RBGDR

CYBERSPACE AND SOCIAL PARTICIPATION IN THE CONTEXT OF CREDIT COOPERATIVISM: THE CASE OF A COOPERATIVE IN THE ALTO VALE DO ITAJAÍ REGION (SANTA CATARINA)

O CIBERESPAÇO E A PARTICIPAÇÃO SOCIAL NO CONTEXTO DO COOPERATIVISMO DE CRÉDITO: O CASO DE UMA COOPERATIVA DA REGIÃO DO ALTO VALE DO ITAJAÍ (SANTA CATARINA)

CYBERSPACE AND SOCIAL PARTICIPATION IN THE CONTEXT OF CREDIT COOPERATIVISM: THE CASE OF A COOPERATIVE IN THE ALTO VALE DO ITAJAÍ REGION (SANTA CATARINA)

O CIBERESPAÇO E A PARTICIPAÇÃO SOCIAL NO CONTEXTO DO COOPERATIVISMO DE CRÉDITO: O CASO DE UMA COOPERATIVA DA REGIÃO DO ALTO VALE DO ITAJAÍ (SANTA CATARINA)

Rubens Staloch[1] | Clóvis Reis[2]

[1] PhD in Territorial Planning and Socioenvironmental Development (UDESC).
Email: rsstaloch@gmail.com

[2] PhD in Communication (UNAV).
Professor at the Regional University of Blumenau Foundation.
Blumenau, SC, Brazil.
Email: clovis@furb.br

ABSTRACT

Societies development involves the organization of territories and territorialities, analyzed from the perspective of socio-spatial formation in this research path. This viewpoint includes a reflection on the technical-scientific-informational phenomenon and cyberspace as elements of significant changes. In terms of social participation, it is particularly relevant. From this conceptual framework, the research aims to understand and analyze the appropriation of cyberspace for participatory processes in the cooperative system. The methodological scope is qualitative and exploratory, based on the case study of a credit cooperative, which is in the Alto Vale do Itajaí region (state of Santa Catarina). As a result, the contribution of cyberspace to empowerment and participation in assembly acts can be highlighted. On the other hand, appropriating cyberspace and technological tools becomes fundamental for the participation. These conclusions open up horizons for discussions on recent social dynamics, designed in cyberspace and applied to the context of social participation in cooperatives and regional development.

RESUMO

O processo de desenvolvimento das sociedades passa pela organização dos territórios e das territorialidades, compreendida neste percurso de pesquisa a partir da categoria de análise da formação sócio-espacial. Tal perspectiva inclui nas reflexões o fenômeno técnico-científico-informacional e o ciberespaço como elementos de significativas mudanças, sobretudo quando abordados sob o ponto de vista da e para a participação social. Nesse marco conceitual, a pesquisa tem por objetivo compreender e analisar a apropriação do ciberespaço para processos participativos no sistema cooperativista. O escopo metodológico é qualitativo e exploratório, a partir do estudo de caso de uma cooperativa de crédito situada na região do Alto Vale do Itajaí (Santa Catarina). Como resultados, se pode destacar a contribuição do ciberespaço para o empoderamento e a participação nos atos assembleares. Por outro lado, observou-se que a apropriação do ciberespaço e das ferramentas tecnológicas se torna fundamental para a participação. Tais conclusões abrem horizontes para discussões sobre dinâmicas sociais recentes, desenhadas no âmbito do ciberespaço e aplicadas ao contexto da participação social no cooperativismo e do desenvolvimento regional.

Palavras-chave: Ciberespaço; Participação; Cooperativismo; Desenvolvimento Regional.

1. INTRODUCTION

The development of societies undoubtedly involves organizing territories and established territorialities, including communication among individuals, from traditional forms to the appropriation of cyberspace. This research focuses on understanding how cyberspace is used in participatory processes within credit cooperativism and its contribution to regional development.

From Elias's (1994) anthropological perspective, a society is the result of a group of individuals acting together. Therefore, in the scientific field, it is necessary to understand and explain the different elements that constitute societies, whether material/physical/technical or immaterial/symbolic/social. From this perspective, the present research seeks to understand the elements arising from the technical-scientific-informational period theorized by Santos (1994), including the notion of cyberspace appropriation described by Lévy (1999), and complementing the studies of Staloch (2015), which related the use of cyberspace to social mobilizations, and Staloch (2019), The former study related the use of cyberspace to social mobilizations, while the latter study proposed links among cyberspace, social participation, and territorial planning.

Regional development is a dynamic, multidimensional process resulting from the interaction of territories, social actors, public policies, and, increasingly, information and communication flows. To build sustainable and inclusive development pathways, governance models must integrate individuals into decision-making processes and promote social participation to strengthen citizenship and territorial cohesion. In this context, communication, especially digital, plays a central role in connecting individuals, organizations, and spaces. Cyberspace emerges as a strategic field of action for collective actors, including credit cooperatives, as a relational and non-physical dimension of territory.

This article investigates how cyberspace has been appropriated as a tool for social participation in the context of credit cooperativism, analyzing its contribution to broadening access to deliberative processes and strengthening cooperative governance. The study is based on the hypothesis that digital communication, by enabling new forms of engagement, can support regional development by democratizing participation — especially in peripheral territories or those far from decision-making centers.

The analysis is based on a case study of a credit cooperative in the Alto Vale do Itajaí region of Santa Catarina. The study used a qualitative, exploratory approach. The article is structured into four sections, beginning with this introduction. The first section presents the theoretical framework, focusing on the relationships among socio-spatial formations, communication, cooperativism, and regional development. The second section outlines the methodological procedures. The third section analyzes the empirical data collected from the cooperative. The fourth section presents concluding remarks that reflect on the findings and their implications for regional development.

2. SOCIO-SPATIAL FORMATION, COOPERATIVISM, CYBERCULTURE, AND CONNECTIONS WITH REGIONAL DEVELOPMENT

2.1 SOCIO-SPATIAL FORMATION – TERRITORIES AND TERRITORIALITIES

Societal development is a process that can be understood through space-time relationships shaped by various factors. For this reason, Elias (1994) stated that society is the result of individuals acting together. This collective behavior can be examined from two perspectives: (1) the interaction of geosystems, as described by Sotchava (1978), and (2) the process of socio-spatial formation, as outlined by Santos (1977, 1978). Therefore, analyzing the territorial development process requires an understanding of the existing reality of nature and society, which is also significant to regional development.

