

The Digital Transformation of the Democratic Public Sphere: Opportunities and Challenges

Gheorghe-Ilie Fârte
“Alexandru Ioan Cuza” University of Iasi

Abstract

The liberal democratic regimes rest on a well-developed public sphere accessible to all citizens that favors free discussions based on reason and critical debate and serves as a space where public opinion is formed through reasoned dialogue. The new digital technologies disrupted many parts of contemporary democratic societies and transformed their public sphere. Digital transformation alters industries and markets, changing the perceived subjective value, satisfaction, and usefulness of goods or services and displacing established companies and products. Within the political realm, digital transformation creates a cleavage between the vulnerable populations who are ill-informed and lack digital fluency and politicians who tend to learn about peoples' problems not to deal with them but to weaponize new technologies to engineer elections and win power. The rise of misinformation and disinformation undermines public trust in democratic institutions and discourages or incapacitates citizens from engaging in debates within the public sphere. On the other hand, the digital transformation of the public sphere empowers ordinary people to aggregate in various publics and counteract the domination of the mainstream parties. Our paper aims to answer whether new technologies provide citizens with ways to counter the undemocratic tendencies caused by digital transformation and engage actively in the public sphere.

Keywords: democratic public sphere, liberal democracy, digital transformation, social media, public reason

Introduction

Any society has a form of political organization and a corresponding public sphere. As an agency that transforms human collectivity into a politically constituted society, the

state exerts the monopoly of legitimate coercion to ensure the well-being and stability of its society by providing governance, security, and public services on a geographically bounded territory (Bremer and Ghosn 2003, 22). The public sphere is “the arena where citizens come together, exchange opinions regarding public affairs, discuss, deliberate, and eventually form a public opinion” (The World Bank 2009, 2) that emerges between private households and the state (Habermas 1991, 30; World Bank 2009, 2). It is generally accepted that a state organized as a liberal democracy relies on a well-developed democratic public sphere accessible to all citizens. Such a public sphere encourages free discussions based on reason and critical debate. It serves as a space where public opinion is shaped through open, rational, and inclusive dialogue, even when divergent interests drive citizens. To the extent that people are involved in the public sphere, they are empowered to hold government officials accountable for their actions and influence their political decisions.

Both states and the public sphere of various societies have changed a lot throughout history. Still, they did not follow a linear trajectory from inferior to superior or bad to good. Of course, one can argue that contemporary liberal democratic regimes provide more economic advantages to the multitude than the absolutist monarchies of the 17th and 18th centuries or that contemporary media-constituted public sphere (Trenz and Eder 2004, 10) involves more citizens in debating and solving public problems than the late 17th and early 18th centuries coffeehouses (England), salons (France), table societies (Germany), and the New England town meeting in pre-Independence America (Odugbemi 2008, 27; The World Bank 2009, 1-2). However, no historical law determines the evolution of states and the public sphere toward a worthwhile end by undergoing a suite of incremental or revolutionary improvements. Besides, all positive and negative transformations exceeded in magnitude and complexity the intentions of those who premeditated or triggered them. Humanity has not reached the “end of history” in terms of ideological evolution, as Francis Fukuyama (1992) posited. Despite its superior ethical, political, and economic traits

compared to other political regimes, Western liberal democracy does not represent the final form of human government. It will change and is already changing, together with its corresponding public sphere, under the pressure of numerous economic, social, political, cultural, and technological factors.

New digital technologies have significantly transformed many aspects of contemporary democratic societies. These changes are particularly evident in the for-profit sector, where companies have strived to gain a significant competitive advantage by adopting digital transformation tools. The widespread use of new technologies has altered perceptions of goods and services' value, satisfaction, and usefulness, displaced established companies and products, and radically transformed industries and markets (Mühlburger and Krumay 2024). Enabled by the innovative use of digital technologies, accompanied by the strategic leverage of key resources and capabilities, and aiming to radically improve an entity and redefine its value proposition for its stakeholders (Gong and Ribiere, 2021), digital transformation boosts innovation, enables the acquisition of new knowledge and skills, creates new forms of collaboration within the organizations and across industries, stimulates the apparition of new business models, and leads to the sustainable usage of organizational resources (Robertson and Lapina 2023). Digital transformation is not limited to introducing new technologies into the business process; it redefines entire business models (Buonocore et al. 2024).

Digital transformation allows a growing interconnectivity between firms and the alignment of heterogeneous resources. Firms increase their scales and scopes far beyond their conventional boundaries thanks to the extensive use of complementary resources, increased automation, the ability to gather and analyze vast amounts of data, and improved process control. On the other hand, increasingly permeable and expanding boundaries make firms more vulnerable and sensitive to external control (Plekhanov, Franke and Netland 2023).

The unparalleled opportunities this digital landscape provides are exploited unequally by economic actors. For example, the European Union had a higher GDP than the United States in 2011 (World Bank 2024), but in recent decades

the EU has been lagging behind the US both economically and technologically (Arnal and Féas 2024). As Gideon Rachman stated, “From technology to energy to capital markets and universities, the EU cannot compete with the US” (Rachman 2023). Seeing that EU companies have difficulty keeping up with firms in the United States in the new digital economic ecosystem, we can imagine how big the gap is in the case of other countries.

The public sector’s outmoded structures, propensity to inertia, and opaqueness mean it lags behind private sector digitalization efforts. On the other hand, citizens expect greater government transparency and user-friendly digital government services (Mettler et al. 2024). Despite the resistance to change in government structures, digital transformation has also produced revolutionary effects in the political sphere. It is true that progress towards e-government is still incremental in countries like Romania (Gavriliuță, Stoica and Fârte 2022), but the digital transformation of the public sphere and the political contests rooted in it is so spectacular that it can no longer be overlooked. The multifaceted digital public sphere enables both the dominant public and counterpublics to participate in and shape political dialogues (Xie 2024). Social media serves as a platform for marginalized and voiceless individuals to express their opinions, connect with others, and engage in political activities (*ibidem*). The results of the first round of the Romanian presidential elections on November 24, 2024, highlighted the existence of a counterpublic that could solidify discreetly in the digital public sphere. Mainstream political actors were surprised that an underdog candidate managed to slip through the loopholes in the legislation and leverage the resources offered by social platforms.

