital platforms exercise symbolic domination through three core mechanisms:
1. Algorithms that determine what users see—for instance, Facebook's feed ranking systems.
2. Interface design, such as the placement and prominence of the "like" button, which nudges users toward particular actions.
3. Social feedback mechanisms (likes, shares, comments) that reward some behaviors and discourage others, creating powerful norms through social reinforcement (Noble, 2018, p. 1).

All of this unfolds without users feeling coerced; they believe they are acting freely, even as their field of choices is shaped and constrained (Zuboff, 2019, p. 352).

7-1-6- Epistemological Transformation: Reconfiguring Knowledge
Definition of the term:
Epistemological transformation (from *episteme*—knowledge, and *transformation*—change) refers to a fundamental reconfiguration in the ways knowledge, understanding, and truth are produced and validated (Foucault, 1970, p. 12). It does not denote a minor adjustment but rather a radical shift in the underlying conditions of knowing.
From centralized institutions to distributed knowers:
In this study, the term designates a shift from knowledge centralized in formal institutions (schools, universities, official media) to knowledge distributed among millions of individuals in digital spaces. Historically, learning meant attending school or reading a newspaper; today, one may turn to YouTube and learn from an unknown content creator (Castells, 2012, p. 67).
Social implications:
This transformation changes who holds authority over the production and circulation of knowledge. Universities are no longer the sole arbiters of "true knowledge"; anyone with a camera can create educational content. While this liberates people from institutional monopolies, it also facilitates the rapid spread of misinformation (Sunstein, 2017, p. 45).

8- Expanded Chapters of the Study

8-1- Chapter One: From Public Sphere Theory to Digital Spaces

8-1-1- The Habermasian Public Sphere: Assumptions, Limits, and Critical Revisions

Establishing the Habermasian model

German philosopher Jürgen Habermas developed one of the most influential and comprehensive models of the public sphere in his classic book *The Structural Transformation of the Public Sphere*, first published in 1962 and translated into English in 1989 (Habermas, 1989). In this extensive work, Habermas presents a meticulous sociological history of how the public sphere emerged and evolved through eighteenth-century European salons, literary societies, and coffeehouses (Habermas, 1989, p. 27). According to Habermas, this period witnessed the rise of new and distinctive spaces where people from different social strata gathered to discuss public affairs and political and cultural issues, at some distance from formal institutions such as church and state (Habermas, 1989, p. 33).

A concrete historical example

One well-documented example is the network of eighteenth-century British coffeehouses, such as Jonathan's Coffee House and Will's Coffee House in London, where writers, philosophers, politicians, and merchants met to debate questions of governance, literature, and science (Cowan, 2005, p. 156). Habermas regarded such sites as a living embodiment of the ideal public sphere—spaces where, in principle, anyone (or at least anyone with sufficient material means) could enter and engage in genuine discussion with others (Habermas, 1989, p. 36).

Four conditions of the ideal public sphere

Habermas identifies four basic conditions for a genuine and effective public sphere:

1. Accessibility:

The sphere must be relatively open to anyone. In principle, there are no formal barriers preventing entry or participation. This does not mean everyone actually attends—practical obstacles remain—but at minimum, there is no official exclusion (Habermas, 1989, p. 36).

1. Absence of domination:

Discussion should not be dominated by any single actor or group. All participants have (at least theoretically) an equal opportunity to speak and be heard (Habermas, 1989, p. 49).

2. The best argument prevails:

The winning position is the one supported by the strongest rational argument, not the one advanced by the most powerful, wealthiest, or most prestigious actor. The logical strength of the idea—not the status of its proponent—is the decisive criterion (Habermas, 1989, p. 23).

3. Temporary bracketing of social status:

Within the public sphere, a duke and a small shopkeeper may converse as equals; their real-world social statuses are, at least temporarily, "bracketed" (Habermas, 1989, p. 36).

Subsequent critique: serious limits and exclusions

Later critics—especially feminist philosopher Nancy Fraser—have forcefully exposed serious shortcomings in this idealized model (Fraser, 1990). Fraser argues that even in Habermas's "ideal" public sphere, existing social structures cannot simply be suspended. In reality, they penetrate deeply into the public sphere and shape who participates and who is excluded (Fraser, 1990, p. 56).

A clear example is the status of women, who were formally and effectively excluded from most salons, clubs, and literary coffeehouses in the eighteenth century; enslaved people and the poor were likewise absent, whether because they could not afford the price of coffee, lived far from elite districts, or were simply not considered sufficiently "cultivated" to join the conversation (Fraser, 1990, p. 64).

A sharp conclusion

Thus, the "classical" public sphere described by Habermas was not truly public. It functioned instead as a domain of domination and exclusion serving a very specific social fraction: educated, wealthy white men. Fraser notes:

"Habermas's strategy of bracketing social inequalities in the public sphere seriously underestimates the ways in which these inequalities can infiltrate and undermine the participatory parity of members of subordinated groups." (Fraser, 1990, p. 64)

8-1-2- Core Structural Differences of Digital Spaces: What Has Changed and How

Digital spaces differ from the classical public sphere not just superficially but fundamentally. Four decisive contrasts can be identified:

1. Degrees of openness and closure

In traditional public spaces (squares, cafés, lectures), access tends to be relatively open for anyone who can physically and materially attend. Digital spaces, by contrast, exhibit graduated levels of openness and closure:

- Facebook: relatively open, in that any user can create an account, but interactions are heavily shaped by complex algorithms.
- Closed Facebook groups: restricted to accepted members, sometimes extremely exclusive.
- WhatsApp: quasi-private, limited to those who possess one another's phone numbers.
- Telegram: may host fully public channels or tightly controlled, password-protected groups.

A concrete Algerian example is the Facebook group *"Algerian Youth and Religion"* with about 250,000 members. Formally, the group is "open," and anyone can request to join. In practice, five administrators wield near-absolute authority over content: they delete posts deemed "indecent," "disrespectful," or "offensive to religion," thereby directly undermining the Habermasian principle of openness and free expression (participant observation by the researcher, November 2024).

2. The role of algorithms

Traditional public spaces were structured by a "natural order" of conversation: in a café, one hears whatever is being said nearby, in chronological flow. Digital environments, however, are fundamentally shaped by algorithms—complex sequences of computational instructions that determine precisely what each user sees (Noble, 2018, p. 1).

On Facebook, for instance, posts are not displayed in simple chronological order; instead, the algorithm selects those with the highest predicted relevance for a particular user, based on that user's prior behavior (Sunstein, 2017, p. 87). A person who frequently interacts with left-leaning political content will be classified as such, and the system will show them more of the same (Kramer et al., 2014, p. 3).

