

Constructing Effective Network Political Communication: Theoretical Models and Ukrainian Practices

Andrey Kostyrev

Department of Social Sciences, European Humanities University (Vilnius)
Institute of International Relations and Political Science, Vilnius University
Email: akostyrev@ukr.net

Abstract. This article explores the construction of effective social networks for political communication, by combining theoretical modeling with empirical validation through practices adopted by Ukrainian officials. It introduces a framework grounded in structural functionalism, social network constructivism, and normative value approaches with the objective to evaluate the role of trust, engagement, and network structure in enhancing communication effectiveness. The article proposes *valence* as a metric for assessing the influence of political actors within online platforms and validates its applicability by using case studies of *Telegram* and *Viber* channels. The article's findings reveal that well-designed network configurations, by balancing centralization for trust-building and decentralization for engagement, can significantly enhance political communication outcomes. The study contributes to the theory and practice of networked political communication, offering actionable insights for policymakers and practitioners.

Keywords: political communication, social media, social capital, communication power, valence, communication field, Ukraine, Zelenskyy.

Efektyvių politinės komunikacijos tinklų kūrimas: teoriniai modeliai ir Ukrainos praktikos

Santrauka. Šiame straipsnyje tiriamas efektyvių socialinių tinklų, skirtų politinei komunikacijai, kūrimas. Tai daroma konstruojant teorinį modelį, kuris empiriškai tiriamas nagrinėjant Ukrainos atvejį. Teorijoje remiamasi struktūrinio funkcionalizmo, socialinių

Received: 26/06/2024. Accepted: 17/01/2025

Copyright © 2025 Andrey Kostyrev. Published by Vilnius University Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

tinklų konstruktyvizmo ir normatyvinėmis priemonėmis siekiant įvertinti pasitikėjimo, įsitraukimo ir tinklo struktūros svarbą skatinant komunikacijos efektyvumą. Straipsnyje siūloma kalbėti apie vertybinį valentiškumą kaip rodiklį, kuriuo nustatoma politinio veikėjo įtaka socialiniuose tinkluose. Šis vertinimas pritaikomas tiriant „Telegram“ ir „Viber“ tinklus. Tyrimas parodo, kad apgalvota tinklo konfigūracija, centralizuotas pasitikėjimo kūrimas ir įsitraukimo decentralizacija gali reikšmingai padidinti politinės komunikacijos poveikumą. Tyrimas prisideda prie įtinklintos politinės komunikacijos teorijos ir praktikos analizės, implikuodamas pasiūlymus politikos formuotojams. Straipsniu siūloma vertybinio valentiškumo, kaip būdo matuoti politinių veikėjų įtaką interneto tinkle, idėja ir ji pritaikoma atvejo analizėje tiriant „Telegram“ ir „Viber“ platformas. Analizėje atskleidžiama, kad gerai sukurta konfigūracija tinkle, subalansuotas pasitikėjimo kūrimo valdymas ir decentralizuotas įsitraukimas gali padidinti komunikacijos efektyvumą. Analizė prisideda prie politinės komunikacijos socialiniuose tinkluose teorijos ir praktikos, siūlydama naujus principus politikos formuotojams ir praktikams.

Reikšminiai žodžiai: politinė komunikacija, socialinė medija, socialinis kapitalas, komunikacinė galia, vertybinis valentiškumas, komunikacinis laukas, Ukraina, Zelenskis.

Introduction

In an increasingly digital world, political communication has become deeply embedded in the dynamics of social networks. Changes in the communication space – variability, differentiation, demassification, and individualization of communication links due to development of the Internet and web networks have brought forward profound social consequences, including the political sphere. The mediatization of politics has shifted the focus from the traditional hierarchical communication structures to networked interactions, where the ability to engage and mobilize audiences defines political success. In 2013, Jay G. Blumler announced the onset of the fourth age of political communication, characterized by the ever-expanding diffusion and utilization of Internet facilities. The new model of political communication has overtaken the previously dominant political communication process model¹. However, the construction of effective social networks for political communication remains a critical challenge,

¹ J.G. Blumer, “The Fourth Age of Political Communication,” *Workshop on Political Communication, the Free University of Berlin* (12 September 2013): 1–3.

requiring a more profound understanding of their structural and functional dynamics.

The aim of the article is to reveal the most effective structural and functional configurations of social networks for facilitating political communication.

This objective determines the following research goals: (1) to analyze network political communication models; (2) to explore the criteria for assessing the influences of political actors in online networks; (3) to present an effective structure of the communication field; (4) to verify the theoretical provisions based on empirical examples of Ukrainian political communication practices.

Research Methodology. To fulfill the research objective and goals, theoretical and empirical methods were employed. By integrating theoretical insights with empirical findings, the article seeks to provide both a conceptual framework and practical recommendations for constructing impactful political communication networks.

1. The theoretical foundation integrates three key approaches to evaluate the effectiveness of social networks in political communication. (1) Structural functionalism examines the systemic roles of nodes (public opinion leaders, officials, influencers) and their connections within social networks, while highlighting their contributions to network cohesion and message delivery. It also allows to identify the configurations of centralized and decentralized structures that maximize communication effectiveness on the Internet. (2) Social network constructivism explores the dynamic ‘pulsation’ of communication fields, balancing collectivism (centralized hubs) and individualism (peripheral nodes). It is used to analyze how online platforms adapt to the demands of integration (building cohesive trust networks) and decentralization (fostering broad audience engagement). (3) The normative value approach evaluates the ethical and democratic dimensions of network construction, emphasizing transparency, inclusivity, and trust-building. It helps to investigate how social media upholds democratic norms while addressing challenges such as polarization or echo chambers.

2. Empirical methods are used to demonstrate the practical function of network political communication and check the basic theoretical conclusions. The extensive Ukrainian experience of online political communication is highly suitable for scientific analysis. The study employs a mixed-methods approach to analyze the construction and effectiveness of network political communication, by focusing on the Ukrainian practices of political leaders' and officials' use of social media, specifically, *Telegram* and *Viber*, as case studies. The methodology uses quantitative and qualitative methods to evaluate network structures, trust dynamics, and audience engagement. Comparative analysis of network effectiveness focuses on the 2019 Ukrainian election campaigns, which provided an empirical basis for comparing network effectiveness. Metrics from Zelenskyy's team were compared with those of his main competitor, Petro Poroshenko, to highlight the importance of semi-peripheral engagement in achieving network dominance. Dynamic trust modeling explores changes in trust levels, which were compared with the follower growth so that to determine the direct influence of trust on the network structure and communication field dynamics. Network dynamics evaluation uses the analyses of Zelenskyy's networks structural features: (a) cohesion in the core zone – led by Zelenskyy's creative team, featuring consistent messaging and trust-building; (b) activity in the semi-periphery – contributions from followers who amplified messages through comments and reposts; (c) flexibility in the periphery – open networks that ensured broad dissemination to diverse audience segments. Innovative quantitative methods also include President Zelenskyy's current valence index calculation. The data were collected from two popular online platforms in Ukraine – *Telegram* and *Viber* – due to their significant role in political communication, particularly during the war against Russian aggression. Metrics such as the number of subscribers, views, reposts, and interactions were analyzed with the objective to assess activity levels. Public trust in political leaders was meas-

ured by using data from *Kyiv International Institute of Sociology*, capturing monthly trust levels during key political events. These data were included in the author's formulas for calculating valence to determine the effectiveness of network political communication of political actors, particularly the President of Ukraine. The valence index, designed to measure the effectiveness of network nodes, integrates two core factors: (a) Trust level – expressed as a percentage of respondents who trust a given political figure; (b) Network size – measured by the number of followers or subscribers to a politician's platform. The index was calculated for President Zelenskyy's *Telegram* and *Viber* channels at multiple time points, by correlating the trust dynamics with the network growth.

Limitations of the Research. While this study provides valuable insights into constructing effective social networks for political communication, several limitations should be acknowledged, particularly regarding the *valence* assessment methodology and the reliance on data from *Telegram* and *Viber* platforms.