Given this context, my article aims to present some essential effects of the digital transformation of the democratic public sphere. We will evaluate the communication practices impacted by digital technologies against the ideal characteristics of the democratic public sphere, highlighting aspects where public discourse may fall short. Besides, we will answer whether digital transformation brings more risks than opportunities to the democratic public sphere. To reach our

research goal, we will present the organizing principles of liberal democracy, the essential traits of the democratic public sphere, the impact of digital transformation on the democratic public sphere, and the risks and opportunities citizens face within the digital public sphere.

1. The Pillars of Liberal Democracy

Liberal democracy does not exist as a natural state of affairs. It constitutes itself wherever citizens' political conduct is significantly governed by the following principles: inclusiveness, political participation, political equality, the predominance of the concurrent majority, the containment and predictability of government power, and the enforcement of the non-aggression principle (Calhoun 1851; Kuehnelt-Leddihn 1974; Young 2002; Gastil 2008). In the communication "Exploring the discursive boundaries of contemporary populism" (Fârte 2017), the above-mentioned organizing principles of liberal democracy were detailed and correlated with the factors favouring the rise of right-wing populism.

Inclusiveness implies an increasing percentage of society's members who possess the right to vote, an expanding pool of potential candidates for public offices, and a fair representation of vested interests in the ever-changing political agenda. In the course of history, the political body consisting of society's members comprised (a) all adult male citizens who served in the army, (b) all adult male citizens who paid taxes above a certain level, (c) all adult male citizens, (d) all adult citizens without any adverse distinction founded on race, color, sex, language, religion or faith, national or social origin, wealth, or any other similar criteria, (e) all adult citizens together with their ancestors (in so far the living citizens respect the political options of the past generations transmitted by tradition), or (f) all adult citizens and resident non-citizens. The more members of a society are included into the political body, the more inclusive this society is (Fârte 2017, 91).

The expansion of the body politic is positive in principle, but it risks creating problems if made absolute. For example, stopping reforms desired by the present generation out of reverence for traditional political institutions that would seem

to be undermined by them is tantamount to exercising the veto power of past generations. However, respect for ancestors should not prevail over the survival or well-being of the present generation. It is also worth mentioning that non-citizen suffrage can provide valuable input to the decision-making process regarding public affairs, but it reduces the value of citizenship and decreases cultural assimilation or social integration (Stanton, Jackson and Canache, 2007).

While increasingly broader categories of citizens enjoy the right to vote, only a minority of the political body has a real chance of being elected to public office. There are countries where higher officials come from a relatively small pool of people who descend from certain privileged families, graduate from the same elitist schools, belong to the same fraternities or sororities, share the same system of values, etc. (Fârte 2017, 91). In many democratic societies, the body of public office candidates includes significantly fewer women than men. For example, the Romanian parliament elected on December 01, 2024, included 364 men and only 101 women (Belu 2024). Regarding the inclusiveness of the political agenda, one can easily notice that certain privileged problems and vested interests get favourable treatment from public officials (e.g., military pensions or the level of salaries in the public sector) while other issues and interests are ignored or dismissed (e.g., the increase in public debt).

In a vigorous and well-balanced democracy citizens are actively involved in all forms of *political participation* to the upper limit of their civic virtues (such as abnegation, patriotism, loyalty, and respect), civic skills (for example, the capability to dialogue, to work in a team, to negotiate, or to build consensus), and civic conduct (such as behaving in a civil manner, being fiscally responsible, accepting responsibility for the consequence of one's actions, practicing civil discourse, becoming informed on public issues, or providing public service) (Fârte 2017). The low turnout and the tendency of some social groups to surpass the result of free voting by means of obstructive political practice depress political participation and create conditions for the rise of populism. For example, voter turnout in the parliamentary elections in Romania was only

31.84% in 2020, but it rose to 52.5% in 2024. The significant increase in voter turnout was accompanied by the rise of sovereignist Eurosceptic parties, which together won over 30% of the vote. Absenteeism at the vote, followed in the next electoral cycle by a vigorous anti-system vote, indicates deficient political participation.

Political equality is a simple contrivance that allows people very different in terms of physical, intellectual, and moral qualities to be treated as equal political actors. The abstract equality of political actors means equality before the law and equal suffrage rights. Political equality is affected when some groups lack practical opportunities to be elected or real chances to politicize their interests effectively. Sometimes, people perceive that certain “privileged minorities” may affirm their identities, can easily politicize their specific problems or interests, and are able to use political means effectively while the ruling class ignores them (Fârte 2017). In every democratic society, marginalized citizens’ votes do not seem to matter because their representatives either do not enter legislative bodies or are excluded *ab initio* from governmental coalitions. For example, in the last 24 years, in Romania, the National Liberal Party and the Social Democratic Party have governed the country either together or alternatively. The electorates represented by the two parties have primarily benefited from the advantages of holding political power. By contrast, the parties representing the so-called populist or sovereignist electorate were excluded from any governing coalition even though they acted within the law's and the constitution's limits. One cannot speak of political equality, where some political actors are marginalized or ostracised.

A well-balanced democracy needs a *concurrent majority*, namely a numerical majority mixed with the negative power of all conflicting interests. A minority part of society could exert – by its representatives – this negative power through veto, interposition, nullification, check, or balance of power, and they must be able to prevent or arrest the oppressive actions of government (Calhoun 1851, 15). Unfortunately, most countries do not have a true concurrent majority. Moreover, due to chronic low turnout, many countries lack even a numerical

majority in relation to the total number of citizens with the right to vote. Under these conditions, the legitimacy of the political system and the rulers' authority are undermined, and the rise of anti-system political movements is imminent (Fârte 2017).

The *containment and predictability of the government's power* manifests where the government's actions are limited by law and a written or unwritten constitution. Limited and predictable political power presupposes that elections are organized at periodic intervals so that all key positions in government can be contested and the governmental authority peacefully transferred from one group of people to another. Full liberal democracy is undermined where the key positions in government are held in the long run by the same group of people. When populists condemn the so-called corrupt elite, they refer, in fact, to the social groups who seem to exert a monopoly of political power (Fârte 2017).