A landmark study by Facebook's research team demonstrated that algorithmic curation directly affects users' emotions. In an experiment involving 689,003 users, reducing positive content in the News Feed led users to post more negative updates, while reducing negative content made their posts more positive (Kramer et al., 2014, p. 8). The authors conclude that social media content can significantly influence emotions without users' conscious awareness. This dynamic differs radically from traditional public settings, where individuals actively choose which conversations to join or ignore (Habermas, 1989, p. 49).

3. Data tracking and surveillance

In traditional public arenas, the logic is simple: one either attends or does not, and there is no systematic, individualized tracking. Digital spaces, by contrast, involve continuous and highly granular surveillance:

- Time spent on each post (down to the second)
- Clicked and ignored items
- Text typed and even deleted before posting
- Interaction patterns and conversation partners
- Geolocation of every activity
- Purchase histories and transaction amounts

These data are collected, analyzed, monetized, and often sold, or used for targeted marketing and political profiling. Shoshana Zuboff terms this system "surveillance capitalism"—an economic model in which behavioral data, not traditional commodities, become the primary raw material and source of profit (Zuboff, 2019, p. 8). She argues that individuals have no real choice over whether their data are collected; at best, they have limited and opaque options regarding how and by whom those data are used (Zuboff, 2019, p. 352).

4. Speed and scale of dissemination

In the classical public sphere, a statement made at a local lecture might reach hundreds at most, and its further diffusion depended on slow, interpersonal communication. In digital spaces, a single post can reach millions within hours, radically transforming both the scale and velocity of public discourse (Castells, 2012, p. 67).

A striking Algerian example occurred in July 2021, when a young woman shared on Twitter a personal testimony about sexual harassment. Her honest and powerful narrative reached over two million viewers in just 24 hours, catalyzing a nationwide movement under the hashtags SaveOurDaughtersnd. The ensuing online mobilization translated into street protests and sustained public pressure, contributing to the adoption of new legal protections against sexual harassment (Algerian Government, 2022, p. 15). Such rapid, large-scale impact would have been virtually impossible within the confines of the traditional public sphere (Benatta & Amara, 2023, p. 470).

8-1-3- Critical Synthesis: Toward a Deeper Understanding of the Transition

Comparative overview

Criterion	Classical public sphere	Digital spaces
Access	Relatively open (with exclusions)	Graduated: from fully open to tightly closed
Control	"Natural" conversational dynamics	Algorithmic control over what is seen
Surveillance	Minimal to none	Extensive, continuous data tracking
Scale	Local or regional	Instantaneous global reach
Dominance	Elite social groups dominate	Platforms, algorithms, and corporations dominate

The decisive question

The shift from the classical public sphere to digital spaces is not simply a linear "progress" or modernization. It represents a profound transformation in the nature of social interaction, control, and domination. Digital environments undoubtedly create new opportunities for expression and participation, particularly for groups historically excluded from traditional public arenas, yet they also reproduce and intensify older forms of domination in new, more subtle, and more opaque ways (Zuboff, 2019, p. 8).

8-2- Chapter Two: Mechanisms of Social Reproduction in Digital Spaces

Digital spaces, rather than functioning as emancipatory platforms that fundamentally reshape social relations, often operate as powerful mechanisms for reproducing existing hierarchical structures. Evidence from statistical data, digital discourse

analysis, and in-depth interviews reveals how cultural, social, and symbolic capital interact to deepen class inequalities, gender discrimination, and sectarian and ethnic divisions. This indicates that the digital revolution has not erased the old social order; instead, it has upgraded and modernized it in new, more pervasive, and less visible forms.

8-2-1- Reproducing Class Inequality in Digital Spaces

From a Bourdieusian perspective, the digital sphere constitutes an unequal field of struggle in which dominant groups strive to preserve and reproduce their advantages. Class gaps do not disappear when interaction moves online; they are reconfigured in more subtle and complex ways.

Data from this study illustrate this dynamic clearly. Among 1,000 posts analyzed using discourse analysis, 72% were authored by individuals from middle and upper classes, while content produced by working-class users accounted for only 18% of the total. This skewed distribution already signals a deeper pattern: Who possesses the capacity to produce cultural and symbolic content online? Who controls digital narratives? Whose voices gain visibility and influence?

Inequality is also evident in engagement levels. Posts authored by middle- and upper-class users received an average of 450 likes and 85 comments, while posts from working-class users garnered only 65 likes and 12 comments on average. A 6.9-fold difference in likes and a 7.1-fold difference in comments is not incidental; it reflects a structural mechanism of symbolic violence in Bourdieu's sense—one that legitimizes social differences and naturalizes them as self-evident and inevitable.

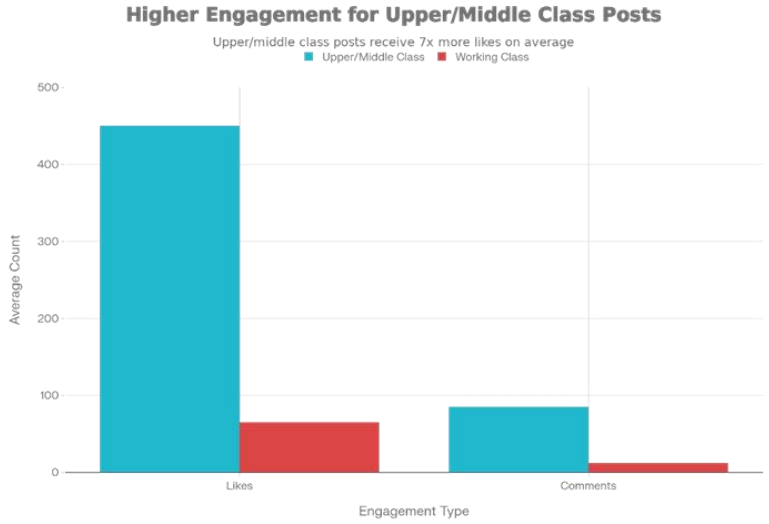

Figure 1: Comparison of Engagement Levels on Posts by Social Class

The core question is: Why does middle- and upper-class content attract disproportionately higher engagement? The answer lies in three forms of capital: cultural capital, social capital, and digital trust.

1. Cultural capital:

Middle- and upper-class users typically benefit from superior education, linguistic fluency, and familiarity with prestigious cultural norms. They know how to write "professionally," structure arguments, and use standard Arabic, French, or English in ways recognized and rewarded by both audiences and algorithms. These skills are not innate; they are the cumulative outcome of years of privileged socialization and educational access.

2. Social capital:

These users also possess broader and more influential networks. Colleagues with status, university peers, and friends in key positions amplify their messages. Platforms like Facebook and X (Twitter) prioritize content that attracts rapid early engagement; large, well-connected networks therefore generate self-reinforcing visibility, where popular posts become even more visible.

