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Digital Technology and Large Data in Contemporary Social Structures

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ABSTRACT

This literature-based study examines how digital technologies and large-scale data practices reshape social structures and everyday interactions. Drawing on qualitative thematic synthesis, the study explores shifts in work relations, social solidarity, and access to welfare as experienced within digitally mediated environments. Digital systems reorganize work by introducing data-driven evaluation, flexible arrangements, and algorithmic coordination, which alter perceptions of recognition, security, and professional identity. Social interaction increasingly unfolds through networked platforms, producing new forms of connection that rely on symbolic exchange, rapid communication, and shared narratives rather than physical proximity. These patterns foster fluid solidarity while simultaneously encouraging segmentation and selective affiliation. Access to welfare and public services becomes closely tied to digital literacy and the ability to navigate automated systems, creating new lines of inclusion and exclusion. The study highlights how data-based decision processes influence perceptions of fairness and trust, as individuals often encounter opaque mechanisms that translate lived experience into numerical representation. Overall, the findings indicate that digital technology functions as a structuring force that shapes meaning, power relations, and social experience. By synthesizing established theoretical perspectives, this study provides a conceptual foundation for understanding contemporary social change driven by digital systems and data practices, offering insights for future scholarly reflection and policy-oriented discourse.

INTRODUCTION

The development of digital technology over the past two decades has changed the way humans work, communicate, and build social relationships. These changes did not emerge as purely technical events, but rather as social experiences that were lived, interpreted, and experienced by individuals and social groups. The digitization of economic activities has introduced platform-based work systems, automated decision-making, and large-scale information management through data processing. This phenomenon confirms that digital technology and big data have become structural elements in contemporary social life, influencing the way organizations and individuals manage economic and social activities (Arifin & Putra, 2022). This reality affects the way humans understand working time, the value of productivity, and the meaning of social connectedness. Work relationships that were previously direct are now largely mediated by digital devices, algorithms, and online systems. In their daily experiences, individuals face changes in the rhythm of life, forms of communication, and ways of building trust. Interpretations of these changes are not singular because they are influenced by the social background, economic position, and historical experiences of each subject (Todorova & Georgieva, 2023). Therefore, readings of digitalization need to place humans at the center of interpretation, not merely as objects of technology. An interpretive approach helps to understand how individuals adapt, give meaning, and respond to changes in social structures that occur through increasingly widespread digital practices.

Changes in working relationships due to digitalization have consequences for patterns of interaction between individuals and between groups. Remote working, flexible contract systems, and the use of online platforms are shifting the boundaries

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between private and public spaces. This transformation is evident in the implementation of remote working, which has changed the patterns of coordination, supervision, and daily working relationships (Mendrika et al., 2021). The work experience is no longer tied to a specific physical location but takes place through a constantly active digital network. This condition affects the formation of social solidarity as face-to-face interactions are reduced and replaced by text, voice, or visual-based communication. Solidarity, which previously grew through shared space, is now undergoing a transformation. Individuals are learning to build social bonds through digital media with different norms and ethics. At the same time, a sense of false connection emerges that is not always accompanied by deep social relationships. This experience creates tension between the need for togetherness and the demands of digital efficiency (Melián-González, 2019). Interpreting these changes is important because they concern the quality of social relationships, a sense of belonging, and social cohesion in an increasingly digitalized society.

Big data amplifies these changes through the collection, processing, and utilization of personal information on a large scale. Data forms the basis for economic, social, and administrative decision-making. In their daily lives, individuals realize that their digital activities leave traces that can be exploited by various institutions. This awareness shapes new ways of viewing privacy, self-control, and power relations. Social structures are shifting because access to data is not evenly distributed. Certain groups have greater capacity to process and utilize data, while other groups are in a passive user position (Şahīn, 2022). This condition shows that the utilization of big data is not socially neutral, but rather related to organizational strategies and institutional interests in modern social structures (Mardikaningsih & Hariani, 2023). This inequality has the potential to affect the distribution of welfare, employment opportunities, and social participation. From a hermeneutic perspective, data is not merely numbers, but a representation of human experiences interpreted through a particular framework of interests. Therefore, literature studies examining big data need to critically examine the relationship between technology, power, and social experience.