Finally, to enforce the *non-aggression principle* means to forbid, prevent, or punish the proactive use of force in peoples' own sphere. This personal sphere is a *conditio sine qua non* for living a truly human life and includes (a) one's life and bodily integrity, (b) one's physical, intellectual, and moral faculties, and (c) the tangible and intangible goods which persons have acquired by the free exercising of their own faculties and capabilities. One of the most insidious violations of the non-aggression principle happens when a government uses its power to enforce certain disputable claim rights. If a society reached a very high degree of honesty and solidarity, it would be acceptable for its government to guarantee some claim rights (for example, the right to education, the right to science and culture, the right to affordable healthcare, the right to a living wage, the right to retirement, or the right to unemployment benefits) by a partial redistribution of income and wealth. Unfortunately, politicians' demagoguery and people's false sense of entitlement often transform government into "that great fiction through which everybody endeavours to live at the expense of everybody else" (Bastiat 2011, 99). Instead of increasing freedom and solidarity, people create a climate of reciprocal spoliation that impoverishes and dissocializes them.

As mentioned above, a democratic society does not automatically constitute when people (especially politicians) profess faith in the principles of liberal democracy. These organizing principles must imprint the lives of society's members not only when they are directly involved in the political game but also when discussing and debating public interest issues. In an actual democratic society, the principles of liberal democracy also shape the public sphere.

2. The Emergence of Public Sphere

The following excerpt from Habermas's book *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy* is a convenient starting point for understanding the defining features of the democratic public sphere:

The public sphere cannot be conceived as an institution and certainly not as an organization. It is not even a framework of norms with differentiated competences and roles, membership regulations, and so on. Just as little does it represent a system; although it permits one to draw internal boundaries, outwardly it is characterized by open, permeable, and shifting horizons. The public sphere can best be described as a network for communicating information and points of view (i.e., opinions expressing affirmative or negative attitudes); the streams of communication are, in the process, filtered and synthesized in such a way that they coalesce into bundles of topically specified public opinions. Like the lifeworld as a whole, so, too, the public sphere is reproduced through communicative action, for which mastery of a natural language suffices; it is tailored to the general comprehensibility of everyday communicative practice. (Habermas, 1996, 360)

The first normative consideration on public sphere states that it is a lifeworld (*Lebenswelt*) and not a system. While the system operates through formal mechanisms and regulations and is characterized by strategic action aimed at achieving specific goals, the lifeworld is maintained through communicative action, where individuals seek mutual understanding and coordinate actions based on shared values and norms (Fairclough, 1991).

It can easily be noticed that the distinction between lifeworld and system is similar to the Hayekian distinction between cosmos (or spontaneous order) and taxis (or planned order):

While a cosmos or spontaneous order has thus no purpose, every taxis (arrangement, organisation) presupposes a particular end, and men forming such an organisation must serve the same purposes. A cosmos will result from regularities of the behaviour of the elements which it comprises. It is in this sense endogenous, intrinsic or, as the cyberneticians say, a 'selfregulating' or 'self-organising' system. (Hayek 1968, 12)

Spontaneous order is the order which *emerges* as a result of the voluntary activities of self-interested individuals who don't intentionally try to create it by planning, manifesting the following attributes (Easterly 2011): (a) Nobody designed it; (b) Nobody needs to direct it; (c) Nobody can completely know it; (d) Everybody can understand its essential aspects: regulative principles, systemic resources, feedback, etc.; (e) Very simple behaviors can result in complex phenomena; (f) It is not automatically good (in all aspects, for everyone and in any circumstances); (g) Every action can have unintended consequences, (h) Partial equilibrium analysis works within the context of spontaneous order.

Hence, the public sphere doesn't exist as an independent, natural fact; it emerges whenever and wherever people act together in concert following certain regularities and cannot be created or moulded at will by anyone. Like any other order structure in social reality, the public sphere in any society and any historical period is imperfect. Unfortunately (or fortunately), no minority acting as an elite can correct its flaws. This does not mean that we must accept them fatalistically. Everyone can give an impetus to change in a direction that they consider favourable, with the inherent risk of unintended and undesirable consequences.

Secondly, the public sphere does not emerge automatically in specific privileged locations. As Seyla Benhabib noted, any topographical location can become a public space, a site of common action coordinated through speech and persuasion (Benhabib 1992, 78). She added, for exemplification, that a town hall or a city square where people do not act in concert is not a public space, but a private dining room where people gather to hear a samizdat or where dissidents meet with foreigners becomes one (*ibidem*).

Throughout history, the public sphere has been tied to various locations: (a) the agora, where polis' citizens from Ancient Greece exchanged and discussed opinions, (b) the rooms in the royal palaces, where the king and nobles discussed the public affairs of the kingdom, (c) Church congregations, where members of oppressed or marginalized groups gathered and articulated their objectives, (d) the salons, where the nobility and the grande bourgeoisie of finance and administration met with the 'intellectuals' on an equal footing to discuss public issues (World Bank 2009, 1-2), (e) sites like "Jocan's glade" from the Marin Preda's novel *Moromeșii*, where peasants commented on articles from the newspapers, (f) various venues for gatherings, (g) the web pages of social media groups, etc. The plurality and variety of places where people communicate about issues of public interest illustrate that the public sphere is stratified rather than homogeneous.

Thirdly, from the Habermasian perspective, the public sphere is a discursive space where private individuals come together to discuss and debate matters of public interest on an equal footing, relatively free from political and economic pressures (Habermas, 1991, 360; Fraser 1992, 112). It is a network for expressing, communicating, and debating educated opinions supported by evidence and logical reasoning. The public sphere is governed by a form of communicative rationality that acknowledges only the force of the better argument. People agree to let arguments and not statuses determine decisions (Calhoun 1992, 1). All manifestations of power and strategic actions are ruled out of court (Gardiner 2004, 42).

The considerations mentioned above normatively describe the ideal form of the public sphere or what the public sphere is in its essential and abstract hypostasis. Nowhere does the public sphere meet these high standards. It is easy to proclaim that everyone has free and equal access to a discursive space in society, but many citizens are culturally and technologically impoverished. In principle, they have free and equal access to a discursive space in society, but in practice, they are excluded or marginalized. For example, digital transformation provides people with sophisticated toolkits for communicating efficiently on the Internet. While most people

passively consume messages elaborated by others, rarely intervening with simple reactions, certain individuals or minority groups manage to leverage artificial intelligence programs, search engine optimization, and social media algorithms to develop and widely disseminate messages tailored to the needs and desires of the recipients. Free and equal access to a discursive space in society does not mean that people equally contribute to the process of forming opinions on public issues in the public sphere.