Thinking about territory, in turn, requires an understanding of space. According to Santos, space is "dynamic and unitary, where materialities and human action come together" (Santos, 1994, p. 49). For the author, "space is the inseparable set of natural or manufactured object systems and systems of actions, whether deliberate or not" (1994, p. 49). However, it is not possible to understand the concept of territory without understanding its relationship to space, as Lefebvre (1976) affirmed in Espacio y Política.

This production of relationships is what Sack (2011 [1986]) defines as territoriality. These are formed through human actions and the attempt by an individual or group to control or influence others within a space. Territory, in this sense, refers to control of access, and such control is established through constituted territorialities. Raffestin (1993) emphasizes the importance of considering nature as an element of the territory, highlighting the use and transformation of natural resources as instruments of power, and understanding territoriality as multidimensional and inherent to societal life. Accordingly, Souza (1995; 2010) conceives of territory as a space defined and delimited by and through power relations.

Indeed, the concept of territory is in constant transformation and is not defined strictly by its physical boundaries, but also by the way social interaction is produced within it. This highlights the relevance of actors in constructing interactions. Considering the temporal division proposed by Santos (1994), it can be inferred that it is in the technical-scientific-informational period that the intensified use of technology enables changes or rearrangements in territories — including the

perspective of cyberspace appropriation and the contextualization of a cyberterritory.

The cyberterritory can be understood as "the non-physical space of social interaction, mediated by the networks and connections of cyberspace, in which dialogues, mobilizations, actions, and conflicts inherent to society occur, including the social transformations that may result from such interactions" (Staloch & Reis, 2015, p. 50).

In the contemporary context, it is clear that new forms of social relationships and interactions are emerging in cyberspace. These forms can be used for social mobilization, as Staloch (2015) has studied, or for social participation in territorial planning processes, as Staloch (2019) has proposed. They can also be used in many other contexts. This study explores these dynamics within the scope of social participation in cooperativism.

Communication, especially that mediated by information and communication technologies (ICTs) and cyberspace, is essential for forming social networks, mobilizing people, and fostering territorial cohesion. As Castells (2015) emphasizes, information flows contribute to the shaping of power relations and social action networks. In credit cooperativism, these flows are fundamental to fostering participatory governance and organizational transparency while directly influencing member empowerment and social capital development (Putnam, 1993). Thus, cyberspace alters not only forms of communication but also redefines the possibilities for individuals' political, social, and economic engagement within their territories, including perspectives on regional development.

2.2 COOPERATIVISM

Based on Elias's (1994) interpretation, it can be understood that the development of societies is related to cooperative practices, the union of knowledge, intentions, and relationships of joint action. Numerous forms of cooperation between people have been experienced in society since ancient times. In Brazil, for example, cooperative practices undoubtedly predate the country's official discovery in the 1500s. These practices could be observed in the collective actions of Indigenous communities aimed at ensuring survival and the sustainable stewardship of nature for the benefit of the entire village.

The first cooperative initiatives, as they are known today, emerged in the second half of the 19th century with the arrival of European immigrants — particularly Germans, Poles, and Italians. The first formal cooperatives were established to support small-scale production among small farmers, to promote mutual credit models, and even to enable large-scale agricultural production (Meinen, 2022). According to Silva (2000, p. 89), a cooperative operates both as an association of individuals (a social project) and as an economic enterprise (an economic project), and can be understood as "one of the most advanced forms of social organization."

To guide the organizational process of cooperatives under broader regulatory standards, the Brazilian government enacted Law No. 5,764 in 1971. This legislation established the requirement for cooperative registration and officially designated the Organization of Brazilian Cooperatives (OCB)[1] as the representative entity for cooperativism in the country. To this day, this law defines the guiding principles for cooperatives, especially concerning their structure and operation (Meinen, 2022).

The cooperative model—particularly its close relationship with the communities in which it operates and its emphasis on encouraging participation—can be correlated with the formation of social capital, as theorized by Bourdieu (1985) from a more individualized perspective and by Putnam (1993; 1996) from a more collective, civic-community-oriented approach. According to Putnam (1993, p. 167), social capital is understood as "features of social organization such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions."

Morais (2021, p. 91) states that cooperatives "contribute to job creation, [...] income generation, and the socioeconomic inclusion of their members." In this context, credit cooperativism enables the allocation and distribution of financial resources within the communities in which it operates, as well as providing educational opportunities through the Technical, Educational and Social Assistance Fund (FATES) and utilizing the Social Fund to promote social initiatives aimed at local and regional development. According to Meinen (2022, p. 246), such operational approaches "should continue generating benefits for society."

---

1   The OCB Resolution No. 56/2019 regulates the classification of cooperativism sectors, reducing them from 13 to 7, namely: agricultural; consumer; credit; infrastructure; labor; production of goods and services; health; and transportation (OCB, 2019). In 2025, a new sector, insurance, was approved, bringing the total to 8 sectors.

Regarding the cooperative model, it is important to highlight that members are the true holders of decision-making power, primarily through assembly acts: the Ordinary General Assembly (AGO), held annually to present and deliberate on results and elections, and the Extraordinary General Assembly (AGE), which can be called whenever it is necessary to make decisions that affect the cooperative's strategic direction.

With respect to cooperative management, the 2000s marked significant progress aimed at strengthening the movement through the adoption of cooperative governance practices. This governance model is grounded in several instruments designed to foster a healthy governance environment, reduce conflicts, and establish structures such as a Board of Directors, mutual oversight among staff, the active ownership participation of leaders, and the voting rights of members at General Assemblies (Filho, 2009).

From this perspective, Meinen (2022) explains that the governance process within cooperatives makes them less vulnerable in terms of institutional solidity. In this context, cooperative governance is structured around four dimensions: (i) representation and participation; (ii) strategic direction; (iii) executive management; and (iv) oversight and control.