Access to welfare has changed with the penetration of digital technology. Public services, social assistance, and economic opportunities are increasingly dependent on digital systems and databases. Individuals with adequate digital literacy tend to have easier access to these services, while vulnerable groups face the risk of social exclusion (Romele et al., 2020). In this case, digital empowerment is an important prerequisite for ensuring legal protection and fair access for the community in online-based social and economic activities (Negara & Darmawan, 2023). Experiences of alienation can arise when administrative procedures are narrowed down to interactions with automated systems. This affects how people perceive social justice and institutional impartiality. Well-being is no longer determined solely by the ownership of material resources, but also by the ability to interact with digital systems. Interpreting these changes is important because they concern the basic rights of citizens and the sustainability of social cohesion. An interpretative approach allows for an understanding of the experiences of different social groups in facing these changes.

Overall, digitization, big data, and changes in social structures are shaping a new landscape of communal life. Working relationships, social solidarity, and access to welfare are interconnected through ever-evolving digital practices. Human experience is at the center of this change, both as subjects who interpret and as actors who adapt. Literature studies provide a space to piece together various theoretical perspectives and critical reflections on these changes. By re-reading the ideas of thinkers, this study attempts to understand the direction of ongoing social change.

Changes in the structure of working relationships due to digitalization raise questions about the stability of employment relationships and the meaning of work itself. Platform-based work systems offer flexibility, but at the same time create uncertainty about the social and economic status of workers. The relationship between workers and employers becomes indirect and mediated by algorithms. These changes are also reflected in the dynamics of management and labor relations in multinational companies that are increasingly dependent on digital literacy (Darmawan et al., 2023). The work experience loses the personal dimension that previously formed the basis of professional solidarity. When performance appraisals are conducted through automated data and metrics, the space for human dialogue narrows. This condition raises questions about how the social structure of work is being reshaped by digital technology and how individuals interpret their position within that structure. This problem is structural in nature because it concerns the distribution of power, social recognition, and economic security in a digital society.

Social interaction patterns and access to welfare face serious problems due to dependence on digital

systems and big data. Disparities in digital literacy and access to technology have the potential to widen the social gap. Individuals who are not digitally connected find it difficult to participate fully in social and economic life. Data-based decision-making processes are often not transparent to the wider community. At the organizational level, the application of information technology does increase managerial efficiency, but at the same time raises new challenges related to social justice and inclusiveness (Arifin & Putra, 2022). This creates tension between system efficiency and a sense of social justice. Experiences of social exclusion can arise when individuals feel misunderstood by the systems that govern their lives. This issue requires a critical reading of the relationship between technology, social structures, and human welfare.

Social changes resulting from digitalization are occurring rapidly and permeating various areas of life. Work relationships, social communication, and welfare distribution are undergoing a restructuring that affects daily life. Academic study is needed to understand the direction of these changes reflectively. Literature studies enable the exploration of developed theoretical ideas and their reinterpretation in line with the latest developments. Thus, this study provides a conceptual basis for a critical reading of the digital social reality. This understanding is important for the development of social sciences that are responsive to the changing times.

Furthermore, this study is relevant because it concerns the future of social cohesion and social justice. Digital technology promises convenience and efficiency, but it also poses the risk of social fragmentation. Scientific examination helps identify patterns of change in social relations and their implications for collective welfare. By systematically reviewing various ideas, this study contributes to the enrichment of academic discourse on the relationship between technology and society. This provides a basis for reflection on the development of policies and social practices that are more human-centered.

This research aims to systematically examine theoretical ideas about digitalization and big data and their implications for social structures and patterns of human interaction. This study seeks to understand how working relationships, social solidarity, and access to welfare are reshaped through digital practices. Theoretically, this research contributes to the enrichment of sociological perspectives on technology-based social change with an interpretive approach. Practically, this study provides a framework of understanding for academic readers and practitioners to interpret digital social dynamics more reflectively. Thus, this research is expected to be a conceptual reference for further studies on the relationship between digital technology and human social life.