1. Methodological limitations in *valence* assessment. The *valence* metric, while innovative, is subject to certain methodological constraints: (a) Subjectivity in trust measurement: Trust, as a qualitative dimension of *valence*, can be difficult to quantify accurately. While engagement metrics such as likes, shares, and comments are relatively straightforward to measure, assessing trust often requires proxies such as sentiment analysis, which may not fully capture the nuances of audience perceptions. (b) Temporal variability: The *valence* metric is sensitive to temporal factors, such as spikes in engagement during political events or campaigns. This may skew the results if not contextualized, as it does not necessarily reflect sustained influence over time. (c) Inter-platform comparability: The metric is designed for specific social media environments and may not be directly comparable across platforms with different algorithms, audience behaviors, and communication norms.

2. Platform-specific limitations. The study relies on data from *Telegram* and *Viber*, and partly *Facebook*, which, although significant in the Ukrainian context, may present inherent limitations: (a) Narrow platform focus: *Telegram* and *Viber* are widely used in Ukraine, but they do not encompass the entirety of the country's digital communication landscape. The findings may not fully account for dynamics on other platforms, such as *Twitter (X)*, *WhatsApp* or *TikTok*, which have different audience demographics and engagement patterns. Political communication on these platforms is influenced by external factors, such as internet penetration, platform policies, and regional political dynamics, which may limit the replicability of the findings elsewhere. (b) Data accessibility and transparency: the data available from *Telegram* and *Viber* may fail to provide comprehensive insights into user behavior. (c) Bias toward official messaging: both platforms were analyzed for broadcasting official messages in Ukraine, thus potentially limiting the analysis of grassroots interactions and broader audience engagement.
3. National Constraints. The study's findings are rooted in the practices of Ukrainian political leaders and may not be transferable to political communication networks in other national, political, or cultural contexts.

However, the analysis of using social media by Ukrainian political leaders allows us to verify the proposed models of constructing effective network political communication.

The interdisciplinary combination of the network theory and political communication allows us to distinguish two main models of network political communication: (1) The *linear model* and (2) The *value social activity* model. A comparative analysis of these models forms the theoretical basis of the study. An empirical approach rooted in Ukrainian realities is designed to validate these theoretical propositions and establish their practical relevance.

1. The Linear Model of Network Communication

In the current network society, political communication has evolved into a networked structure and must be constructed according to the network theory's rules. From the standpoint of the graph theory, on which the general network theory is built, a social network is a collection of nodes (social actors) connected by network edges (communication links). The first step in constructing a communication network is establishing dyadic (two-way) communication. Stanley Wasserman and Katherine Faust note that "a social network is a social structure consisting of social actors (for example, individuals or organizations) and a set of dyadic connections between these subjects"². Thus, dyadic communication is the cornerstone of communication construction, which defines its characteristics.

Communication occurs not only through two-way relations, but also through polygons of connections, creating simple primary networks. These networks can be categorized into centralized and decentralized forms. In centralized networks, the main communication channels emanate from a single node, around which, a circle of supporters is formed. Although supporters also communicate with each other, the content of communication and the structure of the network are primarily determined by links with the center. An example of such a network is *Christ and the Apostles*. Decentralized networks arise from common interests, where all nodes are equal, and communication channels are similar in content and intensity, resulting in a relatively homogeneous structure. *Friends-fishers* can serve as an example. It is essential to note that centralization and decentralization tendencies replace each other during development. The Crucifixion and Resurrection of Christ led to the dispersion of the Apostles' network and the creation of a broader network of early Christians. Similarly, the development of an amateur fishers' network could lead to the establishment of a Fisher

² S. Wasserman and K. Faust, "Social Network Analysis in the Social and Behavioral Sciences," *Social Network Analysis: Methods and Applications*, Vol. 8 (Cambridge University Press, 1994), 18.

club with its hierarchical structure, exemplifying Robert Michels's 'Iron Law of Oligarchic Tendencies'³. Within large networks, zones of greater or lesser centralization are formed, and, as these networks are developing, primary elementary structures evolve and form complex network compositions. Such multi-networks are inherently heterogeneous because the number of connections between actors varies. Notably, social networks have their own 'hubs', nodes through which a greater amount of communication passes. These nodes acquire certain powers in constructing social interaction, and politicians strive to occupy these hub positions within the network.

Social media networks are composite multi-networks with their hubs. Unlike traditional networks formed through oral, written, or broadcast channels, these networks are scale-free. Although the number of individual communication contacts is limited by Dunbar's number (about 150)⁴, the effect of Milgram's Law of six handshakes⁵ makes online-communication networks virtually limitless. This characteristic of social media determines the multifaceted and controversial effects of these online networks on political communication. Proponents of a quantitative approach to analyzing social network effectiveness believe that the number of contacts is the primary indicator. Several researchers have attempted to derive formulas to measure social network effectiveness mathematically. Changes in these formulas have been driven by shifts in communication channels and network structures.

David Sarnoff's Law from the 1930s states that the effectiveness of a radio or television network increases proportionally to the number of listeners/viewers⁶. However, with the advent of local computer

³ R. Michels, *Political Parties. A Sociological Study of the Oligarchical Tendencies of Modern Democracy*, transl. by E. Paul (Martino Fine Books, 2016).

⁴ R. Dunbar, *How Many Friends Does One Person Need?: Dunbar's Number and Other Evolutionary Quirks* (London: Faber and Faber, 2010).

⁵ S. Milgram, "The Small World Problem," *Psychology Today* 1, no. 1 (1967): 61–67.

⁶ S. Hogg, "Understand and Obey the Laws of Networking. Ignorance of the Laws of Networking is no Excuse," *Network World*, 05 October 2013, <http://www.networkworld.com/article/2225509/cisco-subnet/understand-and-obey-the-laws-of-networking.html>.

networks, Robert Metcalfe found that the network's effectiveness is proportional to the square of the number of users⁷. With the rise of the Internet, David Reed suggested that the efficiency of such networks should grow faster due to simultaneous connections among multiple users, incorporating group interactions into the effectiveness formula⁸. Dmitrii Gubanov, Dmitrii Novikov, and Alexander Chkhartishvili later noted that the effectiveness of an online social network depends on the potential connections among all actors⁹. Bob Briscoe, Andrew Odlyzko, and Benjamin Tilly developed a methodology for network assessment based on the ranked effectiveness of online-network connections¹⁰. While these formulas are applied to calculate the effectiveness of network classes united by specific Internet technologies, they face criticism as they leave many questions open regarding the effectiveness of social media as communication tools. Despite this, many politicians and political technologists continue to evaluate their social media participation based on quantitative indicators alone.

This evaluation matrix is built on the classical linear model of the dyadic communication process proposed by Claude Shannon and Warren Weaver¹¹. In this instrumentalist approach, communication is viewed as information transmission, consisting of three basic elements: *sender*, *message*, and *recipient*. Even after adding components like coder/decoder, noise, and feedback, this model cannot address essential aspects of human communication value. For example, simple dyadic communication with actor A can hold the highest

⁷ S. Simeonov, "Metcalfe's Law: More Misunderstood than Wrong?" (2002), <http://blog.simeonov.com/2002/07/26/metcalfe-s-law:-more-misunderstood-then-wrong?/>

⁸ D.P. Reed, "That Sneaky Exponential: Beyond Metcalfe's Law to the Power of Community Building," *Context Magazine* (1999), no. 2, <http://www.reed.com/gfn/docs/reedslaw.html>.

⁹ D.A. Gubanov, D.A. Novikov, and D.A. Chkhartishvili, *Social Networks: Models of Information Influence, Management and Confrontation* (Moscow: Publishing house of physical and mathematical literature, 2010), 110–120.

¹⁰ B. Briscoe, A. Odlyzko, and B. Tilly, *Metcalfe's Law is Wrong* (2006), <http://spectrum.jeeec.org/computering/networks/metcalfes-law-is-wrong/1>.