Governance aims to contribute to the creation of "a solid and appropriate governance environment that takes into account the specificities of credit cooperatives within the financial system and the Brazilian socioeconomic reality" (Ventura, 2009, p. 49). In this regard, Filho, Coelho, and Ferreira Ventura (2009, p. 63) emphasize that participation "takes on the role of an external control mechanism, characterized by the exercise of tacit supervision carried out by the community itself over management."

To allow assemblies to be held in cyberspace, the Central Bank authorized non-face-to-face assemblies through Official Letter 5312/2020, issued on March 19, 2020 (Central Bank of Brazil, 2020). Later, in July 2020, Law No. 14.030 was enacted, formally authorizing online general assemblies, allowing for the remote—and secure—participation of cooperative members. These regulatory changes were largely driven by the progression of the COVID-19 pandemic, which forced cooperative financial institutions to adopt new forms of participation, as this is a legal requirement.

This is a significant shift, and it must be both encouraged and supported to ensure that members can express their intentions regarding the direction of the cooperative. Investigating the appropriation of cyberspace in this context is essential, as it represents a new way of understanding the potential for participation and the formation of social capital.

2.3 SOCIAL PARTICIPATION THROUGH CYBERSPACE

When analyzing the historical context, it becomes evident that there have been various forms of communication and their respective elements, ranging from interpersonal to global, or what are referred to as networked media, as highlighted in the studies of Santos (1999), Lévy (1999), Castells (1999), and Cloutier (2012). In the period designated by Santos (1994) as the technical-scientific-informational era, the internet and information and communication technologies (ICTs) have fostered a rich debate regarding the constitution of social, economic, cultural, and political relationships.

Castells (1999) described this new form of sociability as organized in networks, particularly because there is a disconnection between locality and sociability in the formation of community. He termed this the "network society," which outlines the invisible infrastructure of a society imagined as a network, even reshaping the industrial society. In The Power of Communication (2015), Castells invites reflection on how communication and information influence political power relations by connecting the structural dynamics of the network society with the interaction among emotion, cognition, and behavior. In the studies of Reis and Hostin (2019), it becomes evident that there is a relationship between communication (via ICTs) and development, opening new lines of inquiry into cyberspace from this interpretive framework.

Lévy (1999) defines cyberspace as "the new medium of communication that arises from the worldwide interconnection of computers" (p. 17). He also describes it as "the space of communication opened by the worldwide interconnection of computers and their memories" (p. 94), allowing for multiple forms of communication. According to the author, three basic principles guided its initial growth: "interconnection, the creation of virtual communities, and collective intelligence" (p. 129).

The studies of Staloch (2015, 2019) demonstrated the potential of cyberspace in the context of social participation — a relevance that became even more apparent during the COVID-19 pandemic, especially as it compelled people to learn how to use various technological tools (apps, software, etc.) both for working from home and for studying remotely (Staloch & Rocha, 2020). Additionally, the use of cyberspace during the pandemic extended to the judiciary, where tools and software were adopted to conduct virtual hearings and maintain the progress of legal proceedings.

In this scenario, according to Prensky (2012), the concept of digital wisdom must be considered. This concept has two meanings: "it refers to the wisdom that results from using digital technology to enhance cognitive capacity beyond our innate abilities, and the wisdom in using technology to improve our capabilities" (Seefelder de Assis & Francisca Machado da Silva, 2018, p. 2). In other words, it is not enough to merely own a smartphone or computer — one must also know how to use these resources appropriately. "Digital tools will be available to everyone, but will only be accessible to those who know how to use them" (Seefelder de Assis & Francisca Machado da Silva, 2018, p. 11).

When reflecting on cyberspace and the constitution of territories, one may also consider the concept of cyberterritory, defined by Staloch and Reis (2015, p. 50) as "the non-physical space of social interaction, mediated by the networks and connections of cyberspace, in which dialogues, mobilizations, actions, and inherent societal conflicts are inserted, including the social transformations that may result from such interactions." Therefore, cyberspace can contribute to regional development, particularly through the actions of the credit cooperativism system.

2.4 BRIEF NOTES AND CONNECTIONS FOR REFLECTING ON REGIONAL DEVELOPMENT

Regional development has been the subject of various theoretical and political approaches, especially given the growing socioeconomic inequalities that exist across territories. Regional disparities have been addressed in debates on public policies and strategies aimed at development, as well as in academic discussions that seek to understand the complexity and dynamics of regional transformation processes.

According to Staloch (2015), regional development can be understood as a process resulting from the interaction among social actors and the environment in which they are situated—territory. It involves a series of actions that generate transformations, resulting from the relationships established in everyday life, and is characterized by being collective, integrative, and political. For Diniz (2012), development must be viewed from multiple dimensions, including economic, social, political, cultural, and institutional aspects, while also taking into account the specificities of each territory.

The emphasis on the regional scale enables the recognition of the importance of proximity relations, cooperation, identity, and shared history in building development processes. This perspective values not only economic indicators but also participatory governance mechanisms, social cohesion, environmental sustainability, and the expansion of citizenship. From this viewpoint, regional development involves not only growth in economic terms but also improving the quality of life and strengthening the capacity of local actors to influence the future of their territories.

Communication—particularly digital communication—plays a strategic role in fostering regional development by facilitating the circulation of information, mobilization of social networks, formation of collective identities, and the expansion of opportunities for participation. In this context, cyberspace becomes a space of territorial connection, enabling new forms of organization, articulation, and decision-making, especially in settings where geographic distance and limited infrastructure historically restricted access to participatory processes.

In the context of credit cooperativism, adopting digital tools and virtual assemblies can increase members' presence and influence in cooperative governance, thereby strengthening democratic practices and management transparency. Thus, when used appropriately, cyberspace has the potential to become an inclusive and developmental space, contributing to the creation of more cohesive, participatory, and sustainable territories.

3. METHODOLOGICAL PROCEDURES

The study presented here is an exploratory and non-systematic bibliographic research, employing a case study method conducted in a credit cooperative located in the Alto Vale do Itajaí region (Santa Catarina, Brazil). The name of the cooperative, as well as the municipalities where it operates, are kept confidential. For this reason, the municipalities are identified as follows: Municipality 1 (M1); Municipality 2 (M2); Municipality 3 (M3); Municipality 4 (M4); Municipality 5 (M5); and Municipality 6 (M6)[2]. The choice of a case study with a qualitative and exploratory approach aligns with the understanding that regional development is a complex and context-specific process, as proposed by Brandão (2008) and Theis et al. (2022). Thus, the analysis of a single cooperative allows for a deeper understanding of the interactions among territory, communication, and social participation.