The public sphere cannot insulate itself from political power and economic forces. The public sphere will always be influenced by politicization, bureaucratization, and commodification that distort reason-based communication between equals. Besides, the public sphere is not a realm of an abstract general interest in which all members of society can participate and have a stake in preserving it. People always pursue their interests and seldom become blind to valid arguments. At best, they accept to pursue “enlightened self-interest” and observe some “conversational constraints” seen as a common interest. Hence, people always communicate and debate opinions in the public sphere guided simultaneously by communicative rationality and particular interests.

Forthly, although it is legitimate to assume the associational view of public sphere since people “act together in concert” (Benhabib, 1992, 78), it is necessary to accept that the public sphere has a complementary agonistic dimension. People cooperate in discussions and debates guided by communicative rationality, but they also compete for recognition, precedence, and acclaim. Like other games in social life, communicative games in the public sphere have winners and losers.

Finally, Habermas envisages a form of ethical, ideal dialogue that is governed by transparent, universalistic principles and oriented towards reaching mutual understanding and rational consensus (Gardiner 2004, 37). Such a logocentric and humourless language would unfold in a unique and inclusive public sphere (Gardiner 2004, 42). As M. Makhtin said, in the public sphere coexist multiple voices and languages: “Living discourse (as opposed to a hypostasized ideal language) is necessarily charged with polemical qualities,

myriad evaluative and stylistic markers, and populated by diverse intentions” (Gardiner 2004, 35). People communicate ideas and opinions to secure maximum mutual understanding, but they often try to subvert and liberate the established order through humour, chaos, and the grotesque (Gardiner 2004, 43-45). The public sphere is populated with dominant publics, subordinate or marginal publics, and counterpublics that sometimes strive for mutual understanding and consensus and sometimes intentionally disrupt the existing narratives to change the social order.

In conclusion, the public sphere emerges in a society in the way and to the extent that citizens build a communication infrastructure to discuss public issues and influence the decision-making process regarding public interest. The public sphere constantly evolves along the lines of consensus building under the imperative of discursive rationality but also in the direction of mocking, criticizing, undermining, or even changing the existing socio-political order.

3. Public Opinion as a Product of the Public Sphere

Defining the public sphere as a “network for communicating information and points of view”, Habermas asserted that the streams of communication enabled in it are filtered and synthesized in such a way that they coalesce into bundles of topically specified public opinions (Habermas 1996, 360). Since the formation of public opinion occupies an essential place in the dynamics of the public sphere, it seems appropriate to resume here some terminological clarifications regarding the concepts of individual opinion, collective opinion and public opinion (Obadă and Fârte 2024, 31-35).

A convenient starting point is considering opinion as the expression of an attitude towards a controversial subject (Cutlip and Center 1964, 70). People often invoke facts in support of their professed opinions, but they rarely base their opinions on sufficient facts. They can maintain their erroneous opinions despite the existence of apparent empirical counterevidence. Unlike facts, which can be recognized or ignored, opinions are better or worse argued or justified.

Regarding certain subjects, opinions formed are shared by most of society. These opinions seem to rely on the assent or consensus of the entire society. In such situations, individuals with different opinions feel the psychological pressure of public opinion. They see public opinion as a social agency that approves, disapproves, wills, permits or imposes something on the level of the entire society. As a body of social control, public opinion shapes individual opinions and, consequently, the social conduct of individuals. For example, public opinion in Romania approves the republican form of government, the democratic-liberal form of political organization, Romania's membership in the EU and NATO, the organization of the economy on free market principles and the termination of pregnancies through abortion, but disapproves of censorship, the persecution of minorities, the corruption of dignitaries, the existence of "special pensions" and the federalization of the country. There are also topics where public opinion is not crystallized. An example in this sense is cultivating economic relations with African countries. Although thorough works have been written about the formation of public opinion (Lippmann, 1946) and the role of public relations in shaping it (Bernays 1935), no consensus has been reached regarding the definition of the concept of public opinion.

An illustrative example in this regard is the cluster of definitions extracted from the specialized literature by Susan Herbst. Thus, public opinion is considered (Herbst 1993, 438):

- The general will of a political community;
- The opinions attributed to an ignorant public by the media;
- The beliefs of different communities;
- The opinion of the majority, manifested mainly by voting or the opinion of a vocal minority, manifested through the media or in public meetings;
- The opinion adopted by consensus, following public debates;
- The result of elections, referendums, or surveys;
- The fiction that the powerful ones resort to to enslave the weak.

Susan Herbst then notes the existence of four definitional perspectives on public opinion: (1) the aggregation perspective, according to which the public is an atomized mass of individuals, and public opinion is the sum of individual opinions; (2) the majoritarian perspective, which also treats the public as an atomized mass of individuals, but public opinion is associated with the opinion of the majority of the population; (3) the discursive, consensual or Habermasian perspective, which considers public opinion as an entity that emerges from discussions and debates in the public sphere; (4) the reification perspective, which considers public opinion a simple rhetorical instrument, more precisely the projection of what the political elite and journalists believe to be true (regarding a subject of public interest) (Herbst 1993, 439-440). The four definitional perspectives are not mutually exclusive. Some definitions combine two or more of them. For example, Scott Cutlip and Allen Center combine the summative and discursive perspectives when they equate public opinion with “the sum of individual opinions (...) on a problem under public debate and affecting a group of people” (Cutlip and Center 1964, 72).

The theoretical perspectives and definitions mentioned above are valuable for understanding the concept of public opinion, but we believe that some additional clarifications are helpful. First, we believe it is useful to correlate public opinion with individual and collective opinions. An individual opinion is a person’s opinion about something. This “something” can be an individual, a thing, an event, or a situation that arouses a strictly personal or collective interest. Individual opinion enjoys the cognitive and affective assent of the person who shares it regardless of whether others have similar or different opinions. For example, a person may hold the individual opinion that withholding taxes constitutes theft regardless of the opinions of their peers and the dominant opinion in society on the subject. The collective opinion is not obtained by aggregating individual opinions but emerges from discussions that take place within a group of people (e.g., family members, coworkers, and residents of a particular neighbourhood). The collective opinion is ontologically different from individual opinions even though, in

the case of some individuals, it may be identical or very similar to them.