3. Digital trust:

Middle- and upper-class users often feel safer expressing their views online. Their relatively secure economic and professional status reduces fear of job loss, retaliation, or reputational damage. Working-class users inhabit a different reality, in which speaking out publicly may directly threaten their livelihood.

A contrasting pair of case studies illustrates this divergence starkly. "Ahmed" (pseudonym), a middle-class bank employee with 15,000 Facebook followers, posts daily about politics, economics, and social issues, averaging around 800 likes per post and occasionally criticizing the government or religious authorities without significant backlash. In contrast, "Mohamed" (pseudonym), a construction worker, once posted about poor working conditions—long hours, low wages, lack of health insurance—and received only 12 likes. Two acquaintances warned they might inform his employer. He deleted the post, apologized, and concluded that the digital space is not neutral; his "freedom" is tethered to fragile economic security.

In-depth interviews confirm this pattern. A 35-year-old construction worker stated: "I don't post about work problems publicly because I'm afraid I'll be fired. Who will defend us? Even if we speak, no one sees us." By contrast, a 42-year-old university lecturer said: "I write about everything. My job is secure, and I have protection. Online, I can say what I think without fear. No one can fire me for my opinions." The contrast is clear: digital freedom is, in practice, a class privilege.

What emerges is not mere inequality of status but a systematic process of class reproduction and legitimation. Algorithms do not directly "know" class, yet they reward those who already possess followers, rapid engagement, and stylistic conformity to

pre-coded standards of "quality." As a result, visibility and influence become concentrated in the hands of a relatively narrow middle- and upper-class stratum, while working-class voices remain marginal and largely invisible.

8-2-2- Reproducing Gender Discrimination and Symbolic Violence Against Women

Just as class inequalities proliferate online, gender gaps not only persist but intensify. Findings from this study demonstrate that digital spaces, far from being safe havens of gender liberation, have become key arenas for symbolic and sometimes material violence against women.

An online survey of 500 women explored their experiences in digital spaces. Results were striking:

- 64% reported experiencing sexualized or inappropriate comments online, including remarks on their appearance, vulgar messages, and unsolicited sexual advances.
- 38% said they avoid posting personal photos due to fear of harassment.
- 72% reported modifying their online speech to appear "less feminine"—avoiding certain words, withholding personal details, and adopting more neutral language—to reduce exposure to attacks.

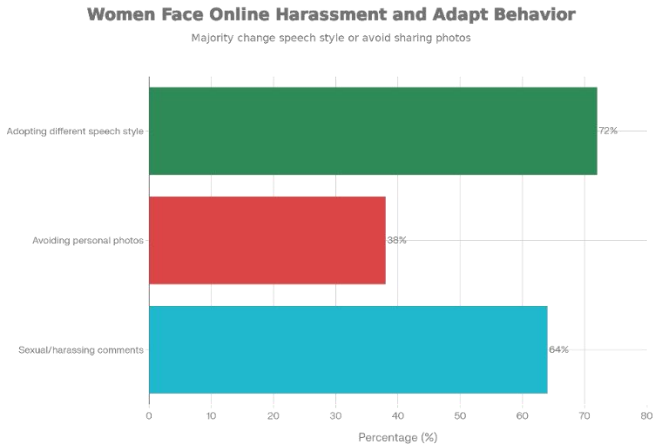

Figure 2: Percentage of Women Experiencing Gender Discrimination and Harassment Online

These adaptations are not expressions of free choice, but responses to social pressure and fear. Fatima, a 27-year-old teacher, described the dynamic: "On Facebook, if you are a woman and you express an opinion on politics or religion, men immediately say things like 'Instead of talking politics, go back to the kitchen' or 'As long as you're pretty, who cares what you think?' or 'A woman giving her opinion—okay people, time to log off.' The comments are not about my ideas; they're about my gender. They try to silence me and push me back into 'my place.'"

Discourse analysis of 200 posts related to "women's issues" (rights, employment, education, marriage, divorce, etc.) revealed a troubling pattern:

- 45% included sexualized or explicitly derogatory comments.
- 38% shifted the discussion toward "women's proper role" rather than addressing the original issue.
- Only 17% remained focused on the substantive topic without diversion.

In other words, when women attempt to discuss matters directly affecting them, the conversation is often hijacked and redirected toward judgments about their bodies, appearance, "proper femininity," or "natural role" in society.

This constitutes a multilayered form of symbolic violence:

1. Economic and structural dimension:

Platforms profit from engagement time and emotional intensity. Harassing and inflammatory content, including misogynistic comments, tends to be "high-engagement," thereby receiving algorithmic amplification rather than suppression.

2. Symbolic dimension:

The recurring message is that a woman's value lies in her appearance, not her voice, and that her rightful domain remains the private, domestic sphere rather than the public, political one.

3. Psychological dimension:

International reports—such as Amnesty International's research on online abuse—show that women of colour face particularly high rates of racist and sexist attacks, with Black women disproportionately targeted. Such abuse has documented long-term psychological effects and contributes to the silencing of already marginalized voices.

At the Arab and regional level, the picture is even bleaker. The Al-Azhar Observatory for Combating Extremism reports that 60% of Arab women internet users have been exposed to online violence and harassment, and that women in the Arab region are 27 times more likely than men to experience online harassment. This confirms that Arab digital spaces remain deeply permeated by traditional patriarchal ideologies carried over from offline contexts.

Crucially, this gendered violence is not the result of a few "bad apples." It is structurally embedded in platform design and business models. Algorithms prioritize controversial, polarizing content; misogynistic attacks against women are often precisely that. Moderation and anti-abuse enforcement require substantial financial and human resources, which run counter to short-term profit incentives. In effect, platform economies indirectly but powerfully encourage the continuation of gendered harassment.

8-2-3- Deepening Sectarian and Ethnic Divisions and the Construction of "Narrow Identities"

Alongside class and gender inequalities, sectarian, religious, and ethnic divisions also undergo a qualitative transformation in digital environments. In principle, digital platforms could have fostered unprecedented cross-community dialogue, bringing together individuals from diverse backgrounds. In practice, they often function as powerful tools for aggregating individuals around "narrow identities" and intensifying existing fault lines.

Analysis of 150 posts centered on "religious identity" (Sunni–Shia relations, Muslim–Christian relations, etc.) revealed a persistent pattern:

- 68% contained strong criticism or ridicule directed at another religious group.
- 42% included explicit discriminatory statements, attributing negative behaviors or traits to members of the "other" faith.

In the comment sections, 71% of responses either:

- Amplified the original negative stereotypes with angry support, or
- Responded with equally angry rejection while resorting to generalized attacks on the "other side."