In conducting the case study, the research method combined two techniques: a semi-structured interview with a member of the cooperative's leadership—referred to throughout the study as "E1"—and a questionnaire administered using simple random sampling. The questionnaire was distributed both digitally (via Google Forms) and in printed format at branch locations during May 2022. A total of 304 responses were collected, 96.4% of which were from cooperative members. The data were tabulated using Microsoft Excel.

Regarding ethical considerations, the research adhered to established principles to ensure participant anonymity and data confidentiality. All participants provided informed consent via a form presented at the start of the questionnaire and interview processes.

The questionnaire responses were submitted by cooperative members from the six municipalities where the cooperative has service branches, with the following distribution: M4 (26%), M2 (21%), M5 (18%), M1 (18%), M3 (16%), and M6 (1%). Additionally, the study made use of primary documentary analysis (assembly minutes) and secondary data (reports and information from documents provided by the cooperative institution).

---

2   The cooperative has authorized the use of the collected data — both primary and secondary.

4. DATA AND ANALYSIS

It is well known that, following the outbreak of the COVID-19 pandemic, various cooperatives began to adopt technological tools (through cyberspace) to conduct their assemblies—Ordinary General Assemblies (AGO) and Extraordinary General Assemblies (AGE). Currently, many continue to operate in fully digital or hybrid formats (combining in-person and digital participation). The cooperative analyzed in this case study was founded in 1999, when a group of leaders and farmers began discussions on establishing a solidarity-based credit cooperative to meet their local demands. It was the first cooperative of its system in the Alto Vale do Itajaí region of Santa Catarina.

As of May 2022, the cooperative had established operations in six municipalities in the Alto Vale do Itajaí region (SC): M1 (opened on April 2, 2001); M2 (opened on September 15, 2008); M3 (opened on June 25, 2009); M4 (opened on September 20, 2010); M5 (opened on October 15, 2010); and, most recently, M6, the first branch outside the Alto Vale do Itajaí region, inaugurated in January 2022.

In addition to these municipalities, the interview with "E1" revealed the cooperative's plans to expand into other municipalities in Santa Catarina, as well as other Brazilian states, particularly regions that are still underserved by cooperative financial institutions. Analyzing the cooperative's data shows a growth trajectory over the past twenty years, especially in terms of membership. Thus, it can be noted that the cooperative is based on solidarity.

cooperativism has grown and strengthened through the union and networking of organizations operating in this sector, clearly demonstrating its contributions to regional development. These contributions go beyond financial outcomes and include significant social impacts.

However, as highlighted by Magri (2018a; 2018b), efforts are still needed to strengthen the cooperative model within the Brazilian context. From this perspective, the active participation of members in the cooperative's decision-making processes becomes especially relevant. This allows for connections and reflections based on the theoretical framework that links cyberspace, social participation, and regional development.

In light of the cooperative's geographic expansion plans and within the scope of governance, a model of representation through elected delegates is being studied. In this model, each delegate, who is elected during an assembly, represents an equal number of cooperative members based on the ratio of the total number of members to the number of appointed delegates. Delegates are responsible for encouraging participation within their local or regional communities through General Nucleus Assemblies (GNAs) and for presenting their deliberations to the General Assembly (Ordinary and Extraordinary) without pursuing personal interests.

When analyzing the data related to the cooperative's growth—particularly its plans for geographic expansion (as revealed in the interview with "E1")—the representational system through elected delegates appears to be highly appropriate. Currently, the number of cooperative members is distributed among the branches as follows: M1 – 2,489 members; M2 – 1,928 members; M3 – 2,144 members; M4 – 1,910 members; M5 – 1,553 members; M6 – 46 members.[3]

Regarding the member profile, 64% are individual members (natural persons – PF), 22% belong to the agricultural sector (AGRO)—which reflects the cooperative's origins—and the remaining 14% are legal entities (PJ). In terms of gender distribution, 52% are male and 38% are female, while legal entities account for the remaining 10%.

As for age groups, the majority of members fall between 30 and 60 years old (56%), followed by those aged 18 to 29 (24%). To support the analysis, the following overview presents the participation format and the number of members who took part in assembly processes at the cooperative from 2002 to 2022:

---

3   Data extracted from the documentary analysis provided by the cooperative – Internal Regulations of the Delegate Representation System (2010) – the regulations were revised and approved by the Central's Board of Directors in a meeting held on August 24, 2021, and have been in effect for the entire System since that date.

Table 01 | Assemblies and Number of Participants – 2002 to 2022

Period	Eligible to Vote	Date of the Assembly	Participants % of Total
2002 (There was only M1)	222	23/02/2002	101 45,50%
2003	284	01/03/2003	160 56,34%
2004	314	20/03/2004	226 71,97%
2005	529	26/02/2005	265 50,01%
2006	537	25/02/2006	235 43,76%
2007	590	03/03/2007	303 51,36%
2008 (The opening of the M2)	640	29/03/2008	361 56,41%
2009 (The opening of the M3)	850	14/03/2009	442 52,00%
2010 (The opening of the M4 e M5)	1775	13/03/2010	643 36,23%
2011	2592	02/04/2011	878 33,87%
2012	3108	03/03/201	420 13,51%
2013	3716	16/03/2013	433 11,65%
2014	4072	29/03/2014	417 10,24%
2015	4408	18/04/2015	354 8,03%
2016	5370	09/04/2016	561 10,45%
2017	6301	01/04/2017	550 8,72%
2018	7021	07/04/2018	557 7,93%
2019	7644	06/04/2019	534 6,99%
2020	8750	24/07/2020 *Assembly held online - Google Meet*	133 1,52%
2021	9003	12/03/2021 *Assembly held online - Google Meet*	263 2,92%
2022 (The opening of the M6)	9875	11/03/2022 *Assembly held online - mobile app Assemblex[4]*	493 4,99%

Source: Prepared by the authors based on data collected from the Cooperative's General Assembly minutes (2022).