Unlike individual opinion, collective opinion does not have a subject – the collectivity – that gives its cognitive and affective assent to it. The collectivity, as such, neither thinks nor feels anything. Everyone's collective opinion is attributed to the collectivity he is a part of. The specific form of collective opinion regarding a subject of collective interest depends on the number, quality and argumentative dominance of the people involved in the discussions. Individuals can perceive the consonance or dissonance of individual opinion in relation to collective opinion. For example, a teenager from a traditional family may have a lax opinion regarding sexual relations before marriage, which is in opposition to the more rigid collective opinion that they should be avoided. It is not only the number of those who accept the collective opinion that matters, but also the position held within the group and the argumentative performance demonstrated in discussing the subject.

Public opinion has all the attributes of collective opinion, adding uniqueness at the level of a society and the presence of indirect coercion in its formation. Public opinion emerges under the influence of a political agency that expresses its dominance within society and makes certain opinions prevail on controversial subjects, not necessarily by considering the number of people who adhere to them. Walter Lippmann said that propaganda is impossible without censorship, more precisely, without a barrier between the public and the controversial events discussed (Lippmann 1946, 31). Analogously, we cannot conceive of public opinion without the interpretative filter that the dominant political agency in society places between the public and the subjects on the public agenda.

Like other collective opinions, public opinion is attributed by everyone to the whole society – as a subject *sui generis* – according to their perception of the discursive and coercive dominance of certain points of view. So, we have an explanation of why members of a society consider that public opinion approves of something (e.g. same-sex marriage) even when, individually, they would disapprove of it. Summarizing the above considerations, we can say that public opinion is the

opinion attributed by individuals to the whole society – as a subject sui generis – based on the discursive and coercive dominance of those who debate public interest topics. This definition corresponds to a mix between the discursive and reifying perspectives on public opinion.

4. Digital Transformation and the Democratization of the Public Sphere

As mentioned, any human society, regardless of its political organization, has a public sphere where people discuss and debate issues of general interest and where public opinion crystallizes. If a society is genuinely democratic, it is expected that the corresponding principles of its political organization – inclusiveness, political participation, political equality, the predominance of the concurrent majority, the containment and predictability of the government power, and the enforcement of the non-aggression principle – will also characterize the public sphere. In the following, we will try to show what challenges digital transformation raises to the public sphere and answer whether digital changes strengthen or undermine its democratic character. To begin with, we will review a few contributions that highlight the problematic aspects and the reasons for optimism regarding the digital transformation of the public sphere.

Discussing the challenges to digital politics and the tribulations of edifying the cultural public sphere, Benjamin Barber (2001) and Jim McGuigan (2005) mentioned the following adverse effects of digital disruption on the communicative networks: (a) speed, (b) reductive simplicity, (c) user's solitude, (d) pictoriality, (e) lateralness, (f) data overload, (g) immediacy, (h) segmentation, and (i) social amnesia. These problematic aspects are worth considering because they can negatively influence the functionality of the public sphere.

While reasoned dialogue in the public sphere requires time and patience, the high *speed* at which the events unfold and the messages' velocity surpass people's ability to reflect the situation accurately. While social problems are increasingly complex, and people need multiple, complex choices, many analyses and decisions communicated in the virtual public

arena are phrased in a *reductionist*, Manichaeian style without nuances. Digital transformation favours the emergence of virtual communities that trespass geographical borders. Unfortunately, the same technologies *isolate* and atomize individuals or network them in tribes that hate each other. Democracy needs connected people who can use public reasons politely to justify their stance on specific public issues.

The democratic public sphere emerges and can thrive only where the blind force of emotions is tempered through words. Unfortunately, it is easy to see in the digital public sphere that *images* prevail over words and have a more significant impact than many rational and well-documented texts. It is true that political equality is a pillar of democracy. However, democracy cannot dispense with epistemic and even deontic *hierarchies*. If people do not trust in the authority of those who know what is good and appropriate in some circumstances, social institutions cannot function, and society is falling apart. Unfortunately, lacking trust in experts and institutions, people are vulnerable to fake news and conspiracy theories that spread on the Internet without warning signals.

The democratic public sphere needs more knowledge, not just information. Reality shows us that people are *overloaded* with unnecessary or pernicious information that exceeds their ability to reflect on them critically. It is admitted that managers' cognitive skills do not increase at a comparable rate with technological progress, and the increasing depth and scope of analytical results provided by digital tools can result in information overload (Plekhanov, Franke and Netland 2023, 826). If information overload creates problems for managers and, in general, the elite, we can imagine what destructive effects this phenomenon can have on ordinary people. Participants in the digital public sphere must cope with shattering the 'gatekeeper paradigm' that has long dominated the understanding of public opinion formation (Sevignani 2022, 103-104). Digital outlets from classic media companies and established organizations still rely on editorial processes and compromise-building rules and procedures. Professional journalists still act as information mediators who provide context and meanings for the facts. Unfortunately, many people navigating on the Internet,

especially on social media, prefer *immediacy*, taking unchecked and un-contextualized information.

In the last two decades, social media has contributed to *fragmentation* processes in forming public opinion and the circulation and public reception of news (Peterson 2022, 145). Instead of raising a standard of unity, an interpretive framework of events and political discussions which includes different interpretations, many media outlets are now contributing to the polarization of society and the formation of ideological echo chambers as self-isolating enclaves (*ibidem*). As mentioned above, the democratic public sphere does not need a unique communicative rationality and a general effort to reach a consensus. However, it cannot exist with atomized individuals and sects that hate each other. Finally, participants in the digitally transformed public sphere instil *social amnesia*, showing interest only in the latest thing. The focus on breaking news undermines the tradition of a community and diminishes the meaning of social actions within the public sphere.

In the article “Many Tech Experts Say Digital Disruption Will Hurt Democracy,” Janna Anderson and Lee Rainie list several concerns regarding the democratic character of the digitally transformed public sphere (Anderson and Rainie, 2020, 5). They observed that new technologies empower the powerful. Big corporations, governments, and political parties have no interest in pursuing a democratic agenda except to the extent that they would directly benefit from the measures taken. The more abundant the resources and the more sophisticated and efficient the tools for exploiting them, the more the powerful will profit from them. Ordinary people constantly provide corporations and political organizations with a great deal of data about themselves for free. These data are indeed used by companies and political organizations to better tailor their products and services to the needs of consumer citizens. Still, they also serve to strengthen the power position of the providers.