RESEARCH METHOD

This study uses a qualitative literature review approach with an interpretative orientation to examine ideas, concepts, and scientific arguments regarding digitalization, big data, and social structural change. This approach was chosen because the study aims to understand the meanings, thought patterns, and conceptual frameworks developed in previous scientific works. The research process began with the collection of relevant academic literature in the form of scientific books and reputable journal articles. Each source was read critically to identify theoretical positions, basic assumptions, and relationships between ideas. The search was conducted through international scientific databases using keywords tailored to the focus of the study. A thematic synthesis approach is used to group recurring main themes, enabling the development of a structured and coherent understanding of changes in work relations, social interactions, and access to welfare in digital society.

The literature search strategy is systematically organized by establishing clear inclusion and exclusion criteria. The inclusion criteria covered scientific works discussing social theory, digital technology, big data, and changes in social structure. The exclusion criteria were applied to sources that were popular in nature, had not undergone peer review, or were not relevant to the focus of the study. Each selected source was then analyzed using open coding techniques to identify key concepts and main arguments. The coding process is followed by axial coding to find connections between themes. This approach allows researchers to compile a reflective and argumentative synthesis. Variations in analytical style are applied by comparing the perspectives of different authors and interpreting the differences in their thinking, so that the study is not merely descriptive.

Research quality assurance was carried out through consistent analysis procedures and transparency in the source selection process. Each stage of literature search, selection, and analysis was systematically recorded to maintain academic traceability. The validity of the interpretation was reinforced through repeated readings and cross-source comparisons to avoid one-sided interpretations. A research synthesis approach is used to summaries conceptual findings without eliminating the complexity of the authors' thoughts. Thus, the results of

the study are expected to reflect the depth of theoretical reflection that is scientifically accountable. This method enables the development of a solid and relevant academic narrative for the development of social sciences that examine the relationship between digital technology and human social life.

RESULT AND DISCUSSION

Digitalization, Big Data, and the Reconstruction of Social Working Relationships

Digital transformation has profound implications for how work is understood and carried out. Advances in digital technology are reshaping the structure of working relationships by changing how work is understood, performed, and evaluated. As with any other change, the spread of new perspectives does not happen quickly, but rather gradually through interactions within social networks (Hilbert, 2020). Work is no longer positioned as an activity tied to a specific physical space or stable hierarchical relationships. Work relationships are shifting to relationships based on systems, digital procedures, and data-based evaluations. In the experience of workers, relationships with work institutions feel increasingly abstract because interactions take place through digital interfaces (Carreri et al., 2020). Performance assessments are presented in the form of numerical indicators produced by automated systems. This changes the way individuals perceive recognition, achievement, and self-worth. Work becomes a fragmented experience because productivity demands are presented in measurable tasks. The perception of work as a means of self-actualization is adjusted because it is mediated by the logic of efficiency and speed. Work relationships are moving towards a more impersonal pattern, although they still provide a sense of connection through continuously active digital networks. This change shows that access to technology and digital skills are important prerequisites for maintaining one's position and job sustainability in the digital era (Arifin & Darmawan, 2021). The digitization of work has formed a new paradigm that balances efficiency with social connectedness.

Big data presents a new paradigm in work management that is centered on digital information. There is an ideology that argues that big data will contribute significantly to progress in all areas of human endeavor (Devlieghere et al., 2022). Big data reinforces this change by making information the center of work management. Worker activity data is collected, processed, and used to regulate the rhythm of work with precision. In their daily experiences, workers realize that every digital action has evaluative consequences (Platonova, 2022). The use of digital tools has raised various ethical challenges related to concepts of social work (Nordesjö et al., 2021). This awareness shapes a new internal discipline as individuals adjust their behavior according to system parameters. The structure of work relations has become more asymmetrical because data control lies with institutions or platform owners. Workers are in the position of being both a source of data and subjects regulated by the results of data processing. This condition affects perceptions of fairness and work autonomy. Work relationships are no longer fully negotiated directly but are determined by algorithms working behind the scenes. This condition requires the development of human resource capacity in understanding and managing data so that organizational decisions remain effective and fair (Khairi & Darmawan, 2022). In social interpretation, algorithms become structural actors that significantly shape work relations. Big data and algorithms form a new work structure that challenges the concepts of fairness and autonomy.