---

4   Paid tool with the function of broadcasting and conducting online assemblies. Available at: https://assemblex.com.br

The cooperative held its first Ordinary General Assembly entirely online in 2020, through the Google Meet platform. Analyzing the participant numbers in the General Assemblies, it is observed that from 2001 to 2009 there was an average participation rate of around 56% (fifty-six percent). In 2010 and 2011, the average participation was around 35% (thirty-five percent), from 2012 to 2017 the average was around 10% (ten percent), in the period from 2018 to 2019 the average participation was 7% (seven percent), and for the period from 2020 to 2022 the average participation was 3% (three percent).

It is noted that during the pandemic and with the use of ICTs through cyberspace, the average participation remained around 3% (three percent), with the initial moment of use (year 2020) showing a participation rate of 1.5% (one and a half percent). From the data collected, it can be seen that at the first moment when a cyberspace tool (Google Meet) was used for participation—considering the context imposed by the COVID-19 pandemic—the participation rate decreased considerably; however, there was an increase in the percentage of participants who were members residing in municipalities other than M1 (the cooperative's headquarters).

When considering the data of the members who participated in the last General Assembly held on March 11, 2022 — through the Assemblex platform — it is found that 56% are male, 35% female, and 9% connected as legal entities. Furthermore, the age distribution of the participants is as follows[5]: up to 17 years old – 3%; from 18 to 29 years old – 26%; from 30 to 60 years old – 64%; above 60 years old – 7%.

The percentage of participation by age group follows the same pattern as the proportional distribution of members by age group, with a notable fact that among members above 60 years old, five members were connected who are over 79 years old. When summarizing the data graphically – Graph 01 – the relationship becomes evident between the opening of new branches distant from the location of the in-person Assemblies (M1), the increase in the number of members per period, and the participation percentage in the Assemblies, showing that the higher the number of members, the lower the participation percentage.

---

5   Excluding legal entities logged into the Assemblex participation system.

Graph 01 | Relationship Between Branch Openings, Number of Members, and Participation (%) in Assemblies – 2002 to 2021
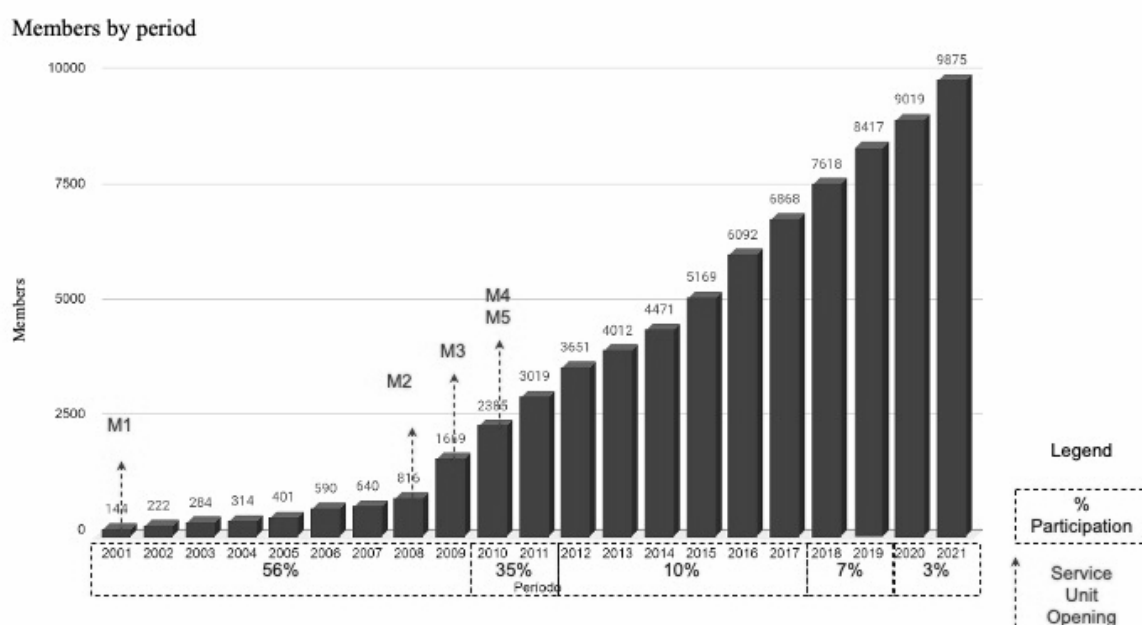
Source: Prepared by the authors based on data collected from the minutes of the Cooperative's General Assemblies (2022).

It can be observed that as new branches were inaugurated, the number of members increased. Furthermore, for this research, it is important to highlight that the in-person Assemblies were held at the M1 branch, and it can be seen that while only the M1 branch existed (from 2002 to 2008), the percentage of members participating in the Assemblies was significantly higher than after the opening of branches in other municipalities.

From the questionnaire applied, 54% of respondents said they had not participated in an in-person assembly, and of these, 88% are members who do not reside in M1. This data is relevant because the Ordinary and Extraordinary General Assemblies were held in person at M1, and thus this situation may make it difficult for members from other municipalities to participate in this format, as they would have to travel from one municipality to another. Meanwhile, 62% reported having participated in an assembly digitally—via the internet.

Of those who reported having participated digitally, 89% said they enjoyed participating in this way, and 93% said they would participate again in this format. On the other hand, 11% said they did not like participating in the assembly digitally. It is noted that those who said they liked it belong to the age group between 22 and 39 years old. Meanwhile, those who said they did not like participating online are mostly above 30 years old, with a notable concentration in the age group above 40 years. Regarding the type of device used to participate in the digital assembly, it was found that 79% used a cell phone (smartphone), 20% used a notebook, and 1% used a desktop computer.

According to "E1," the digital assembly format

> [...] atende os requisitos legais de realização da Assembleia, permite a participação dos Cooperados, como também o seu direito de exercer o voto. Minha opinião é que a Assembleia Digital é uma ferramenta importante para a Cooperativa realizar suas assembleias em momentos que não são possíveis fazer no formato presencial como foi o caso no período da pandemia. Também se torna uma ferramenta importante para as Cooperativas que não tem implementada na sua estrutura de Governança a representação por Delegados, e assim por hoje a Cooperativa estar abrindo agências mais distantes de sua Sede o que virá a dificultar a participação presencial como também por não mais dispor de espaço físico para no mesmo momento acomodar todos os cooperados que desejarem participar da Assembleia no formato presencial (E1, april 2022).