Digitally networked surveillance capitalism creates an undemocratic class system by deepening the divide between the controllers (political institutions and corporations) and the controlled (consumer citizens). Atomized or fragmented into

small groups, ordinary people have little influence over the political-economic elite. In contrast, the latter has all the data and tools necessary to orchestrate actions to influence cognitions, attitudes, opinions, and behaviours on a societal or global scale. Citizens' lack of digital fluency, inability to create extensive and consolidated social networks, and apathy produce ill-informed publics, marginal publics, or, in times of economic and social decline, counterpublics. All these types of publics weaken democracy and the fabric of society.

The powerful are motivated and capable of weaponizing new digital technologies to target vulnerable, atomized populations and engineer elections. Even when populist counterpublics managed to organize themselves under the radar against mainstream parties, the latter always found means to counter anti-establishment actions. (The November 24, 2024, presidential elections in Romania represent an illustrative example.) The widespread use of new technologies blurs the line between real and virtual reality and sows confusion in the minds of ordinary people. This atmosphere of confusion tends to undermine ordinary citizens' trust in democratic institutions.

Another worrying fact is the decline of trusted, independent journalism and the rise of social media-abetted tribalism. Professional journalists respond slowly to the information needs of ordinary people because they must primarily disseminate accurate, objective, and factual data. Besides, the same journalistic standards impede them from satisfying the public's emotional needs. Interested in receiving gratifying information, many ordinary people get more information from influencers who confirm their expectations in their echo chamber on social media than from journalists who could provide them with verified information.

Finally, the speed, scope, and impact of manipulation technologies may take time to overcome as the pace of change accelerates. Pressured by their competitive environment, companies have adapted themselves to digital transformation better than public institutions. Protected by monopoly status, political institutions respond too slowly to the revolutionary changes in the digital environment.

On the other hand, Janna Anderson and Lee Rainie have indicated some reasons for hope (Anderson and Rainie, 2020, 6). Individuals are not helpless victims; they evolve. Literacy is spreading rapidly and widely. While the literacy of ordinary people after the advent of printing took several centuries (in many countries, illiteracy disappeared only at the beginning of the 20th century), people of all ages and conditions have formed the ability to receive and post messages on the Internet in a few decades.

Human society is a self-organizing system continuously adapting to incremental and revolutionary changes. The slippages and excesses in the initial phase of digital transformation will become increasingly rare thanks to the assumption by promoters of new technologies of professional and ethical standards commensurate with the risks posed by these technologies. One can see, for example, that public institutions and companies adopt increasingly higher standards to protect citizens' privacy and data security.

Democratic values have always been threatened throughout history. History also shows us that people have found resources to counter the anti-democratic tendencies of the powerful. Easy and cheap access to new digital technologies offers ordinary people more opportunities to oppose anti-democratic actions than their predecessors in other eras have. Finally, ordinary people are not on their own. Enlightened leaders from the governmental sector, activists, and the enlightened super-rich already help steer policy and democratic processes to empower citizens and produce better democratic outcomes.

In his study "Digital Public Sphere", Mike Schäfer (2015) presents the ambivalent aspects of the digital public sphere, balancing the reasons for pessimism and optimism related to the changes brought about by new technologies. Among the reasons for pessimism, Mike Schäfer includes the following problems concerning the digital public sphere (Schäfer 2015):

- Profound differences between people, social strata or world regions in accessing the internet and in the ability to utilize it;

- The fragmentation of society into small communities of like-minded people because of search engine algorithms and filter bubbles;
- De-politicization and consumerism caused by holding discussions and debates on commercial, profit-oriented platforms;
- Enhancing a false sense of empowerment to the people who do not encounter opposing views because of the echo chamber effect;
- People practice concealing their identity when participating in discussions and debates on social platforms
- On the other hand, the author reviews some reasons for cyber-optimism (Schäfer 2015):
- The relatively open, facile, and fast access to relevant information;
- Ordinary people's empowerment to make their voice heard in society;
- The opportunity to create and develop new, decentralized, networked production of communication and content free from commercial logic.

At the end of these considerations on the digital transformation of the public sphere, we will recapitulate some positive and negative aspects, placing them in correspondence with the pillars of liberal democracy: inclusiveness, political participation, political equality, the predominance of the concurrent majority, the containment and predictability of the government power, and the enforcement of the non-aggression principle.

Digital transformation enhances the public sphere's inclusiveness by lowering access barriers for different experiences to enter the public sphere (Sevignani 2022, 92). The digital public sphere provides free and open access to everyone for information sharing, equal participation, and deliberate decision-making (Xie 2024). Social media, in particular, is a platform for marginalized and voiceless individuals to express their opinions, connect with others, and engage in political activities. They can choose to strive to belong to the dominant public, marginal public, or counter publics (Xie 2024). Social

media also enables contradictory common sense to enter the public sphere, directly circumventing the gatekeepers' filter. Ordinary people upload their genuine private opinions, which amounts to a quantitative explosion of communicative offers (Sevignani 2022, 104). Naturally, this overloading of the discussion agenda with private and unfiltered opinions risks making it difficult to find reasonable reasons to support political decisions.

The rise of digital media makes communication processes in the public sphere participatory, interactive, net-like, decentralized, and transparent, in sharp contrast to those mediated by mass media, that is socially selective, one-way, linear, centralized, and non-transparent (Sevignani 2022, 91). People are stimulated to participate actively in discussions and debates because they do not feel obliged to strive for consensus under the imperative of a unique discursive rationality. They can deride, criticize, undermine, or change the existing socio-political order. Of course, this unfettered political participation carries significant risks. Without minimum concertation, communication in the digital public sphere can become a generalized cacophony.

Communication in the digital public sphere strengthens political equality associated with the flattening of hierarchical structures. Indeed, anyone can have a voice on the internet to express their opinion. On the other hand, only some voices have the same chance of being heard on a large scale. It happens rather for commercial reasons through the effect of filtering algorithms than according to the quality of the opinions expressed. On social networks, the attention and engagement of participants are treated as commodities. Therefore, algorithms often favour superficial and easy messages that attract the attention of many people over informed opinions that require substantial processing effort on the part of the receivers.

As mentioned, the public sphere cannot insulate itself from political power and economic forces. Any government tends to achieve general conformity by flooding communication channels in the public sphere with messages enforcing its power. While it is difficult for a minority to prevent or arrest the government's oppressive actions through veto, interposition,

nullification, check, or balance of power, the emergence of the concurrent majority is possible in the digital public sphere. The communication networks on the internet are so vast and complex that no government can control them. There will always be a minority in the digital public sphere that discursively combats the official narrative of the majority in an effective way.