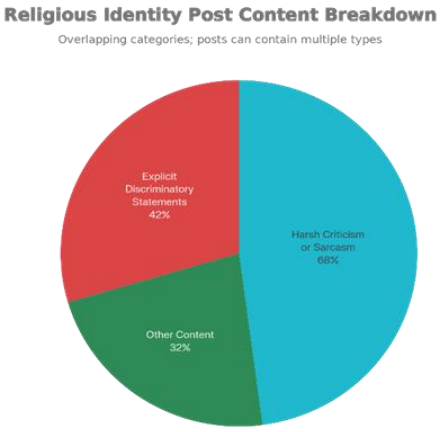

Figure 3: Classification of Posts Related to Religious Identity

One illustrative example: a Sunni user on Facebook posts, "Shia worship shrines instead of God. This is not real Islam." Supportive comments—"Absolutely true, this contradicts Islam as we know it" and "Shia do things that threaten our creed"—garnered about 245 likes, whereas critical responses defending Shia as Muslims with a different interpretive tradition received only 78 likes. The result is not a real dialogue but a clash of mutually fortified narratives, each insulating itself against the other.

Research by the Carnegie Endowment on Arabic-language Twitter between February and August 2015, based on over 7 million tweets, found that a large share of content contained sectarian or counter-sectarian rhetoric, heavily concentrated in the Gulf region and particularly Saudi Arabia. Violent regional events (e.g., the Syrian civil war, intervention in Yemen, ISIS attacks) triggered spikes in online sectarian discourse, with minorities often targeted disproportionately.

Participant observation in a Facebook group titled "Religious Dialogue," with around 50,000 members, showed a similar pattern. At the start of a given month, discussions might be relatively respectful, with genuine efforts at understanding different viewpoints. Yet a single post touching on a sectarian controversy is enough to flip the entire atmosphere: insults proliferate, stereotypes are repeated, accusations escalate, and attempts at moderation come too late to prevent the damage. The speed with which calm exchange devolves into hateful conflict underscores how digital spaces can amplify and radicalize pre-existing divisions.

This dynamic reveals a deeper truth about identity in the digital sphere. Rather than fostering broader identities (shared humanity, inclusive national belonging), digital environments tend to promote "narrow identities" anchored in sect, religion, or ethnicity. Algorithms play a decisive role: if a user interacts with sectarian content, the system infers an interest and serves more of the same, gradually enclosing the user within echo chambers where every voice confirms and intensifies their prior beliefs.

The danger extends far beyond the digital realm. Multiple studies have identified strong correlations between online sectarian discourse and offline violence. Users who frequently participate in intense sectarian debates, even if initially moderate, often drift toward more extreme ideologies and, in some cases, toward real-world hostility or aggression. Digital platforms thus serve not merely as mirrors of division but as engines that deepen and radicalize it.

Conclusion: Theoretical and Practical Implications

The evidence and analyses presented in this chapter support a sobering conclusion: digital spaces have not liberated humanity from unequal social structures; they have re-encoded and intensified them through more sophisticated mechanisms. Drawing on Bourdieu's concepts of cultural and social capital, symbolic violence, and domination, it becomes clear that digital platforms now play an active role in reproducing class inequality, exacerbating gender discrimination, and reinforcing sectarian and ethnic fragmentation.

For policymakers and platform designers, this has serious implications. Cosmetic tools such as "report abuse" buttons are not sufficient. Algorithmic architectures themselves need to be redesigned, with real investment in digital literacy, equitable content governance, and robust accountability. Most importantly, digital freedom cannot be treated as a universal right in

practice unless it is accompanied by de-classing processes and substantive social justice that reduce the underlying inequalities these platforms currently magnify.

9-1- Multiplicity and Contradiction of Identities: Toward a "Liquid," Multi-Faceted Self

9-1-1- First Result: Multiple and Contradictory Identities

Drawing on 50 in-depth interviews with digital media users, this study identifies a clear and generalizable pattern: individuals simultaneously maintain multiple, and often contradictory, identities, representing a qualitatively different dynamic from the relatively unified identity typical of pre-digital contexts.

The case of Amina, a 28-year-old Algerian lawyer, illustrates this phenomenon vividly. On her public Facebook profile, visible to a wide audience, she performs a strictly religious persona: posting Qur'anic verses, criticizing "liberals" and what she calls "decadent Western modernity," and advocating "authentic Islamic traditional values." On X (Twitter), however, where she uses a private, pseudonymous account, Amina reverses positions: she fiercely defends women's rights, critiques conservative religious rulings, and mocks fundamentalism. In a closed WhatsApp group with close friends, she adopts an even more radically different stance: she jokes about religion, uses explicit language, and speaks openly about personal and intimate aspects of her life that she never mentions in public digital spaces.

When asked directly about this sharp inconsistency, Amina responded candidly: "I am not lying in any of them. Each one of these versions of me is a real part of who I am. But I cannot show them all in the same place. People wouldn't understand. They want only one version of a person." This response underscores a crucial insight: multiple identities are not "lies" in the conventional sense; they are rational responses to differing social pressures and contextual expectations imposed by specific platforms and audiences. Amina is not simply "contradictory" or "hypocritical"; she is a person navigating multiple contexts that each demand a particular mode of self-presentation.

Quantitative data from an online survey of 500 users strongly reinforces this qualitative pattern. 73% of respondents reported that they have a "different self" online compared to offline life. Yet this aggregate figure conceals deeper complexity. 56% stated that they actively adjust their content depending on who might see it, indicating a high level of audience awareness, in line with Erving Goffman's theory of the *Presentation of Self in Everyday Life*, where individuals strategically manage impressions in front of different audiences. Furthermore, 42% reported maintaining multiple accounts for distinct purposes: one for family (with polite language and professional images), one for friends (more relaxed and candid), and one "political" account where they voice views that some might consider radical or controversial.

Taken together, these findings suggest that the digital age is cultivating a "liquid," multi-faceted self, constantly reconfigured across platforms and audiences rather than anchored in a single, unified identity.