¹¹ C.E. Shannon and W. Weaver, *The Mathematical Theory of Communication* (University of Illinois Press, 1962).

value for actor B, making A significantly influential. Additionally, an influential actor can provide more social capital than numerous lesser connections, thereby demonstrating that quantitative methods alone cannot guide the construction of effective network political communication.

2. Value Social Activity Model of Communication

Supporters of qualitative methods for assessing the cooperative effectiveness of social networks provide a vector for finding answers to questions which quantitative methods often overlook. For them, communication is a human informational interaction. These researchers view communication as “a socio-cultural interaction of people, groups and organizations, states, and regions through informational connections”¹². They merge value and social-activity approaches. The former understands communication as involving friendly relations, relationships, contacts, and mutual understanding, which define communication as a valuable social and spiritual, including psychological and moral, formation. The social activity approach focuses on the social environment and other important factors influencing the audience, which are much broader than the purely technical ones.

In contrast to the linear model, which underpins quantitative methods, these approaches are based on Wilbur Schramm’s improved model of dyadic communication. This model primarily provides a framework for a two-way communication process, where both the sender and the receiver of information operate within their own frameworks of correlation, mutual relations that have developed between them, and the surrounding social situation^{13,14}. To under-

¹² L.M. Zemlyanova, *Foreign Communication Studies on the Eve of the Information Society: Explanatory Dictionary of Terms and Concepts* (Moscow State University, 1999), 91.

¹³ W. Schramm, *The Science of Human Communication* (New York: Basic Books, 1963).

¹⁴ W. Schramm, “The Nature of Communication Between Humans,” in *Process of Effects of Mass Communication*, ed. by W. Schramm and F. Roberts D.F. (Urbana, 1971).

stand the essential characteristics of constructing communication, special attention should be paid to the intersection of the value/interests frameworks of communicators, without which, communication would be impossible. At this intersection, trust arises as a necessary condition for social interaction. The greater this intersection is, the more effective the communication process becomes. In other words, the more common ground the subjects have, the faster they will reach mutual understanding, build stronger trust, and achieve more effective interaction.

Values are the glue that binds social actors together. Communication begins with the search for common needs and interests but can develop only through the energy of synthesizing common values. Trust between communicators arises in the zone of value intersection. Therefore, increasing the area of value correlation frameworks' intersection is essential for successful communication. Thus, social actors constantly communicate with each other (1) for their own interests and (2) based on common values.

Schramm's socio-communicative construct involves only two communicators interacting in a social environment. Such dyadic communication serves as the primary link in constructing a communicative environment. However, real-life communication models are far more complex, and they include many different actors – humans, groups, organizations, states, and nations – who play diverse social roles in various circumstances, thus creating diverse social networks.

Unlike technological systems, a social communication network is characterized by each of its nodes (social actors/communicators) acting in accordance with their own interests. From this perspective, the formation of social networks can be considered through the prism of the game theory, where each player interacts with others in pursuit of maximum benefit. In the process of communication regarding interaction, players exchange information and agree on cooperation and resource distribution, leading to a cooperative game. As Matthew Jackson points out, this network formation game plays out first. Then, when a network has been formed, it determines the

players' activities and their outcomes, leading to the network-based game¹⁵.

This dynamic can be seen as a two-stage game: first, players create a network, and then they use it to transfer information, resources, etc. So, at the first stage of social interaction, communication forms a network, and, at the second stage, the network acts as a communication tool, structuring the communication space. Therefore, the need for social cooperation inevitably leads to the formation of social networks which construct the communication environment in different ways. A network-based game involves nodes (actors) in the social network, with communication edges representing their trust levels or influence on each other. As a result of this game, social capital is created in social networks like honey in a comb.

Supporters of the structural and functional approach claim that social capital is the main criterion for the effectiveness of such networks. However, scientists debate whether network constructions contribute to achieving maximal communication effectiveness. James Coleman, for example, argues that since trust underpins social interaction, the most effective communication structures are closed social networks, where ties between the subjects are stronger. He notes that complex networks, formed from several closed networks, are effective for organizing broader interaction. An example is an underground radical organization of South Korean students, which consisted of separate circles connected either by studying at the same institution, living in the same town, or belonging to the same church parish¹⁶.

This concept is reflected in current studies of online communication. Researchers of social media have identified a trend towards homophily in communicative exchanges. According to the hypothesis of the 'echo chamber', individuals tend to interact primarily with those who share similar opinions, while minimizing exchanges with

¹⁵ M. Jackson, *Social and Economic Networks* (Princeton University Press, 2010), 234–240.

¹⁶ J.S. Coleman, "Social Capital in the Creation of Human Capital," *American Journal of Sociology*, Vol. 94 (Supplement: *Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure*), (University of Chicago Press, 1988), 95–120.

those who think differently¹⁷. Eli Pariser observed that, for this reason, individuals tend to live increasingly inside a ‘bubble’, seeing a ‘personalized’ world constructed in their own image and likeness. Information that does not conform to their orientations simply disappears from view, filtered out by their personal bubbles¹⁸.

By turning to sources closer to their own opinions or interacting with ‘friends’ who share their preferences, people enclose themselves in an echo chamber where the same watchwords continuously rebound off its walls¹⁹. As a result, people in one moral matrix find it difficult to understand what is important to those in another²⁰. This misunderstanding leads to polarization, a feature of the network society’s communication space, which contrasts with the homogeneous space of traditional media that structures society around a single information mainstream. Despite the perceived openness of virtual space, Thomas Cooper and Joe Thomas show that social media exchanges often create isolated bubbles where individuals only see their side of the story²¹.

It is of importance to note that personal beliefs, associated emotions, and experiences have always played a significant role in political structuring. However, in a network society, individuals can ensure effective social interaction within a communication space they create. Damiano Palano defines this emerging construction as an alternative to ‘party democracy’ and ‘audience democracy’, calling it ‘bubble democracy’. In bubble democracy, the generalist audience gets fragmented, and the self-referential tendency marks the segments into which

¹⁷ D. Palano, “The Truth in a Bubble: The End of ‘Audience Democracy’ and the Rise of Bubble Democracy,” *Soft Power* 2, no. 6 (2019): 47.

¹⁸ E. Pariser, *The Filter Bubble: How the New Personalized Web is Changing What we Read and how we Think* (New York: Penguin Press, 2011), 124.

¹⁹ Sh. Iyengar and J.S. Westwood, “Fear and Loathing across Party Lines: New Evidence on Group Polarization,” *American Journal of Political Sciences* 2, no. 59 (2014), 690–707.

²⁰ J. Haidt, *The Righteous Mind: Why Good People are Divided by Politics and Religion* (London: Vintage, 2013), 186.

²¹ T. Cooper and J. Thomas, *Nature or Nurture: A Crisis of Trust and Reason in the Digital Age* (London: Albany Associates, 2019), 29.

the audience gets divided. This fragmentation is caused by structural changes in communication offers and individual strategies for managing ‘information overload’²². Communication ‘bubbles’ vary in scale depending on their value content and teleological orientation.

Filtration bubbles or echo chambers are similar to the ‘little boxes’ which Wellman described twenty years ago: homogeneous, broadly embracing groups encapsulate people socially and cognitively²³. However, Wellman argued that a significant share of social organization no longer fits this model. In networked societies, boundaries are more permeable, and interactions are with diverse others²⁴. This idea was developed further by Castells in his concept of flows²⁵. Digital information and communication technologies enable both ‘little box’ and transnational networking communities. The independence of online communication from spatial and temporal factors allows these bubbles to expand globally. In the context of globalization, communication bubbles do not merge into one but rather stick together tightly like foam.

At their core, Wellman’s and Castells’s network society models reflect Burt’s network concept. Ronald Burt, building on Mark Granovetter’s theory of weak ties, argues that network actors able to communicate with other networks accumulate social capital. Indirect ‘weak’ ties allow networks to spread wide, thereby enhancing their effectiveness. Burt compares the efficiency of four types of networks: internally cohesive open (with external connections), internally cohesive closed, internally disintegrated closed, and internally disintegrated open. He concludes that the internally cohesive open networks

²² D. Palano, *The Truth in a Bubble: The End of ‘Audience Democracy’ and the Rise of Bubble Democracy*, 45–46.