Another noteworthy point concerns the voting process and how it is conducted. Through analyzing the minutes from in-person assemblies where votes were expressed orally by raising hands, it was observed that there were no opposing votes to the presented agendas. The same occurred during the online assembly via the Google Meet platform. Those who wished to vote against an agenda item had to express themselves audibly. If the vote was in favor of the agenda, participants were expected to remain silent.

With the implementation of the Assemblex tool in the 2022 assembly, which allowed for anonymous voting via a remote system, opposing votes to the agendas were observed. This confirms the research responses in which 91% of respondents stated that they felt safe and confident voting with the tool. The interviewee and the Cooperative also reported this perception when highlighting that

> [...] o formato de votação utilizado no formato digital onde o Cooperado poderia escolher a sua opção de voto sem que as pessoas vissem como estava votando lhe deu mais tranquilidade em de fato omitir a sua decisão pelo voto, até porque nas Assembleias presenciais tínhamos praticamente todas as propostas colocadas em votação aprovadas por unanimidade e que neste formato utilizado, no digital, não foi isso que ocorreu. Acredito que seria interessante projetar se formos fazer a Assembleia presencial ter uma ferramenta de voto semelhante a Assembleia no formato digital (E1, april 2022).

This gives us reason to consider the possibility that cyberspace empowers and encourages individuals. The main benefits of participating online, according to respondents, are: 1) convenience (being comfortable at home); 2) not needing to travel to participate; and 3) being able to vote without fear of judgment. The data show that digital participation expands members' access to decision-making spaces, especially in regions that are geographically peripheral to the headquarters. This contributes to decentralizing power, strengthening social capital, and promoting more inclusive governance, which are fundamental elements for participatory regional development (Dallabrida, 2015; Morais, 2021).

Additionally, another point to contextualize is the difference between the number of members participating in the digital assembly and those who actually voted on the discussed agendas. According to "E1" (2022), this is a "negative factor" and may have occurred "because we have many members who participate in the Assembly with low technological proficiency and older age, and who had difficulty executing the votes."

Thus, it can be seen that this information corroborates the responses given in the questionnaire, since when asked about the main difficulties for participating online (via the internet), the following panorama of answers emerged, from the most frequent to the least: i) poor or unstable internet connection; ii) not knowing how to properly use the technologies; iii) lack of internet access; iv) lack of security to access via the internet; and v) lack of an adequate computer or cell phone.

This data can be correlated with the perspective of digital wisdom, where it is not enough to simply own a smartphone or computer; it is necessary to know how to use these resources properly. As "digital tools will be available to everyone, but will only be accessible to those who know how to use them" (Seefelder de Assis and Silva, 2018, p. 11).

Finally, the responses to the open-ended question, which allowed participants to comment on using the internet for assembly participation, can be categorized into six dimensions of analysis: (i) those who liked the digital format, (ii) those who liked it due to its convenience, practicality, and interactivity, (iii) those who thought it was better than the in-person format, (iv) those who disliked the digital format and preferred in-person, (v) those who thought it would be interesting to combine both modes (in-person and online), and (vi) those who liked it but raised specific reservations, such as the impossibility of participation for those without internet access.

From the relationships evidenced, it can be inferred that as new cooperative branches are inaugurated in municipalities distant from the headquarters, participation tends to decrease, as shown by the historical data collected. The adoption of digital tools, while expanding inclusion, challenges the institutional structure to develop digital training actions, especially among members with lower digital literacy, pointing to an integrated agenda between social inclusion, technological innovation, and territorial cohesion.

Based on the data collected and the theoretical frameworks used, it is undeniable that information and communication technologies, or cyberspace as a whole, have generated impacts on the (re)organization of societies, including a new perspective on the formation of social capital. This is of utmost relevance to the cooperative movement, where each member must be heard and has the right to actively participate in the cooperative's deliberations, thereby creating a network of potential local and regional development.

5. FINAL CONSIDERATIONS

The rise of cyberculture has ushered in a new phase of social relationships. They are now constituted through cyberspace and the increasing use of ICTs. Participation demands new discussions and proposals for application, as seen in the present case study. The study demonstrated how credit cooperatives can enhance their members' participatory processes by appropriating cyberspace, promoting more effective and democratic participation. The data reveal that digital tools expand the inclusion of geographically distant audiences, strengthening social connections and contributing to regional development processes.

It can be said that there is an inseparable relationship between the physical-territorial dimension and involvement in cyberspace. In this research, it was found that the implementation of digital assemblies in a credit cooperative resulted in increased participation of members residing in municipalities outside the cooperative's headquarters, where in-person assemblies had previously been held. All members from municipalities within the cooperative's coverage area were able to participate equally in digital assemblies. This change confirms the general hypothesis of this research by demonstrating cyberspace's potential to enable social participation.

However, participation in cyberspace alone is insufficient. Although cyberspace has the potential to expand social participation, the analyzed data also reveal significant limitations related to digital exclusion. The low technological engagement of certain groups, such as the elderly, family farmers, and rural residents with poor infrastructure, indicates the persistence of access inequalities that could undermine the effectiveness of participatory processes in a democratic society. Therefore, the non-participation of some of the cooperative's members in digital assemblies should not be viewed as merely a technical or operational limitation, but rather as a political and social phenomenon of exclusion.

The elitism of deliberative processes may intensify as only members with greater technological familiarity, higher education, or better internet access are able to actively participate in the cooperative's decisions. Such asymmetry tends to concentrate decision-making power in more connected and digitally literate segments, disregarding the needs and interests of historically more vulnerable groups — which contradicts the principles of cooperativism and the foundations of inclusive territorial governance.

This reality requires cooperatives and public policymakers to do more than offer digital channels. They must promote effective digital inclusion strategies, critical technology use training, and hybrid mechanisms that combine in-person and digital formats. From a regional development perspective, failing to overcome these barriers may exacerbate social and territorial fragmentation, undermining the development of legitimate participatory processes and the cohesion of involved communities.