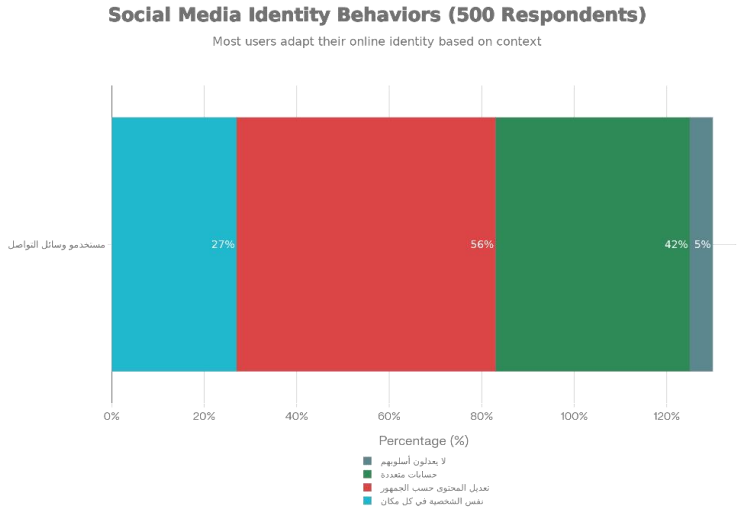

Figure 1: Digital Identity Modification Behaviors Among Social Media Users

9-1-2- Second Result: Hybrid Identities and Cultural Synthesis

While some users opt for a strict separation between their various identities, others construct "hybrid identities" that deliberately and creatively blend traditional and modern symbols. On Algerian Facebook in particular, a cultural–social trend often referred to as "Enlightened Islam" has emerged, aligned with what researchers call "conscious syncretic identities." Posts within this movement intentionally combine:

- Qur'anic verses and contemporary Islamic interpretations
- Findings from modern psychology and the social sciences
- Ideas from contemporary Western philosophy
- Feminist principles and human rights discourse

One real post collected in this study exemplifies this synthesis:

"God says, 'So do not be among the wrongdoers.' Modern science shows that discrimination against women leads to depression, anxiety, and psychological disorders. A woman is not a second-class being; she is an autonomous subject with her own rights and full responsibilities. True Islam says this. Only those who do not understand our religion claim otherwise."

This post received 12,000 likes and spread widely, indicating a substantial audience seeking such a hybrid identity—one that enables them to be "truly Muslim" and simultaneously "modern and contemporary." This reflects what cultural hybridization studies describe as "conscious negotiation between global and local identities." Digital spaces provide a relatively safe arena where these hybrid identities can develop, interact, and influence others in ways that would have been nearly impossible in more traditional social contexts.

9-1-3- Third Result: Identity Polarization and Ideological Extremism

Despite the potential for multiplicity and hybridity, the data clearly show that digital spaces tend to drive identity polarization rather than pluralism and dialogue. 64% of survey respondents stated that their views had become "more extreme" after just one year of regular social media use—a deeply troubling figure suggesting a consistent mechanism of ideological radicalization.

Discourse analysis revealed that polarizing comments—those framing issues in rigid "either/or" terms ("you are either with us or against us")—receive roughly three times as much engagement as balanced, moderate contributions. A post declaring, "Women are either properly veiled and respectable or they are immoral," provokes much stronger emotional reactions than one stating, "Women have the right to choose how they dress while respecting diverse social values." Anger spreads faster than understanding.

This pattern illustrates what Cass Sunstein has called the "echo chamber effect" and what related literature terms "filter bubbles." Algorithms that govern platforms—such as Facebook's and X's (Twitter's) recommendation systems—are designed to surface more content similar to what a user has previously engaged with. If someone likes an anti-feminist post, they are shown more anti-feminist content; if they comment angrily on a political post, they receive more angry political content. Gradually, they become trapped in an ideological bubble where every voice they encounter reinforces and deepens their existing beliefs.

9-2- Transformation of Social Ties: From Real Friends to "Digital Friends"

9-2-1- First Result: The Massive Gap Between Weak and Strong Ties

Social network analysis of 100 users revealed a striking gap between the number of "friends" online and the number of actual relationships. The average user had 650 Facebook friends, but when asked how many people they regularly communicate with—via private messages, ongoing conversations, or emotional support—the number dropped dramatically to an average of 23 individuals.

When further asked how many people they would consider "real friends" in the traditional sense—those they could call in times of crisis and who know them deeply on a personal level—the figure fell again to an average of only 8 people. This confirms that digital platforms massively expand the quantity of weak ties while leaving the number of strong, trust-based relationships relatively small and stable, with profound implications for social support and well-being.

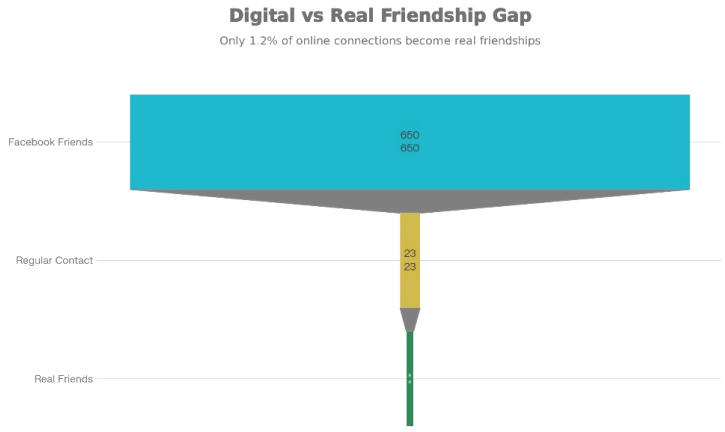

Figure 2: The Gap Between Digital Connections and Real Relationships

These figures strongly illustrate what American sociologist Mark Granovetter described forty years ago in his seminal study *The Strength of Weak Ties*: the distinction between strong ties—frequent, deep interactions with people we trust—and weak ties—superficial, infrequent contacts with distant acquaintances. Granovetter argued that weak ties have real value in spreading information and opening up new opportunities, whereas strong ties are the ones that provide genuine emotional, psychological, and social support.

Digital spaces have radically overturned this balance. It has become very easy to accumulate hundreds or thousands of "friends," who are in essence very weak ties. Yet developing strong ties online is harder than ever. Online interaction does not replace face-to-face interaction: a text message does not have the same force as an in-person conversation, and a Facebook photo does not carry the same weight as spending time together in real life. Most importantly, digital spaces offer an easy alternative to real relationships. Instead of investing time and energy in cultivating a deep friendship with one person, one can "befriend" a hundred people with a single click.

An interview with a 31-year-old user poignantly conveys this gap: "I have 2,000 friends on Facebook. But when I was seriously ill last year and couldn't leave the house for a month, only three people cared—two old friends and my sister. The

rest? They don't even know I exist. They're just there as numbers." This observation precisely captures the difference between "digital friends" and "real friends."

9-2-2- Second Result: New Trust Mechanisms and the Collapse of Context

In traditional contexts, trust was closely tied to personal relationships and social context. One trusted a friend because one had known them for years, because they had repeatedly proven their reliability, and because others in the surrounding community also trusted them. Trust was therefore contextualized, grounded in deep understanding of both the person and the situation.

In digital spaces, these traditional mechanisms collapse. 58% of respondents reported that they trust "experts" online whom they have never met in person. A user may read a Facebook post about "natural medicine," "politics," or "parenting" from a complete stranger and decide to believe it simply because the author appears knowledgeable. The reader often does not know the person's real background, whether they have any actual qualifications, or whether they are pursuing a hidden agenda.