²³ B. Wellman, “Little Boxes, Glocalization, and Networked Individualism,” in *Digital Cities II: Computational and Sociological Approaches*, eds. P. Van Den Besselaar and M. Tanabe, Toru Ishida (Berlin: Springer-Verlag, 2002), 11.

²⁴ *Ibid.*, 12.

²⁵ M. Castells, *The Rise of the Network Society (The Information Age: Economy, Society and Culture)*, Vol. 1, 2nd Edition with a new preface (Oxford: Wiley Blackwell Publishing, 2010).

are the most efficient, while the internally disintegrated open networks are the least efficient²⁶.

Analysis of the debate over closed versus open networks shows that closed networks inevitably transform into open ones through structural holes, with participants interacting in multiple social networks. This interplay of trends towards closeness and openness shapes the structure of social networks. Interaction between different social networks produces multi-networks. The transparency, complexity, multi-layeredness, and extensive intersection areas of value frameworks in social multi-networks suggest the presence of a fundamental social substance: a communication field.

3. Communication Field and Valence

According to Karl Lewin, when considering the interaction of two or more individuals, it is necessary to discuss the social field. The strength of this field affects the processes of social construction within the group. Lewin asserts that the strength of a psychological field is determined by valence, which is the energy charge that the surrounding objects carry to an individual²⁷. Pierre Bourdieu describes the ‘social field’ as the ability to influence and elicit immediate reactions from actors to situational changes in the social environment. In Bourdieu’s sociological theory, the field consists of objective relations between subjects, representing a structure of social positions. The social space itself appears as a set of fields, within which, agents occupy positions that statistically determine their views and practices aimed at either preserving or changing the structure of power relations produced by this field²⁸.

²⁶ R.S. Burt, “Structural Holes versus Network Closure as Social Capital,” in *Social Capital Theory and Research*, eds. N. Lin, Karen Cook K., and R.S. Burt (University of Chicago Press, 2001), 20–30.

²⁷ K. Lewin, *Field Theory of Social Science: Selected Theoretical Papers*, ed. D. Cartwright (New York: Harper & Brothers, 1951), 123–125.

²⁸ P. Bourdieu, *The Forms of Capital: General Sociology, Volume 3: Lectures at the Collège de France 1983–1984* (Cambridge: Polity Press, 2021), 241–258.

Building on Lewin's theory of the psychological field and Bourdieu's theory of social fields, and extending Schramm's communication model, we can describe the set of intersections of various social actors' correlation frameworks as a communication field. These intersections result from value communication, thus becoming the primary resource of social relations in networks. Given the valuable and emotionally saturated nature of communication, connections between actors in the communication field are denoted by non-linear, three-dimensional, transmorphic properties.

The strength of a communication field, formed through interactions between communicators, is determined by the area of intersection of their correlation frames. This area is influenced by: (1) The volume of shared values, (2) The level of trust, (3) The presence of a common communication code (language, symbols, etc.), and (4) The capabilities of the communication channel. Additionally, it is correlated with the characteristics of the surrounding social environment. To determine the strength of the communication field in broader social networks, it is necessary to consider the number of such correlation frames, or, in the network theory terms, communication edges.

The derivative of the number and strength of communication links determines the level of value attraction of a social network node – a communicator. We define this indicator as '*valence*', derived from 'value' and 'valence' (a term Lewin borrowed from chemistry for the social sciences). Nodes with the highest valence are the hubs of the social network, connected not only to a relatively large number of other nodes, but also forming stronger communication links through more common values. As a result, their social capital is multiplied, as their communication field not only expands, but also becomes more powerful.

Valence is determined by indicators such as attractiveness, trust, and complicity. It emphasizes that communication involves not only common moral attitudes and closeness of views but also emotional contact, psychological compatibility, and empathy. Therefore, nodes in the social network with the highest valence are often considered the 'soul of the company'.

Based on the above definition of valence and the variables that determine it, we propose two different but co-dependent ways to quantify the valence. The first strategy uses the variables of the trust level and the number of network account subscribers or followers. So, the first initial basic formula is:

$$\text{Valence } (V) = \text{Trust } (T) \times \text{Number } (N).$$

It is the trust/number valence index. The second iteration takes into account such indicator of valence as complicity. In online networks, the primary valence level of a node can be calculated as the ratio of the number of its contacts (subscribers, followers) and their mutual positive network activity (likes, positive comments, reposts). The second formula is thus:

$$\text{Valence } (V) = \text{Activity } (A) \times \text{Number } (N).$$

It is the activity/number valence index. While understanding the imperfection of these assessments, we can use the proposed methods, because firstly, they cover qualitative (value), activity (social constructivist), and quantitative (instrumentalist) characteristics of the network node's links, and secondly, all these three defined variables are measurable.

Differences in the node valence levels cause heterogeneity in the communication field. The configuration and functional characteristics of the communication field depend on the level of trust and the strength of communication ties between the actors. It is of importance to note that, in real-life relations, the level of trust between actors can vary widely and asymmetrically over time, impacting the construction of the communicative field. The heterogeneity of the communication field leads to diverse social interaction structures.

In networked games, at the initial stage of social interaction, communication forms a network with emotional and psychological hubs. At a subsequent stage, these actors use the network as a communication tool, structuring the social space accordingly. The effectiveness of network development in political communication depends on the attractiveness of social actors, determined by their ability to articu-

late current social values and attract attention and sympathy. Trust and complicity are crucial at the second stage – ‘playing on the network’ – where trust is influenced by the leaders’ perceived adequate reactions to societal value requests through a multi-layered feedback loop. Complicity manifests in various forms of online and offline activity, including voting. It is important to emphasize that trust in the image is more significant than trust in competence in political communication, which is carried out through social networks. This is because, in the image, each follower embodies those features that correspond to their own moral attitudes and values. In turn, complicity does not mean that a specific goal must be declared by a political movement since the mass character is ensured by the fact that each participant represents it in accordance with their own ideal.

The structure of the communication field formed by the e-mail network was analyzed by Bernie Hogan. He identified three network zones, as follows: Zone 1: The limited Ego environment, or core, which includes closest friends and family; Zone 2: The ‘Ego-environment’, or ‘important links’, which includes colleagues at work or school, sports and hobby mates, buyers/sellers, neighbors, etc. Entities in this zone send messages directly to Ego or receive messages directly from Ego; Zone 3: ‘Other’, or ‘weak links’, which involve all messages, including spam, mailing lists, announcements, etc.²⁹.

Based on this analysis, three main areas of communication are formed in multi-network communication fields: the core, the semi-periphery, and the periphery. The core is a relatively closed network with strong connections and a small number of participants, each creating substantial social capital for the others. The semi-periphery, formed through trans-network holes, includes the core’s closest environment (relatives, friends, close colleagues) and online network ‘friends’, followers, and subscribers. The periphery consists of weak, often mediated connections that tend to be scale-free, including acquaintances, strangers, and ‘friends of friends’.

²⁹ B. Hogan, “Online Social Networks: Concepts for Data Collection and Analysis,” in *The Sage Handbook of Online Research Methods*, Second edition, eds. N.G. Fieldng, R. Lee, and G. Blank (Thousand Oaks, CA: Sage Publications, 2017), 249.

To evaluate a political actor's valence in a social network, it is essential to consider not only direct contacts in the communication core but also waves of interaction in the semi-periphery as well as 'weak' mediated signals in the far periphery. These waves manifest as feedback social activity. Based on the understanding of communication as an informational activity aimed at achieving social interaction³⁰, it can be determined that the main criterion for its effectiveness is interaction. Therefore, the purpose of using social media, especially for political campaigning, is to expand the circle of interaction and mobilize supporters. To achieve this purpose, network political communication must perform three functions: (1) Dissemination of information (ideas), (2) Search for supporters, and (3) Their mobilization and organization of interaction. Accordingly, social activity in online networks is distributed on three levels in each of the specified zones of the communication field around the node with the greatest valence (political leader): (1) The periphery involves passive consumers, (2) The semi-periphery attracts active users (from likes/dislikes to comments), and (3) The core forms a close-knit group of like-minded actors who participate in campaigning and offline activism.