Finally, the results of this study highlight its contribution to the debate on the interdisciplinarity of Urban and Regional Planning and Demography, offering opportunities for new studies in the field, especially regarding governance and representation processes.

Despite its contributions, this study has limitations that should be considered. First, the research focused on a single case, which restricts the generalization of findings to other cooperative or territorial realities. Additionally, while the qualitative approach was in-depth, it could have been supplemented with comparative or longitudinal analyses to evaluate the effects of cyberspace use over time. Future investigations should therefore explore different cooperative models, regions with varying levels of digital connectivity, and technological inclusion strategies to broaden the understanding of the relationships between communication, participation, and regional development in diverse contexts.

REFERENCES

BANCO CENTRAL DO BRASIL – BACEN. **Ofício 5312/2020 BCB/SECRED/DIORF**. 2020.

BOURDIEU, P. *The Forms of Capital. In:* RICHARDSON, J. (ed.) *Handbook of theory and research for the sociology of education*. Nova York: Greenwood, 1985.

BRANDÃO, C. A. Desenvolvimento, territórios e escalas espaciais: levar na devida conta as contribuições da economia política e da geografia crítica para construir a abordagem interdisciplinar. *In:* RIBEIRO, M.T.F.; MILANI, C.R. (org.) **Compreendendo a complexidade socioespacial contemporânea:** o território como categoria de diálogo interdisciplinar. Salvador: Editora da UFBA, 2008.

BRASIL. **Lei 14.030de 28 de julho de 2020.** Dispõe sobre as assembleias e as reuniões de sociedades anônimas, de sociedades limitadas, de sociedades cooperativas e de entidades de representação do cooperativismo durante o exercício de 2020; altera as Leis ns. 5.764, de 16 de dezembro de 1971, 6.404, de 15 de dezembro de 1976, e 10.406, de 10 de janeiro de 2002 (Código Civil); e dá outras providências. Disponível em: https://legis.senado.leg.br/norma/32512568/publicacao/32513368. Acesso em maio de 2022.

CASTELLS, M. **A sociedade em rede.** São Paulo: Paz e Terra, 1999.

CASTELLS, M. **O poder da comunicação.** Rio de Janeiro: Paz e Terra, 2015.

CLOUTIER, J. História da comunicação. In: APARICI, R. **Conectados no ciberespaço.** São Paulo: Paulinas, 2012. p. 47-52.

DALLABRIDA, V.R. Governança territorial: do debate teórico à avaliação da sua prática. **Análise Social**, v. 1 (2), n. 215, p. 304-328, 2015.

DALLABRIDA, V.R. **Território, governança e desenvolvimento territorial**: indicativos teórico-metodológicos, tendo a Indicação Geográfica como referência. São Paulo: LiberArs, 2016.

ELIAS, N. **A sociedade dos indivíduos.** Rio de Janeiro: Jorge Zahar Ed., 1994.

FERREIRA VENTURA, E.C. Projeto Governança Cooperativa. In: FERREIRA VENTURA, E.C.; FILHO, J. R. F.; SOARES, M. M.; **Governança cooperativa:** diretrizes e mecanismos para fortalecimento da governança em cooperativas de crédito. Brasília: BCB, 2009.

FILHO, J. R. F. O conceito e a prática de governança corporativa. In: FERREIRA VENTURA, E.C.; FILHO, J. R. F.; SOARES, M. M.; **Governança cooperativa:** diretrizes e mecanismos para fortalecimento da governança em cooperativas de crédito. Brasília: BCB, 2009.

FILHO, J. R. F.; COELHO, F.C.; FERREIRA VENTURA, E. C. Governança em cooperativas de crédito: singularidades no caso brasileiro. In: FERREIRA VENTURA, E.C.; FILHO, J. R. F.; SOARES, M. M.; **Governança cooperativa:** diretrizes e mecanismos para fortalecimento da governança em cooperativas de crédito. Brasília: BCB, 2009.

LEFEBVRE, H. *Espacio y política*. Barcelona: Península, 1976.

LEFEBVRE, H. *The production of space.* Oxford (UK): Blackwell Publishing, 1993.

LÉVY, P. **Cibercultura.** São Paulo: Editora 34, 1999.

MAGRI, C. A.; POMMERENING, E. Jr.; **O cooperativismo financeiro e a agricultura familiar:** gerando desenvolvimento sustentável. Joaçaba: Editora Unoesc, 2018a.

MAGRI, C. O cooperativismo de crédito solidário: mais que financiar crédito, financiar sonhos. In: MAGRI, C. A.;

POMMERENING, E. Jr.; **O cooperativismo financeiro e a agricultura familiar:** gerando desenvolvimento sustentável. Joaçaba: Editora Unoesc, 2018b. p. 11-24.

MATTEDI, M. A.; THEIS, I. M. Cruzando fronteiras: conhecimento e interdisciplinaridade na pesquisa em desenvolvimento regional. **REDES**, 7 (2), p. 77-94, 2002.

MEINEN, E. **Cooperativismo financeiro na década de 2020:** sem filtros. 2.ed. Brasília, DF: Confebras, 2022.

MORAIS, R.T. R. A importância do cooperativismo de crédito para o agronegócio e o desenvolvimento regional: o caso da PRIMACREDI. **Revista Brasileira de Desenvolvimento Regional**, Blumenau, v. 9, n. 1, p. 81-104, abr. 2021. ISSN 2317-5443. Disponível em: https://proxy.furb.br/ojs/index.php/rbdr/article/view/8184. Acesso em: 29 jun. 2022.

ORGANIZAÇÃO DAS COOPERATIVAS DO BRASIL - OCB. **Ramos do Cooperativismo.** Brasília, DF: Sistema OCB, 2019.

PRENSKY, M. *Homo Sapiens* digital: dos imigrantes e nativos digitais à sabedoria digital. In: APARICI, R. **Conectados no ciberespaço.** São Paulo: Paulinas, 2012. p. 101 – 144.

PUTNAM, R. D. **Comunidade e Democracia:** a experiência da Itália moderna. Rio de Janeiro: Editora Fundação Getúlio Vargas, 1996.