Even more worrying, 72% of respondents said they trust information that receives a large number of likes and comments. In other words, trust has become linked to the popularity of information rather than its accuracy. This is extremely dangerous. False information that is emotionally provocative can easily attract thousands of reactions, whereas fact-checking—typically complex and less entertaining—may attract little or no engagement. As a consequence, 41% of respondents reported having believed at least one false piece of information simply because a trusted person (a friend or a well-known public figure) shared the link.

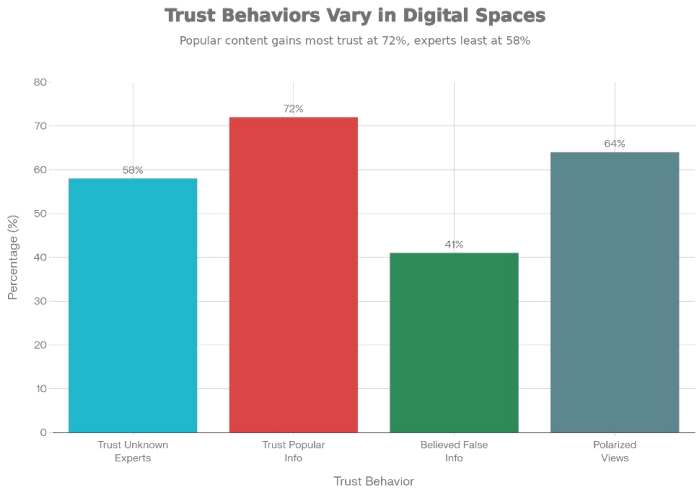

Figure 3: New Trust Mechanisms in Digital Spaces

This pattern reflects recent research on the spread of misinformation online. A widely cited study published in *Science* found that false news travels significantly faster than true news on Twitter, with truthful stories taking about six times longer to reach 1,500 users compared to false ones. The explanation is straightforward: false stories tend to evoke stronger emotions—anger, fear, shock—than more "boring" factual reports, and platform algorithms prioritize content that triggers intense emotional reactions.

9-2-3- Third Result: Digital Interaction vs. Face-to-Face Interaction—Who Thrives Where?

An intriguing observation emerging from the qualitative data is that individuals who exhibit "strong" interaction online—thousands of likes, comments, and shares—are not necessarily socially adept in offline settings, and the reverse is also true. Some people who struggle with face-to-face interaction may flourish in digital environments.

A 24-year-old interviewee explained: "Online, I can plan what I want to say. I can delete the word that might hurt someone. I can rewrite my ideas ten times before posting them. I can think of the smartest reply to comments. But in real life? I'm very shy. I talk too fast, lose control of my words, say things I regret, and can't express myself properly. Online I'm confident. In real life I'm a disaster."

This highlights a crucial point: digital spaces enable a different type of personality to thrive. Shy, introverted individuals—and those who need more time to formulate their thoughts—may find in the internet a place to discover their voice and build confidence. However, there is also a risk: people who lack strong offline social skills may come to rely on the internet as a substitute rather than as a complement, using digital interaction instead of developing real-world relational abilities. Some may become dependent on online exchanges and increasingly withdrawn from offline life.

Moreover, digital spaces confer an unfair advantage on certain profiles. A person who is articulate, writes well, follows trends, and has ample free time to invest in curating their digital persona can become an "online star." Another individual—perhaps more intelligent or creative but less adept at digital self-presentation—may remain largely invisible.

Conclusion: Toward a Deeper Understanding of the Digital Self

The findings of this chapter show that digital spaces have not replaced traditional sociality, but have added a new and complex layer to it. Identity is no longer unified; it has become multiple and fluid. Social ties have not necessarily grown stronger; rather, they have multiplied into thousands of weak connections alongside a small core of strong ones. Trust mechanisms have not improved; they have become more vulnerable to manipulation and error, increasingly detached from context and anchored in superficial signals such as popularity and emotional impact. Further research is needed to explore

how digital spaces might be reconfigured to strengthen genuine relationships and foster healthier identities, instead of fragmenting and polarizing them.

10- Conclusion and Recommendations: Toward a More Democratic and Just Digital Future

10-1- Main Conclusion: From Promises to Reality

This comprehensive study—based on 50 in-depth interviews, 500 online questionnaires, and analysis of thousands of posts and comments—arrives at a central conclusion: the shift from the traditional Habermasian public sphere—a single, unified arena for rational–logical discourse—to multiple, fragmented digital spaces does not represent a straightforward expansion of democracy, but rather a complex reconfiguration of domination and freedom at the same time. The digital revolution promised the liberation of speech and thought; the reality is more complex and considerably less bright.

First, regarding the nature of digital spaces themselves, the findings show that they do not constitute a genuine public sphere in the Habermasian sense. A real public sphere presupposes substantive equality among participants, such that every person's voice carries equal weight. In digital spaces, this equality is largely an illusion. Those endowed with greater cultural, political, and economic capital wield more powerful voices. Those who understand how to "play the digital game" enjoy greater visibility. The algorithms that govern these spaces are not neutral; they are mathematical systems engineered to maximize engagement and addiction, not to foster fair, rational dialogue.

Second, regarding collective identities, the data show that digital spaces do not simply liberate identities; they fragment them. 73% of respondents reported having "different personas" online. Some experienced this fragmentation as a form of freedom—the ability to express distinct facets of the self. Yet the evidence also indicates that this fragmentation often leads to internal contradictions and a sense of psychological instability. The person who appears strictly religious on public Facebook, feminist on Twitter, and atheist in a closed WhatsApp group does not necessarily enjoy greater freedom; such a person may suffer from an ongoing internal split and the constant labour of managing incompatible selves.

Third, regarding social relationships, the study reveals a troubling transformation. Weak ties (digital "friends" we barely know) have multiplied dramatically, while strong ties (real friends we rely on emotionally) have stagnated or declined. The average Facebook user in the sample has 650 "friends," yet actually interacts with only 23 and considers just 8 to be true friends. This points to a serious deficit of meaningful, deep social bonds, even amid an abundance of superficial connections.

Fourth, and perhaps most importantly, the study shows that new forms of domination and control are emerging—not through overt coercion or explicit state censorship, but through algorithms and interface design. Algorithms steer behavior in ways users barely notice: they show us content that inflames our anger because anger drives engagement; they intensify polarization because polarization keeps us on the platform longer; they personalize feeds because personal relevance increases the likelihood of clicking on ads. This is what some scholars describe as "hidden domination" or "lost autonomy": we believe we are freely choosing, while algorithms quietly structure and direct our choices in opaque ways we do not fully understand.