At the peripheral level, social media effectiveness is measured by quantitative indicators. Whereas, at the semi-periphery level, qualitative-value indicators are added, as supporters are formed based on common values, leading to heated debates which identify supporters and increase their activity, thus creating value-motivated groups. This level realizes the main goal of communication, namely, interaction.

These three steps proceed sequentially at the initial network play stage, forming a network. In the second stage – 'play on the network' – the created network acts as a communication tool, with the core's activity stimulating reactions in the semi-periphery, spreading information in waves to the network periphery. This communication field construction fosters solidarity for a common purpose, as trust begets trust (*fides facit fidem*).

³⁰ A. Kostyrev, *Political Communication: Theoretical Background* (Vilnius: European Humanities University, 2024), 28.

4. Ukrainian Practices of Network Political Communication

Social media platforms enjoy significant popularity among Ukrainians, with 77.9% of respondents using them as a source of information, and social media almost catching up with television in terms of credibility³¹. They play a crucial role in the fragile Ukrainian political life – in competitive elections with unpredictable results, popular revolutions on the Maidan, and the struggle against the Russian aggression.

Online networks have become an important mechanism for constructing political interaction among Ukrainians. The rules of political communication at the first stage of the network game were confirmed by the revolutionary events during Euromaidan in 2013–2014. On November 21, 2013, journalist Mustafa Nayem posted on Facebook: “Okay, let’s get serious. Who is ready to go to the Maidan by midnight today? Likes do not count. Only comments under this post with the words “I’m ready!”. As soon as there are more than a thousand, we will organize”. That evening, the post gathered over a thousand ‘likes’, about 900 reposts, 1200 comments, and several thousand people came to Maidan³². Thus, the network effect worked from the call of the valence node through the online complicity of the semi-periphery to the offline activity of the wide periphery.

The 2019 Ukrainian election campaign further confirmed the basic principles of the network theory. Effective network political communication led to a stunning victory in the 2019 elections, first for Volodymyr Zelenskyy, and then for his *Servant of the People* party. At the pre-campaign stage, distrust of the authorities, recorded by sociological studies, was articulated through the television series

³¹ “Media Consumption Habits of Ukrainians: The Second Year of Full-Scale War,” *Civil Network OPORTA*, 10 July 2023, https://www.oporaua.org/en/polit_ad/24796-media-spozhyvannia-ukrayintsiv-drugii-rik-povnomasshtabnoyi-viini-24796.

³² A. Pashinska, “Anatomy of Ukrainian Facebook. Politician Bots, Ratings, Election Victory,” *Espresso*, 14 December 2017, https://ru.espresso.tv/article/2017/12/13/anatomyya_ukraynskogo_facebook_boty_polytykov_reytyngy_pobeda_na_vyborakh.

Servant of the People. The slogans uttered by the main character, played by Zelenskyy, resonated with the majority of Ukrainians and triggered a powerful communication wave in society. The image of Vasylii Holoborodko and his team became the communication core, symbolizing restored public trust. Around this core, a social network got formed. The initial impulse from the television image to social media quickly turned into a multi-network connected by trust to a network hub with an extremely high level of valence. In this way, popularity created a multi-network. In line with Bourdieu's conclusions, social capital accumulated dynamically in this multi-network as a set of real or potential resources associated with possessing a stable network of relations of mutual acquaintance and recognition³³. On the eve of the elections, this social capital transferred from a virtual hero to a real candidate.

After deploying the multi-network, the second stage of the network game – ‘the game on the network’ – began. It became a tool for effectively criticizing the political system. This effectiveness stemmed from Zelenskyy's emotional articulation of justice values, which were sincerely accepted by society and were being actively discussed on social networks. Populism thus became the driving force behind the development of online political communication.

Following this path, the *Servant of the People* multimedia network ensured the ‘diffusion of innovations’ regularity characterized by Aleksandr Ivashchenko and Dmytrii Novikov. This political campaigning experience demonstrates how waves of online and offline activity in the communication field spread from innovators to early followers, and then to late followers³⁴. The players of the multi-network ‘Ze!’ effectively utilized the communication field's structural features: (1) The cohesion advantages of closed centralized networks in the core zone, (2) The activity of online network participants in the

³³ P. Bourdieu, *The Forms of Capital: General Sociology*, 255.

³⁴ A.A. Ivashchenko and D. A. Novikov, *Models and Methods of Company's Innovative Development Organizational Management* (Moscow: Kom Book, 2006), 112.

semi-periphery, and (3) The flexibility of information dissemination in open decentralized networks in the periphery.

The first communication flow was carried out by the ‘Quarter 95’ team, forming an effective core of political communication. Zelenskyy’s close friends from this creative team used sharp humor and caustic satire against Poroshenko. Every week, they released witty political jokes on television, which spread on social media as reposts and memes. In 2018, the average number of views for ‘Quarter 95’ studio’s video products was 207,892 per video. In 2019, 17.5% of the Ukrainian TV audience watched the premiere screenings of ‘Evening Quarter’³⁵.

The second flow engaged network users, involving the network semi-periphery’s nodes – followers – in political deliberation and on-line participation. Despite ‘Ze!’ being a ‘star’ type network, where balance was established between quantitative and qualitative indicators of participation, it managed to achieve significant engagement. In the spring of 2019, the official *Facebook* page of the President of Ukraine, Petro Poroshenko, had 2,423,638 followers. Meanwhile, the official page of Zelenskyy’s team was almost four times smaller at the time, only scoring 582,347 followers, and the page ‘Ze! – Let’s change the country together’ only had 139,963. Yet, according to the indicator of the ratio of the number of followers and their activity, which, as we proved, is key to determining the valence of network nodes, the Facebook page of Zelenskyy’s team more than tripled, while the page ‘Ze! – Let’s change the country together’ exceeded Poroshenko’s page 14 times (31.46%, 137.88% and 9.75%, respectively)³⁶. According to the formula $V = A \times N / 10^6$, Poroshenko’s activity/number valence index was: $9.75 \times 2\,423\,638 / 10^6 = 23.6$; Zelenskyy’s valence scored: $31.46 \times 582,347 / 10^6 = 18.3$; and

³⁵ N. Stuka and K. Shapoval, “Quarter 95” has been without Zelensky for two years. Five facts about the studio’s problems,” in *Forbes Ukraine Magazine*, 24 November 2021, <https://forbes.ua/ru/news/kvartal-95-teryayet-khvatku-za-dva-goda-bez-zelenskogo-studiya-stala-rabotat-khuzhe-vot-5-faktov-24112021-2811>.

³⁶ “Rating of Facebook pages,” *Top 30*, 20 June 2019, <https://www.t30p.ru/FaceBook.aspx>.

the valence of ‘Ze! – Let’s change the country together’ reached: $137.88 \times 139,963 / 10^6 = 19.3$. As we can see, in a separate calculation, accounts related to Zelenskyy were slightly inferior to those of Poroshenko’s account, but, in total, they exceeded Poroshenko by 1.6 times. This example confirms that the activity of online network participants in the semi-periphery area has become an important factor of advantage in the network game.

The third communication flow aimed to secure massive electoral support. The slogan ‘Let’s change the country together!’ aggregated public expectations and mobilized a broad section of the population. Zelenskyy’s image unified various social network ‘bubbles’ around the idea of destroying the corrupt political system and establishing justice. Zelenskyy became the leading candidate in the ratings two months before the elections. The final electoral infographic showed that the majority of voters in all regions of Ukraine voted for Zelenskyy³⁷, thus embodying the public’s desire for radical renewal.