The vastness and complexity of digital communication networks also ensures the containment of political power. Freedom from state oppression on privately owned social platforms is facilitated by their commercial status. Protection against state oppression has a cost. Nothing is free in the world. In exchange for the freedom to communicate democratically and free of charge with others, people offer social network owners an enormous amount of personal data that can be commodified.

Paradoxically, the commercial footprint of the digital public sphere brings people closer to respecting the principle of non-aggression. Whatever manipulation underlies them, commercial transactions offer value for value and take place in a peaceful climate. If two people consent to a communicative transaction in the digital public sphere, they both recognize that they are free from oppression.

Hence, digital transformation presents risks and challenges for the public sphere but also significantly contributes to its democratization. As a vibrant, self-regulating spontaneous order, the digital public sphere can activate internal control mechanisms through which negative aspects can be eliminated or kept at a manageable level.

Conclusion

Enabled by the innovative use of digital technologies, accompanied by the strategic leverage of key resources and capabilities, and aiming to improve an entity, digital transformation boosts innovation radically, enables the acquisition of new knowledge and skills, creates new forms of collaboration within the organizations and across industries, stimulates the apparition of new business models, and leads to the sustainable usage of organizational resources.

Digital transformation has produced revolutionary effects in the business sector, but it has also become influential in the political sphere. While progress towards e-government is still incremental in the administrative apparatus, the digital transformation of the public sphere and the political contests rooted in it have already produced major changes.

After revising the Habermasian definition of the public sphere, clarifying the process of emerging public opinion, and presenting the organizing principles of liberal democracy, I listed several important challenges and opportunities to progress regarding the digitally transformed public sphere. Without overlooking the evident negative aspects of the new form of the public sphere, I argued that digital transformation deepens the democratization of the public sphere. The public sphere was never and nowhere perfect, but as a self-regulating system, it constantly improved itself. Digital transformation also provides us with the means to overcome problems and challenges.

REFERENCES

- Anderson, Janna and Lee Rainie. 2020. “Many Tech Experts Say Digital Disruption Will Hurt Democracy.” *Pew Research Center*. <https://www.jstor.org/stable/resrep63210>. Accessed: 22-10-2024.
- Arnal, Judith and Enrique Féas. 2024. “Competitiveness: The Widening Gap between the EU and the US.” *Elcano Real Institute*, October 29.
<https://www.realinstitutoelcano.org/en/analyses/competitiveness-the-widening-gap-between-the-eu-and-the-us>. Accessed: 20-11-2024.
- Barber, Benjamin R. 2001. “The Uncertainty of Digital Politics.” *International Review* 23(1): 42-47.
- Bastiat, Claude Frédéric. 2011. *Government*. In *The Bastiat Collection* (second edition). Auburn (AL): Ludwig von Mises Institute.

Belu, Catalin. 2024. "Noul Parlament al României este format din 101 femei și 364 de bărbați." Rador, December 10. <https://www.rador.ro/2024/12/10/noul-parlament-al-romaniei-este-format-din-101-femei-si-364-de-barbati>. Accessed: 22-11-2024.

Benhabib, Seyla. 1992. "Models of Public Space: Hannah Arendt, the Liberal Tradition, and Jürgen Habermas." In *Habermas and the Public Sphere*, edited by Craig Calhoun, 73-98. Cambridge (MA): The MIT.

Bernays, Edward. 1935. "Molding Public Opinion." *The Annals of the American Academy of Political and Social Science* 179: 82-87. <https://doi.org/10.1177/000271623517900111>.

Bremer, Stuart A. and Faten Ghosn. 2003. "Defining States: Reconsiderations and Recommendations." *Conflict Management and Peace Science* 20(1): 21-41.

<http://www.jstor.org/stable/26273524>. Accessed: 22-10-2024.

Buonocore, Filomena et al. 2024. "Digital Transformation and Social Change: Leadership Strategies for Responsible Innovation." *Journal of Engineering and Technology Management* 74: 101843.

<https://doi.org/10.1016/j.jengtecman.2024.101843>.

Calhoun, Craig. 1992. "Introduction: Habermas and the Public Sphere." In *Habermas and the Public Sphere*, edited by Craig Calhoun, 1-48. Cambridge (MA): The MIT.

Calhoun, John Caldwell. 1851. *A Disquisition on Government and a Discourse on the Constitution of the United States* Columbia (SC): A.S. Johnston.

<https://archive.org/details/adisquisitionon00cralgoog>. Accessed: 10-04-2017.

Crossley, Nick and John Michael Roberts. 2004. "Introduction." In *After Habermas: New Perspectives on the Public Sphere*, edited by Nick Crossley and John Michael Roberts, 1-27. Oxford: Blackwell Publishing.

Cutlip, Scott and Allen Center. 1964. *Effective Public Relations* (third edition). Englewood Cliffs (NJ): Prentice-Hall

Easterly, William. 2011. “Complexity, Spontaneous Order, blah, blah, blah...and Wow.” *Aid Watch*, January 19. <http://aidwatchers.com/2011/01/complexity-spontaneous-order-blah-blah-blah-and-wow>. Accessed: 22-04-2017.

Fairtlough, Gerard H. 1991. “Habermas’ Concept of ‘Lifeworld’.” *Systems Practice* 4, 54-563.

<https://doi.org/10.1007/BF01063113>.

Fârte, Gheorghe-Ilie. 2017. “Exploring the discursive boundaries of contemporary populism”. In *Anais do 6o Colóquio Internacional Discurso, representações, argumentação, 16 a 18 de agosto de 2017 - Rio de Janeiro, Communalis - Sociét  internationale de communication et logique naturelle*, edited by Monica Rabello de Castro and Milton N. Campos, 105-109, Rio de Janeiro: Marsupial.

Fraser, Nancy. 1992. “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy.” In *Habermas and the Public Sphere*, edited by Craig Calhoun, 109-142. Cambridge (MA): The MIT.

Fukuyama Francis. 1992. *The End of History and the Last Man*. New York: The Free Press.

Gardiner, Michael E. 2004. “Wild Publics and Grotesque Symposiums: Habermas and Bakhtin on Dialogue, Everyday Life and the Public Sphere.” In *After Habermas: New Perspectives on the Public Sphere*, edited by Nick Crossley and John Michael Roberts, 28-48. Oxford: Blackwell Publishing.