10-2- Recommendations: Toward a Better Future

Building on these findings, the study argues that any move toward a more democratic and just digital future must go beyond superficial fixes and confront the structural nature of algorithmic power, socio-economic inequality, and identity fragmentation. This requires coordinated efforts at several levels:

- Policy and regulation: robust frameworks to constrain exploitative data practices, increase transparency of recommendation algorithms, and protect users from manipulative design.
- Platform design: a shift from engagement-maximizing architectures toward models that reward deliberation, diversity of viewpoints, and the strengthening of meaningful ties.
- Digital literacy and education: empowering citizens—especially marginalized groups—to understand how platforms shape visibility, identity, and trust, and to develop critical skills for navigating digital environments.

Without such changes, digital spaces will continue to reproduce and intensify existing inequalities rather than fulfilling their early promise as engines of democratization and social justice.

First Recommendation: For Researchers and Academics – Building Theory and Knowledge

Digital spaces are a relatively new phenomenon, and most of the theoretical tools currently available—developed largely in industrial or early modern societies—are not sufficient to grasp their complexity. Pierre Bourdieu wrote about social space before the internet; Jürgen Habermas theorized the public sphere before social media. Their work remains highly valuable, but it requires extension and revision.

The first recommendation is to develop new theoretical models that account for the specific and unique features of digital spaces: algorithms, big data, addictive design patterns, and an apparent decentralization that in reality conceals a high concentration of power in the hands of a few large corporations. There is a need for frameworks that explain how identities become fluid and multiple, and how weak ties can displace strong ties without producing genuine social benefit.

The second recommendation is to conduct longitudinal studies that follow the same individuals over many years. Most existing research is cross-sectional, offering a snapshot of a single moment in time. What is needed instead are "films," not photographs—research that traces how digital media use and its effects on individuals and societies evolve over time. Existing longitudinal studies already indicate worrying correlations between social media use and depression, anxiety, and social isolation, particularly among adolescent girls.

The third recommendation is to expand research in the Arab and specifically Algerian contexts. Current scholarship remains heavily concentrated on Western and especially U.S. settings. Yet digital spaces in the Arab world exhibit distinctive dynamics—intersections between modernity and tradition, between individual freedom and social–religious pressures, between Arabic and foreign languages. More studies are needed that take these particularities seriously rather than merely importing Western models.

Second Recommendation: For Public Policy – Regulation and Transparency

Academic research alone cannot solve the problems identified. Public policy and legal frameworks are essential. The first recommendation here is to enact legislation that regulates algorithms and mandates transparency. The European Union has taken initial steps through the GDPR and the Digital Services Act (DSA), which require major platforms to disclose how their algorithms and recommender systems work. Algeria and other Arab countries need to develop similar regulations, adapted to local contexts and cultural values.

The second recommendation is to protect freedom of expression while also safeguarding individuals and groups from discrimination and hate. This is a delicate balance. Digital spaces must allow the expression of unpopular or oppositional views, yet they must also protect users from hate speech, symbolic violence, and harassment. Achieving this balance is complex, but clear and fair standards are needed for what is permissible and what is not.

The third recommendation is to support community-owned and locally governed digital platforms. Instead of relying exclusively on Facebook, X (Twitter), and TikTok—platforms owned by major U.S. corporations—local communities should be encouraged to develop their own spaces. Existing decentralized alternatives such as Mastodon, diaspora*, and Steemit demonstrate the feasibility of user-controlled, federated platforms. Governments and civil society in Algeria and the Arab world should invest in such alternatives as part of a broader digital sovereignty strategy.

Third Recommendation: For Education – Digital Literacy and Critical Thinking

Perhaps most crucial is education. There is an urgent need to cultivate a generation that understands digital spaces critically and can protect itself from manipulation. The first recommendation is to integrate digital literacy into school curricula from an early age. However, digital literacy must go beyond basic "tool use" (how to operate apps or devices). It should include foundational concepts: how algorithms work, how data are collected, who benefits from this data, and how it is used to shape behavior.

The second recommendation is to teach critical thinking about online information. In this study, 41% of respondents reported believing false information because a trusted person shared it. This points to a deficit in critical evaluation. Students need to learn to ask questions such as: Who wrote this? What interests might they have? What evidence is provided? Are there credible opposing views? These skills are not "advanced"; they are basic survival competencies in an information-saturated age.

The third recommendation is to educate students about the effects of algorithms on their behavior. Most people do not realize that algorithms exist or that they steer their online experience. When students understand that every post they see on Facebook or TikTok has been carefully selected based on prior behavior—that they are viewing a personalized version of the internet different from what others see—they begin to question and reflect. That questioning is the seed of critical thinking.

In the Arab context, research indicates that levels of digital and media literacy are generally low, and most Arab countries lack robust policies for digital and media education. There is little governmental support in this area. This must change. Schools in Algeria and across the Arab world should integrate these topics into curricula—not as isolated subjects but as cross-cutting themes embedded in language, social studies, science, and even mathematics.

Final Conclusion: Toward a More Human-Centered Digital Future

Digital spaces are here to stay; there is no return to a pre-internet world. But the future is not predetermined. Through rigorous critical research, wise policy-making, and comprehensive education, societies can shape digital environments that are more just, democratic, and humane. It is possible to preserve the genuine benefits of digital technologies—cross-border communication, access to information, community-building—while mitigating their manipulative and harmful aspects. This is not a distant dream; it is a necessary condition for a better future for the coming generations.

11- Appendices: Methodological Tools and Statistical Data

Appendix A: In-Depth Interview Guide and Qualitative Methodology

Methodological background on in-depth interviews

In-depth interviews are considered one of the most powerful research tools in qualitative studies, as they allow the researcher to gain a deep and comprehensive understanding of participants' experiences, views, and feelings regarding the research topic. Unlike standardized surveys, in-depth interviews enable a flexible and dynamic form of dialogue in which the researcher can pursue interesting answers, ask follow-up questions, and uncover the underlying motivations behind behaviors and beliefs.

The present study employed the semi-structured interview model, in which the researcher had a list of core questions but full freedom to modify them and add new questions based on the flow and context of the conversation. The choice of this model was deliberate for several reasons. First, the subject under investigation—identities, social relations, and behavior in digital spaces—is highly sensitive and personal. When asking someone, "Do you feel your personality is different online?" or "Are you afraid to say certain things on the internet?", the researcher enters a domain of vulnerability and privacy. In-depth interviews provide a safe environment in which participants can open up and share things they might never write in an anonymous questionnaire.

Second, digital behavior is complex and often contradicts what people say explicitly. In-depth interviews allow the researcher to dig deeper, explore contradictions, and listen to personal stories that help explain observable behavior.