These three flows merged into a powerful wave which dismantled the former political establishment of Poroshenko and Tymoshenko. Zelenskyy’s convincing victory in the presidential elections on April 21, 2019 (73.22%) demonstrated how popularity transformed into electoral support through effective communication in the network communication field. This trend continued during the July 21, 2019 elections to the Verkhovna Rada of Ukraine. The ‘Servant of the People’ party, by distancing itself from divisive issues, won a majority in all regions of Ukraine, and ended up securing an unprecedented majority in the Verkhovna Rada (154 seats)³⁸. Effective use of network technologies in political communication provided Zelenskyy’s team with a double victory in the election process.

³⁷ “Results of the second round of elections: How the regions of Ukraine voted (infographic),” *TV channel 112*, 30 April 2019, <https://ua.112.ua/vybery-2019/rezultaty-druho-ho-turu-vyboriv-yak-proholosuvaly-v-rehionakh-ukrainy-infohrafika-489061.html>.

³⁸ “Parliamentary elections – 2019: for whom and how they voted in the regions of Ukraine,” *Channel 24*, 22 July 2019, https://24tv.ua/parlamentski_vibori_2019_yak_za_kogo_golosovali_v_oblastyah_ukrayi_n1180582.

Exploiting previously created popular networks for political purposes is not unique to ‘Servant of the People’. World-famous boxer Vitalii Klitschko successfully used this technology in the 2014 mayor elections of Kyiv. He won in the first round with 56.70% of the vote. In 2019, the famous Ukrainian singer Stanislav Vakarchuk used a similar method. He ran for the Ukrainian Parliament under number 1 on the list of the party with the sonorous name ‘Holos’ (‘Voice’) headed by him, and was elected a deputy. Inspired by Zelenskyy’s example, his colleague in the humor shop, the popular Ukrainian showman Serhii Prytula also plunged into politics, although not victoriously, but quite noticeably. Meanwhile, the multifaceted Ukrainian activist Alexey Arestovych, after his military reviews, blogs and online streams on YouTube became mega-popular in 2022 and once gained a record 600 thousand views live, after which, he ambitiously declared his presidential ambitions.

However, those social actors who try to become political leaders by leveraging networks from previous entertainment or sports careers risk falling into a trap of success illusion. Initially, they may gain electoral votes due to their past popularity. In this segment, the periphery of the communication field is crucial, as the number of votes determines the results. But soon, value factors prevail. As the communication frameworks of communicators shift from populist to real public administration, a reduction of the intersection zone weakens the communication field. A decline in trust leads to a decrease in valence and a loss of supporters. Consequently, the political actor’s communication power diminishes.

Zelenskyy experienced this decline a year and a half after the election. According to the *Kyiv International Institute of Sociology* (KIIS), 80% of Ukrainians trusted him after the 2019 elections. However, by February 2022, trust decreased to 37%³⁹. Yet, his cou-

³⁹ A. Hrushetskyi, “5th Anniversary of the Presidency of Volodymyr Zelenskyi: How Trust in the President has been Changing in 2019–2024 and the Assessment of His Party’s Activities,” *Kyiv International Institute of Sociology* (KIIS), 7 June 2024, <https://kiis.com.ua/?lang=eng&cat=reports&id=1413&page=1>.

rageous behavior during the Russian invasion helped him regain public trust. His social media activity reflects these changes. President Zelenskyy has the largest audience on *Instagram* (16.9 million followers), *Twitter* (7.3 million followers), and *Facebook* (3.2 million followers)⁴⁰.

To study the social media construction dynamics, we examined the growth of Zelenskyy's accounts on *Telegram* and *Viber* after the initiation of the full-scale Russian invasion. Analysis of this communication on the *Telegram* network is especially indicative. Because, as Bohdan Yuskiv, Nataliia Karpchuk, and Oksana Pelekh mention, since February 24, 2022, *Telegram* has turned into a key platform for Ukrainians to obtain information about the war (yet it was popular before the war as well). Its attraction and specificity are associated with the provision of operational information and a simplified access to events. Besides that, the reputation of *Telegram* channels in Ukraine is one of providing firsthand and truthful information⁴¹. *Telegram* is the most popular social media platform, and the majority of Ukrainians (71.3%) use it. Furthermore, 50% of the respondents claimed to consume news content on *Viber*⁴². Among other online platforms, *Viber* in Ukraine is distinguished by the fact that, among the 15 most popular channels, there are pages of statesmen on this platform: those of Volodymyr Zelenskyy, Valery Zaluzhnyy, Kirill Budanov, Mykhailo Fedorov, as well as the channels of the Ministry of Defense, military intelligence, and the community of psychological support⁴³. Consequently, in wartime, these online messengers be-

⁴⁰ "World Leaders in Social Networks: Who has the most Followers," *Slovo i Dilo*, 16 August 2023, <https://www.slovoidilo.ua/2023/08/16/infografika/suspilstvo/svitovylidery-soczmerzhex-koho-najbilshe-foloveriv>.

⁴¹ B. Yuskiv, N. Karpchuk, and O. Pelekh, "The Structure of Wartime Strategic Communications: Case Study of the Telegram Channel Insider Ukraine," *Politologija* 107, no. 3 (November 11, 2022): 115.

⁴² "Media Consumption Habits of Ukrainians: The Second Year of Full-Scale War," *Civil Network OPORA*, 10 July 2023, https://www.oporaua.org/en/polit_ad/24796-media-spozhyvannia-ukrayintyv-drugij-rik-povnomasshtabnoyi-viini-24796.

⁴³ E. Lutsenko, "Ukrainian Media Viber Channels," *Mediamaker*, 2 November 2023, <https://mediamaker.me/viber-kanaly-ukrayinskyh-media-5575>.

came the most influential means of political communication. Therefore, the analysis of their dynamics is the most revealing.

Zelenskyy's *Telegram* channel was created on July 30, 2019. By the end of February 2022, it was languishing at around 50,000 followers. The explosive growth occurred after the start of the full-scale Russian aggression. In sharp contrast, on March 15, 2022, the number of subscribers was a record 1,506,665.

Zelenskyy's channel in *Viber* was created only on October 29, 2022. But, at the end of the year, it became the fastest-growing channel in *Viber*, and gained the most subscribers in the first months after its creation. At the end of the first quarter of 2023, the channel already had as many as 1.8 million subscribers.

According to the methodology described in the theoretical part, with the objective to find out the root cause of the effective construction of a political communication network, we compared the dynamics of the level of trust in President Zelenskyy and the number of subscribers to his *Telegram* and *Viber* channels. We use the data of Kyiv International Institute of Sociology about the percentages of trust in Zelenskyy, which were measured in February 2022 – 37%, May 2022 – 90%, December 2023 – 77%, February 2024 – 64%, May 2024 – 59%⁴⁴. Then, we compared these scores with the numbers of subscribers for these months according to the data of TGStat⁴⁵ and Rakuten Viber⁴⁶.

This comparison enabled us to calculate the trust/number valence index by using the formula $V = T \times N / 10^6$. On the above-outlined grounds, this index of valence of Zelenskyy on the *Telegram*

⁴⁴ A. Hrushetskyi, "5th Anniversary of the Presidency of Volodymyr Zelenskyy: How Trust in the President has been Changing in 2019–2024 and the Assessment of His Party's Activities."

⁴⁵ "The official channel of the President of Ukraine Volodymyr Zelenskyy: Increase in the number of subscribers," *TGStat*, 24 June 2024, https://uk.tgstat.com/channel/@V_Zelenskiy_official/stat/subscribers.

⁴⁶ "Volodymyr Zelenskyy," *Rakuten Viber*, 24 June 2024, <https://invite.viber.com/?g2=AQB4nT3TWlpNXU%2F9H7WbPfb6bOVntI4REsivMOOy7TEt7K0zJJB%2Fk23OxI2ZybTm&lang=en>.

network was: February 2022 (before the Russian invasion) – $37 \times 54473 / 10^6 = 2.0$; May 2022 – $90 \times 1350000 / 10^6 = 121.5$; December 2023 – $77 \times 849000 / 10^6 = 65.4$; February 2024 – $64 \times 811000 / 10^6 = 51.9$; May 2024 – $59 \times 770335 / 10^6 = 45.4$. The trust/number valence index of the President of Ukraine on *Viber* was: May 2023 – $90 \times 1800000 / 10^6 = 162$; December 2023 – $77 \times 1500000 / 10^6 = 115.5$; February 2024 – $64 \times 1350000 / 10^6 = 86.4$; May 2024 – $59 \times 1200000 / 10^6 = 70.8$.