Gastil, John. 2008. *Political Communication and Deliberation*. Los Angeles: Sage Publications.

Gavriliu a, Nicu, Virgil Stoica and Gheorghe-Ilie Fârte. 2022. “The Official Website as an Essential E-Governance Tool: A Comparative Analysis of the Romanian Cities’ Websites in 2019 and 2022.” *Sustainability* 14: 6863.

<https://doi.org/10.3390/su14116863>.

Gong, Cheng and Vincent Ribiere. 2021. “Developing a Unified Definition of Digital Transformation.” *Technovation* 102: 102217. <https://doi.org/10.1016/j.technovation.2020.102217>.

- Habermas, Jürgen. 1991. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge (MA): The MIT Press.
- Habermas, Jürgen. 1996. *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. Cambridge (MA): The MIT Press.
- Hayek, Friedrich A. 1968. *The Confusion of Language in Political Thought*. London: The Institute of Economic Affairs.
- Herbst, Susan. 1993. "The Meaning of Public Opinion: Citizens' Constructions of Political Reality." *Media, Culture & Society*, 15(3): 437-454. <https://doi.org/10.1177/016344393015003007>.
- Kuehnelt-Leddihn, Erik Maria, Ritter von. 1974. *Leftism: from de Sade and Marx to Hitler and Marcuse*. New Rochelle, New York: Arlington House. <https://mises.org/library/leftism-de-sade-and-marx-hitler-and-marcuse>. Accessed: 22-09-2024.
- Lippmann, Walter. 1946. *Public Opinion*. New York: Penguin Books.
- McGuigan, Jim. 2005. "The Cultural Public Sphere." *European Journal of Cultural Studies* 8(4), 427-443.
- Mettler, Tobias et al. 2024. "Same Same but Different: How Policies Frame Societal-Level Digital Transformation." *Government Information Quarterly* 41(2): 101932. <https://doi.org/10.1016/j.giq.2024.101932>.
- Mühlburger, Manuel and Barbara Krumay. 2024. "Towards a Context-Sensitive Conceptualisation of Digital Transformation." *Journal of Information Technology* 39(4): 716-731. <https://doi.org/10.1177/02683962231219514>.
- Obadă, Rareș and Gheorghe-Ilie Fârte. 2024. *Principiile și managementul relațiilor publice*. București: Tritonic
- Odugbemi, A. (2008). "Public Opinion, the Public Sphere, and Quality of Governance: An Exploration." In *Governance Reform under Real-World Conditions. Citizens, Stakeholders, and Voice*, edited by Sina Odugbemi and Thomas Jacobson, 15-37. Washington (D.C): The World Bank.
- Plekhanov, Dmitry, Henrik Franke and Torbjørn H. Netland. 2023. "Digital Transformation: A Review and Research

Agenda.” *European Management Journal* 41(6): 821-844.
<https://doi.org/10.1016/j.emj.2022.09.007>.

Rachman, Gideon. 2023. “Europe has Fallen behind America and the Gap.” *Financial Times*, June 19.
<https://www.ft.com/content/80ace07f-3acb-40cb-9960-8bb4a44fd8d9>. Accessed: 19-11-2024.

ROAEP. 2024. “Listă procese electorale.” *Prezență vot*.
<https://prezenta.roaep.ro/history>. Accessed: 09-12-2024.

Robertson, Galina and Inga Lapiņa. “Digital Transformation as A Catalyst for Sustainability and Open Innovation.” *Journal of Open Innovation* 9(1): 100017.

<https://doi.org/10.1016/j.joitmc.2023.100017>.

Schäfer, Mike S. 2015. “Digital Public Sphere”. In *The International Encyclopedia of Political Communication*, edited by Mike S. Schäfer Mazzoleni, Gianpietro et al., 322-328. London: Wiley Blackwell.

https://www.academia.edu/20096227/Digital_Public_Sphere.
Accessed: 22-09-2024.

Sevignani, Sebastian. 2022. “Digital Transformations and the Ideological Formation of the Public Sphere: Hegemonic, Populist, or Popular Communication?” *Theory, Culture & Society* 39(4), 91-109.

<https://doi.org/10.1177/02632764221103516>.

Staton, Jeffrey K., Robert A. Jackson and Damaris Canache. 2007. “Dual Nationality Among Latinos: What Are the Implications for Political Connectedness?” *The Journal of Politics* 69(2): 469-482. <https://doi.org/10.1111/j.1468-2508.2007.00544.x>.

Trenz, Hans-Jörg and Klaus Eder. 2004. “The Democratizing Dynamics of a European Public Sphere: Towards a Theory of Democratic Functionalism.” *European Journal of Social Theory* 7(1): 5-25. <https://doi.org/10.1177/1368431004040016>.

World Bank. 2024. “Comparing United States and European Union by Economy.” *Statistics Times*, November 20.
<https://statisticstimes.com/economy/united-states-vs-eu-economy.php>. Accessed: 22-09-2024.

Xie, Ming. 2024. "The Platformation and Transformation of the Digital Public Sphere: An Introduction." *Communication and the Public*, 9(1): 31-35.

<https://doi.org/10.1177/20570473241228627>.

Young, Iris Marion. 2002. *Inclusion and Democracy*. Oxford: Oxford University Press.

Gheorghe-Ilie Fârte is B.A. in Philosophy (1992) and Ph.D. in Philosophy (2000) at the "Alexandru Ioan Cuza" University of Iasi. His doctoral dissertation was in the field of Logic, and he got an habilitation in communication sciences at the "Babes-Bolyai" University of Cluj-Napoca (2024). He is Professor at the "Alexandru Ioan Cuza" University of Iasi; his area of teaching are: logic, communication theory, political communication and public relations. His research interests and publications are in the following topics: the levels of formalization, the hypostases of logical quantification, the praxeological models of communication, the agonistic public sphere, populism, the mechanisms of belief formation, the principles of persuasion, and fake news.

Address:

Gheorghe-Ilie Fârte

"Alexandru Ioan Cuza" University of Iasi

Faculty of Philosophy and Socio-Political Sciences

Department of Communication Sciences and Public Relations

11 Carol I Boulevard, 700506-Iasi, Romania

Phone: 0040-770-520033

E-mail: farte@uaic.ro