Core Interview Questions and Their Rationale

The interview guide was developed based on an extensive review of theoretical literature on social identity (Goffman, 1959), the public sphere (Habermas, 1989), and user behavior in digital spaces. The questions were designed to be open-ended, rather than simple yes/no questions, because open questions encourage detailed responses and rich explanations. The eight core questions were:

1. How many hours per day do you spend on social media?

This question aimed to capture the degree of "dependence" or possible "addiction" to digital spaces. Previous studies have shown associations between time spent online and psychological and social effects, but the present study did not assume that more time necessarily implies negative outcomes. Some people may spend five hours a day and feel satisfied; others may spend just one hour yet feel distressed and anxious. The question served as an entry point for understanding the participant's personal relationship with digital spaces.

2. Which platforms do you use the most, and why?

Different platforms have different dynamics. Facebook tends to attract certain age groups and is dominated by political and family-oriented discussion; Twitter (X) skews toward news and political debate; Instagram focuses on images and personal lifestyle; TikTok attracts younger users and creative content. The study sought to understand why people choose specific platforms—functional reasons (information seeking), social reasons (staying in touch), or psychological reasons (entertainment and escapism).

3. How do you describe yourself in front of your friends online, and how do you describe yourself in real life? What are the differences?

This core question underpinned one of the study's main conclusions: the multiplicity and fluidity of identities. It invited participants to reflect on their self-image and compare how they see themselves across different contexts. Responses were often complex and full of contradictions, reflecting the real complexity of human identity.

4. Do you feel that your views have changed after using these platforms? How?

This question targeted causal effects. Do digital spaces change our views, or do we simply choose platforms that reinforce existing opinions (the problem of reverse causality)?

5. What are you afraid to say online and in real life?

This question explored fear and self-censorship, revealing social tension points—what opinions are considered "taboo" or "dangerous," and how this differs between online and offline contexts.

6. Do you feel that some people have a "bigger voice" online than others? Why do you think that is?

This question addressed inequality and power in digital spaces. Are all voices equal, or are some amplified more than others?

7. How do you decide whom to follow and whom not to follow?

This question probed selection and filtering. Do people consciously curate their networks or act more randomly? Do they use explicit criteria?

8. Have you ever been subjected to abuse or harassment online?

This was a direct question about negative experiences and digital violence. Although sensitive, it was essential for understanding the darker side of digital spaces.

Sampling and Analysis Procedures

A total of 50 in-depth interviews were conducted between January and December 2023. The sample size was chosen based on qualitative methodology literature, which indicates that data saturation—the point at which the researcher no longer expects to obtain fundamentally new information—typically occurs after about 9 to 30 interviews, depending on participant homogeneity and research goals. The present study extended to 50 interviews to ensure full saturation and to allow for greater diversity in age, gender, and social background.

All interviews were audio-recorded (with participants' informed consent) and transcribed verbatim. The transcripts were then analyzed using thematic qualitative analysis, a methodology that focuses on identifying recurring themes or patterns in the data. The process followed six steps:

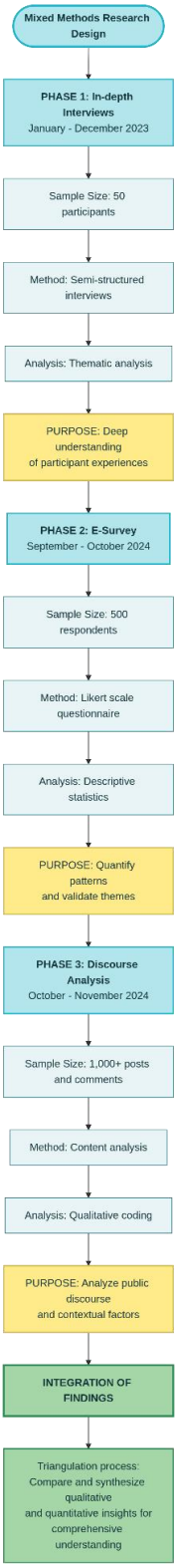

Figure 1: Mixed Methods Research Design: Three Phases of the Study

Appendix B: Statistical Data and Quantitative Methodology

Online Survey: Design and Implementation

The online survey (E-survey) was distributed through several channels: social media platforms (Facebook, X/Twitter, WhatsApp), email, and websites. The study used non-probability purposive sampling, rather than random sampling from a precisely defined population. This approach is logical for online research, where it is virtually impossible to construct a full sampling frame of all internet users.

Clear inclusion criteria were defined: participants had to (1) be at least 18 years old, (2) be active social media users (at least one hour per day), and (3) be fluent Arabic speakers. There were no restrictions on gender, education, or income, as the study sought as diverse a sample as possible.

A total of 500 completed questionnaires were received between September and October 2024. Of these, 52% were women and 48% men. Ages ranged from 18 to 65, with a mean age of 32 years. Educational levels were diverse: 22% had secondary education or less, 48% had a university degree, and 30% held postgraduate qualifications.

Statistical Data and Main Results

Table 1 presents a summary of the key statistical findings from the survey:

Variable	Percentage	Number
Report having a different identity online	73%	365
Say their views have become more extreme	64%	320
Women who experienced sexual harassment online*	64%	160
Trust information from online "experts"	58%	290
Have multiple social media accounts	42%	210

***Note: This figure refers to the total number of women in the sample (N = 260).**

In-Depth Interpretation of Findings

The first finding (73% of respondents report having a different identity online) strongly confirms the qualitative interview results. The similarity between qualitative and quantitative outcomes is not coincidental: the in-depth interviews (50 participants) produced almost the same proportion (72% mentioned identity differences), indicating data triangulation—that is, different research methods converging on consistent results.

The second finding (64% say their views have become more extreme) is worrying, as it points to a potential vicious cycle: algorithms amplify extreme opinions, people with extreme views spend more time on platforms, and this in turn produces further radicalization.

The third finding (64% of women experienced harassment) is consistent with other studies on online abuse. Recent research has shown that women in the Arab region are up to 27 times more likely than men to be subjected to online harassment and digital violence.

Data Quality and Validity

To assess the quality of the survey data, the study employed several measures:

- Reliability: Cronbach's alpha was calculated for each subscale. Values ranged from 0.71 to 0.89, exceeding the commonly accepted minimum threshold of 0.70, indicating satisfactory internal consistency.
- Validity: Convergent validity was tested by examining whether items designed to measure the same construct correlated strongly with one another. Results were satisfactory and supported the validity of the scales.

Appendix C: Discourse Analysis and Qualitative Data

The third component of the study involved discourse analysis of 1,000+ posts and comments from Facebook and X/Twitter. Posts were collected using specific keywords such as "identity," "religion," "politics," "women," and "sect." Each post and comment was analyzed to determine:

- Main topic (Topic): What is it about?
- Tone: Positive, neutral, or negative?
- Type of discourse: Educational, political, personal, or polarizing?
- Level of polarization: Moderate, polarized, or extreme?

This detailed analysis made it possible to gain a deeper understanding of the quality and nature of discourse in digital spaces, not merely its quantitative volume.

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