PUTNAM, R. D. *Making democracy work: civic tradition in modern Italy.* Princeton, NJ: Princeton University Press, 1993.

RAFFESTIN, C. **Por uma geografia do poder.** São Paulo: Ática, 1993.

RANDOLPH, R. A tríade de desenvolvimento, planejamento e política (poder): proposições para investigações de transformações e políticas regionais. *In:* ETGES, V. E.; CADONÁ, M. A. **Globalização em tempos de regionalização:** repercussões no território. Santa Cruz do Sul: EDUNISC, 2016.

REIS, C.; HOSTIN, R.. Comunicação para o desenvolvimento: o percurso teórico-metodológico das abordagens clássicas aos enfoques contemporâneos. **Revista Brasileira de Gestão e Desenvolvimento Regional (G&DR)**. v. 15, n. 4, Edição Especial, P. 3-10, jul/2019. Disponível em: https://www.rbgdr.net/revista/index.php/rbgdr/article/view/4837. Acesso em: mar. 2022.

REIS, C.; PERUZZO, C. M. K. ; HOSTIN, R. . Autores e teorias emergentes da comunicação para o desenvolvimento: Reflexões sobre tendências de pesquisa. **REVISTA LATINOAMERICANA DE CIENCIAS DE LA COMUNICACIÓN**, v. 20, p. 260-273, 2021. Disponível em: http://revista.pubalaic.org/index.php/alaic/article/view/774. Acesso em: maio 2022.

SACK, R. D. **O significado de territorialidade.** *In:* DIAS, L. C.; FERRARI, M. **Territorialidades humanas e redes sociais**. Florianópolis: Insular, 2011.

SANTOS, M. **Por uma geografia nova***.* São Paulo: Hucitec, 1978.

SANTOS, M. Sociedade e espaço: a formação social como teoria e como método. **Boletim Paulista de Geografia**. n. 54. São Paulo, AGB/FFLCH-USP, 1977.

SANTOS, M. **Técnica, espaço, tempo** – globalização e meio técnico-científico informacional. São Paulo: Hucitec, 1994.

SEEFELDER DE ASSIS, P.; FRANCISCA MACHADO DA SILVA, F. M.. EDUCAÇÃO E TECNOLOGIAS MÓVEIS. **CIET:EnPED**, [S.l.], maio 2018. Disponível em: <http://cietenped.ufscar.br/submissao/index.php/2018/article/view/694>. Acesso em: 15 abr. 2022.

SOTCHAVA, V.B. **Por uma teoria de classificação de geossistemas de vida terrestre.** São Paulo: IGEO/USP, 1978.

SOUZA, M. L de. O território: sobre espaço e poder, autonomia e desenvolvimento. *In:* Castro, Iná Elias de et al. (orgs.): **Geografia:** conceitos e temas. Rio de Janeiro: Bertrand Brasil, 1995.

SOUZA, M. L. de. **Mudar a Cidade:** uma introdução crítica ao planejamento e à gestão. 4.ed. Rio de Janeiro: Bertrand Brasil, 2010. 558p.

STALOCH, R. **As redes sociais virtuais como possibilidade para a construção de territorialidades**: uma análise a partir da comunidade "Sou pela Furb Federal". Dissertação de Mestrado: Programa de Pós-Graduação em Desenvolvimento Regional - 2015.

STALOCH, R. **O Potencial do ciberespaço na ampliação da participação social no planejamento territorial municipal.** 2019 423 f. Tese (Doutorado)-Universidade do Estado de Santa Catarina, Centro de Ciências da Educação, Programa de Pós-graduação em Planejamento Territorial, Florianópolis, 2019.

STALOCH, R.; REIS, C. A mediação das relações sociais nas redes sociais virtuais: do ciberespaço ao ciberterritório. **Estudos em comunicação**, nº. 20, 31-52, dezembro de 2015.

STALOCH, R.; ROCHA, I. De O.. Panorama dos programas de pós-graduação da área de planejamento urbano e regional e demografia: a lacuna nas regiões Norte, Centro-Oeste e Nordeste. **Revista Gestão Universitária da América Latina**, v. 12, p. 139-159, 2019a.

STALOCH, R.; ROCHA, I. De O.. Cinco primaveras de discussões e reflexões da Revista Brasileira de Desenvolvimento Regional-RBDR. **REVISTA BRASILEIRA DE DESENVOLVIMENTO REGIONAL**, v. 7, p. 211-228, 2019b.

STALOCH, R.; ROCHA, I. De O.. Produção e disseminação de conhecimento: as temáticas abordadas em 19 anos da Revista Brasileira de Estudos Urbanos e Regionais (RBEUR). **CIÊNCIA DA INFORMAÇÃO EM REVISTA**, v. 6, p. 34-50, 2019c.

STALOCH, R..; ROCHA, I. de O. ; LUCAS, E. R. O. . Análise da produção científica sobre planejamento territorial [?territorial planning?] indexados na base de dados Scopus: perspectivas de novas pesquisas no campo da comunicação e participação social. **Cadernos de Comunicação (UFSM)**, v. 24, p. 1-32, 2020.

STALOCH, R.. Ser docente no século XXI: reflexões sobre sabedoria digital. **EDUCA - REVISTA MULTIDISCIPLINAR EM EDUCAÇÃO**, v. 8, p. 1-20, 2021.

STALOCH, R.; ROCHA, I. de O. OBSERVAÇÃO MULTIDIMENSIONAL DA PANDEMIA DO CORONAVÍRUS. **Confluências | Revista Interdisciplinar De Sociologia E Direito**, *22*(2), 131-147, 2020. Disponível em: https://doi.org/10.22409/conflu.v22i2.43002. Acesso em fev. 2022.

THEIS, I. M., FERRERA DE LIMA, J., MARQUES DE OLIVEIRA, N., BARBOSA, J. L. A., RANDOLPH, R.. DESENVOLVIMENTO REGIONAL: CONSTRUÇÃO DE UM CAMPO DE SABER?. **Revista Brasileira De Gestão E Desenvolvimento Regional,** 18(1), 2022. Disponível em: https://doi.org/10.54399/rbgdr.v18i1.6383. Acesso em mar. de 2022.