The comparative dynamics of these indicators are shown in Figure 1.

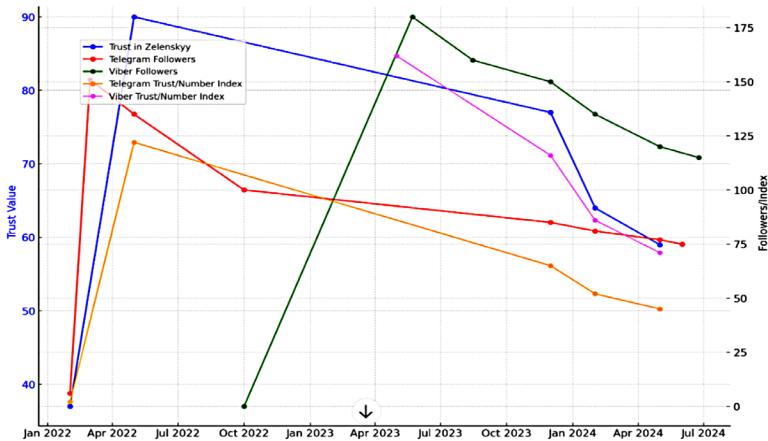


Figure 1. Dynamics of trust in Zelenskyy, number of his Telegram and Viber channels subscribers, and indexes of his valence on these online platforms

Analysis of the dynamics of the presidential *Telegram* and *Viber* channels refutes Malcolm Gradwell’s regularity of the mandatory S-shaped growth cycle of social networks⁴⁷, which was formulated within the linear model of network communication. The direct corre-

⁴⁷ M. Gradwell, *The Tipping Point: How Little Things Can Make a Big Differences* (New York: Little Brown and Company, 2000), 124.

lation between the level of trust and the number of followers demonstrates that trust is the ‘gravitational power’ of the communication field that shapes its structure. The level of trust is the most influential component of the valence of network nodes. Whereas, the number of linear connections is derived from it. Therefore, the Ukrainian practice proves that the dynamics of trust determine the dynamics of the political communication network development.

Conclusions

1. We distinguish two main theoretical network political communication models: the Linear Model and the Value Social Activity Model. The traditional models of political communication, rooted in the **Linear Model** (e.g., Shannon-Weaver and Sarnoff), emphasize the quantity of information transmission lines. Communication flows unidirectionally, focusing on signal passage rather than on interactivity or engagement. In contrast, the **Value Social Activity Model, based on Shramm’s concept**, highlights the dynamic, interactive, and multi-dimensional nature of network political communication. The model shifts focus to: (1) The **intersection of value frameworks** between communicators as the foundation of trust and mutual communication; (2) The **creation of social capital**, which serves as a measure of network strength and influence; (3) A two-stage process: first, the **communication force** constructs the network, and second, the **network structures the communication space**. This model better reflects the interactive and decentralized dynamics of contemporary networked communication, where **emotional attractiveness, trust, and participation** are key components of success.

2. Criteria for assessing political actors’ influence is developed as outcomes of comparative analysis of these models. The **linear model’s instrumental approach** focuses solely on the **number of connections** (the audience size or message reach) to evaluate communication effectiveness. The **value social activity model’s approach aims at mutual understanding and interaction.** Therefore, not

only the number of network links but also their strengths are significant in evaluating a political leader's influence as a network node. To enable its measurement, we introduce the concept of *valueness*. The *valueness* is a combined indicator determined by the ratio of the number of connections in the communication field (valence) and their quality (value). To operationalize this, two indexes are proposed: (1) The *activity/number index*: this index assesses the relationship between the number of followers and their level of online activity; (2) The *trust/number index*: this index measures the impact of trust levels on the influence of political actors within the network. These indexes can be used for assessing influence, as they account for the number of participants as well as for their quality of engagement, and the trust dynamics that drive the network effectiveness.

3. The study concludes that an effective network political communication structure cannot be linear or hierarchical. Instead, it must reflect the multi-dimensional and flexible nature of communication fields. The research identifies three key areas within the network communication fields: (1) *Core*: a cohesive, centralized zone led by the political actor and close associates who produce the main communication messages; (2) *Semi-periphery*: an active area of engaged participants (followers) who amplify messages through sharing, commenting, and online deliberation; (3) *Periphery*: an open, decentralized zone where messages are widely disseminated to attract new participants and followers. The synergy between these zones ensures that the network combines the cohesion of centralized structures with the flexibility and outreach of open networks.

4. Empirical analysis of the Ukrainian network political communication practices confirms the validity of the theoretical provisions developed in this study. They were verified at the main stages of the current political process: (1) **Euromaidan events (2013–2014)**: The Revolution of Dignity demonstrated the mobilizing power of a single influential node (e.g., Mustafa Nayem) combined with semi-peripheral engagement in online networks like *Facebook*. (2) **The Presidential elections of 2019**: Volodymyr Zelenskyy's victory exemplifies

how network communication can transition from entertainment-based networks to political communication networks. Zelenskyy's core network, formed around the *Quarter-95* studio, utilized television and social media to mobilize widespread support. The high activity of 'Ze' communication network participants from the semi-periphery played a crucial role during the elections of 2019, confirmed by calculations of the activity/number valence index according to the formula developed by the author. (3) **Wartime communication (2022–2024)**: The analysis of Zelenskyy's *Telegram* and *Viber* channels demonstrates the critical role of trust in constructing effective network political communication. The calculation of Zelenskyy's **trust/number valence index** highlights the direct correlation between the trust levels and the network growth, thus refuting the traditional linear models of network expansion. These examples validate the study's theoretical model by showing that effective political communication networks rely on a dynamic interplay of trust, engagement, and structural cohesion across the core, semi-periphery, and periphery.

This research demonstrates that network political communication is an interactive and multi-dimensional process, shaped by the structure of the communication field and the valence of political actors. Trust emerges as the most significant factor in determining network effectiveness, acting as the gravitational force which drives network cohesion and expansion. The empirical analysis of Ukrainian practices serves as a validation of the theoretical model. However, taking into account the existing limitations of the research methods and their application in the Ukrainian case, the outlined conclusions require further verification and comparison on other panels of online political communication.

Instead, our findings confirm the hypothesis that specific network configurations, coupled with strategies for building trust and amplifying influence, can enhance political communication outcomes. On these grounds, future research should explore the application of this framework for an assessment of Ukraine's network strategic communication effectiveness in promoting European integration and countering the Russian information warfare.

References

- Blumer, J. G. "The Fourth Age of Political Communication." *Workshop on Political Communication, the Free University of Berlin* (12 September 2013). DOI: <http://www.fgpk.de/en/2013/gastbeitrag-von-jay-g-blumler-the-fourth-age-of-political-communication-2/1>.
- Bourdieu, P. *The Forms of Capital: General Sociology*, Volume 3: Lectures at the Collège de France 1983–1984, 241–258. Cambridge: Polity Press, 2021.
- Briscoe, B., A. Odlyzko, and B. Tilly. *Metcalf's Law is Wrong* (2006). <http://spectrum.jeeec.org/computering/networks/metcalfes-law-is-wrong/1>.
- Burt, R. S. "Structural Holes versus Network Closure as Social Capital." In *Social Capital Theory and Research*, ed. by N. Lin, K. Karen Cook, and R. S. Burt, 1–30. University of Chicago Press, 2001.
- Castells, M. *The Rise of the Network Society (The Information Age: Economy, Society and Culture)*, Vol. 1, 2nd Edition with a New Preface. Oxford: Willey Blackwell Publishing, 2010. DOI: 10.1002/9781444319514.
- Coleman, J. S. "Social Capital in the Creation of Human Capital." *American Journal of Sociology*, Vol. 94 (Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure), 95–120. University of Chicago Press, 1988. <https://www.jstor.org/stable/2780243>.
- Cooper, T. and J. Thomas. *Nature or Nurture: A Crisis of Trust and Reason in the Digital Age*. London: Albany Associates, 2019.
- Dunbar, R. *How Many Friends Does One Person Need?: Dunbar's Number and Other Evolutionary Quirks*. London: Faber & Faber, 2010.
- Gradwell, M. *The Tipping Point: How Little Things Can Make a Big Differences*. New York: Little Brown & Company, 2000.
- Gubanov, D. A., D. A. Novikov, and A. G. Chkhartishvili. *Social Networks: Models of Information Influence, Management and Confrontation*. Moscow: Publishing house of physical and mathematical literature, 2010.
- Haidt, J. *The Righteous Mind: Why Good People are Divided by Politics and Religio*. London: Vintage, 2013.
- Hogan, B. "Online Social Networks: Concepts for Data Collection and Analysis." In *The Sage Handbook of Online Research Methods*, Second edition, ed. by N.G Fieldng, R. Lee, and G. Blank, 241–258. Thousand Oaks, CA: Sage Publications, 2017.
- Hogg, S. "Understand and Obey the Laws of Networking. Ignorance of the laws of networking is no excuse." *Network World*, 05 October 2013. <http://www.networkworld.com/article/2225509/cisco-subnet/understand-and-obey-the-laws-of-networking.html>.
- Hrushetskyi, A. "5th Anniversary of the Presidency of Volodymyr Zelenskui: How Trust in the President Changing in 2019–2024 and the Assessment of His Party's

- Activitie.” Kyiv International Institute of Sociology (KIIS), 7 June 2024. <https://kiis.com.ua/?lang=eng&cat=reports&id=1413&page=1>.
- Ivashchenko, A. A. and D. A. Novikov. *Models and Methods of Company's Innovative Development Organizational Management*. Moscow: Kom Book, 2006.
- Iyengar, Sh. and J. S. Westwood. “Fear and Loathing across Party Lines: New Evidence on Group Polarization.” *American Journal of Political Sciences* 2, no. 59 (2014): 690–707. DOI: <https://doi.org/10.1111/ajps.12152>.
- Jackson, M. *Social and Economic Networks*. Princeton University Press, 2010.
- Kostyrev, A. *Political Communication: Theoretical Background*. Vilnius: European Humanities University, 2024.
- Lewin, K. *Field Theory of Social Science: Selected Theoretical Papers*, ed. by D. Cartwright. New York: Harper & Brothers, 1951. DOI: 10.1177/000271625127600135.
- Lutsenko, E. “Ukrainian Media Viber Channels.” *Mediamaker*; 2 November 2023. <https://mediamaker.me/viber-kanaly-ukrayinskyh-media-5575>.
- Michels, R. *Political Parties. A Sociological Study of the Oligarchical Tendencies of Modern Democracy*, transl. by E. Paul. Martino Fine Books, 2016.
- Milgram, S. “The Small World Problem.” *Psychology Today* 1, no. 1 (1967): 61–67.
- “Media consumption habits of Ukrainians: The second year of full-scale war.” *Civil Network OPORTA*, 10 July 2023. https://www.oporaua.org/en/polit_ad/24796-mediaspozivannia-ukrayintsiv-drugii-rik-povnomashtabnoyi-viini-24796.
- Palano, D. “The Truth in a Bubble: The End of ‘Audience Democracy’ and the Rise of Bubble Democracy.” *Soft Power* 2, no. 6 (2019): 36–53.
- Pariser, E. *The Filter Bubble: How the New Personalized Web is Changing What We Read and How We Think*. New York: Penguin Press, 2011.
- “Parliamentary elections – 2019: for whom and how they voted in the regions of Ukraine.” *Channel 24*, 22 July 2019. https://24tv.ua/parlamentski_vibori_2019_yak_za_kogo_golosovali_v_oblastyah_ukrayi_n1180582.
- Pashinska, A. “Anatomy of Ukrainian Facebook. Politician Bots, Ratings, Election Victory.” *Espresso*. 14 December 2017. https://ru.espresso.tv/article/2017/12/13/anatomyya_ukraynskogo_facebook_boty_polytykov_reytyngy_pobeda_na_vyborakh.
- “Rating of Facebook Pages.” *Top 30*, 20. June 2019. <https://www.t30p.ru/FaceBook.aspx>.
- Reed, D. P. “That Sneaky Exponential: Beyond Metcalf’s Law to the Power of Community Building.” *Context Magazine* (1999), no. 2. <http://www.reed.com/gfn/docs/reedslaw.html>.
- “Results of the second round of elections: How the regions of Ukraine voted (infographic).” *TV channel 112*, 30 April 2019. <https://ua.112.ua/vybory-2019/rezu>

- Itaty-druhoho-turu-vyboriv-yak-proholosuvaly-v-rehionakh-ukrainy-infohrafika-489061.html.
- Schramm, W. *The Science of Human Communication*. New York: Basic Books, 1963.
- Schramm, W. "The Nature of Communication Between Humans." In *Process of Effects of Mass Communication*, ed. by W. Schramm and F. Roberts D. F. Urbana, 1971.
- Shannon, C. E. and W. Weaver. *The Mathematical Theory of Communication*. University of Illinois Press, 1962.
- Simeonov, S. "Metcalfe's Law: More Misunderstood than Wrong?" (2002). [http://blog.simeonov.com/2002/07/26/metcalfe's-law:-more-misunderstood-than-wrong?/](http://blog.simeonov.com/2002/07/26/metcalfe-s-law:-more-misunderstood-than-wrong?/).
- Stuka, N. and K. Shapoval. "Quarter 95" has been without Zelensky for two years. Five facts about the studio's problems." *Forbes Ukraine magazine*, 24 November 2021. <https://forbes.ua/ru/news/kvartal-95-teryayet-khvatku-za-dva-goda-bez-zelenskogo-studiya-stala-rabotat-khuzhe-vot-5-faktov-24112021-2811>.
- "The official channel of the President of Ukraine Volodymyr Zelenskyy: Increase in the number of subscribers." *TGStat*, 24 June 2024. https://uk.tgstat.com/channel/@V_Zelenskiy_official/stat/subscribers.
- "Volodymyr Zelenskyy." *Rakuten Viber*, 24 June 2024. <https://invite.viber.com/?g2=AQB4nT3TWlpNXU%2F9H7WbPfb6bOVntI4REsivMOOy7TEt-7K0zJJB%2Fk23OxI2ZybTm&lang=en>.
- Wasserman, S. and K. Faust. "Social Network Analysis in the Social and Behavioral Sciences." *Social Network Analysis: Methods and Applications*, Vol. 8. Cambridge University Press, 1994. DOI: 10.1017/CBO9780511815478.
- Wellman, B. "Little Boxes, Glocalization, and Networked Individualism." In *Digital Cities II: Computational and Sociological Approaches*, ed. by P. Van Den Besselaar and M. Tanabe, Toru Ishida, 11–25. Berlin: Springer-Verlag, 2002. DOI: https://doi.org/10.1007/3-540-45636-8_2.
- "World leaders in social networks: who has the most followers." *Slovo i Dilo*, 16 August 2023. <https://www.slovoidilo.ua/2023/08/16/infografika/suspilstvo/svitovi-lidery-soczmerezhax-koho-najbilshe-foloveriv>.
- Yuskiv, B., N. Karpchuk, and O. Pelekh. "The Structure of Wartime Strategic Communications: Case Study of the Telegram Channel Insider Ukraine." *Politologija* 107, no. 3 (November 11, 2022): 90–119. DOI: 10.15388/Polit.2022.107.3.
- Zemlyanova, L. M. *Foreign Communication Studies on the Eve of the Information Society: Explanatory Dictionary of Terms and Concepts*. Moscow State University, 1999.