The digitization of work has blurred the boundaries between individuals' professional and personal spaces. Changes in working relationships through digitization have also shifted the boundaries between work time and personal time. Digital systems allow work to be present at all times through constantly connected devices. The work experience no longer has clear beginning and end markers. Individuals feel pressure to always be responsive to messages, notifications, and task requests (Okrushko et al., 2023). This type of work structure changes the experience of fatigue and energy recovery. Personal time is often absorbed by sudden professional demands. In social relationships, this condition affects family and community interactions because individuals' attention is divided. Work has become an experience that infiltrates various areas of life. Interpretations of this change suggest that digitalization shapes fluid work relationships and demands continuous psychosocial adaptation. Under these conditions, balancing productivity and personal life has become a major challenge in the digital age.

Platform-based work marks a fundamental shift from traditional work relationship patterns. Platform-based work relationships present a new form of attachment that differs from conventional work relationships. Individuals work as partners or service providers with loose contractual ties. Work experiences in this system are often characterized by uncertainty in income and social status. Workers' identities become blurred because they are not fully recognized as part of the organization (Cruz &

Gameiro, 2023). This type of work relationship structure creates a strong sense of individualization. Workers are fully responsible for managing their own time, risks, and welfare. Solidarity among workers is difficult to foster because interactions are separate and competitive. In the increasingly widespread practice of the digital economy, these conditions also highlight the need for legal protection for subjects who transact and work through online platforms, especially when work relations and consumption relations intersect (Faridi et al., 2023). In this case, legal certainty and clarity of digital contracts are important issues for protecting the position of workers in the online work ecosystem (Sulaiman et al., 2023). In a social reading, this structure reflects a shift from collective work to atomized work. Platform work reveals new dynamics that emphasize individualization while weakening collective solidarity.

Digitalization also changes the patterns of production and distribution of work knowledge in modern organizations. Digitalization also affects how work knowledge is produced and disseminated. Digital systems provide guidance, instructions, and training based on online modules. Work knowledge is no longer obtained through direct interaction with senior colleagues, but through standardized digital materials. The learning experience becomes more individual and measurable. The mentor-student relationship has undergone a transformation due to technological mediation (Sun, 2023). This affects the process of internalizing work values and professional ethics. Knowledge is understood as information that can be accessed at any time, but it loses its richly meaningful dialogical dimension. This condition requires the development of responsible technology so that digital efficiency remains in line with ethical values within the organization (Radjawane & Mardikaningsih, 2022). The structure of work relationships is moving towards a pattern of independent learning that demands high personal discipline. Work learning is transforming into an independent process that emphasizes accessibility and personal discipline.

Data-based objectivity is a key feature of work-related decision-making in the digital age. The use of data in work-related decision-making creates a strong perception of objectivity. Decisions on promotions, assignments and evaluations are often based on quantitative indicators. In the experience of workers, numbers are seen as a valid representation of performance. However, the meaning of these numbers does not always correspond to the subjective experience of work. The relational and emotional aspects of work are difficult to represent in data. This creates a gap between workers lived experiences and the digital representation of their performance. This situation emphasizes the importance of normative and ethical frameworks in the use of data so as not to create structural injustice in digital work relationships (Darmawan & Negara, 2023). Work relationships become an arena for negotiating meaning between human experience and system logic. Interpretation of this condition reveals latent tensions in the structure of digital work. The use of data presents a dilemma between claims of objectivity and the limitations of representing work experience.

The development of information technology has changed the way humans connect in the world of work. Digitalization has expanded the reach of the global job market. Individuals can work across regions without relocating. Work relationships have become cross-cultural and cross-time zone. This experience opens up opportunities, but at the same time demands a high level of adaptability in communication. Work norms have become diverse and often inconsistent. Workers need to interpret different expectations in a short period of time. This structure of global work relations affects the sense of attachment to local communities. Professional identities have become more cosmopolitan, while local social identities have the potential to weaken (Mirzaxodjayev, 2022). This reading shows that digitalization shapes transnational work relationships with complex social implications. This phenomenon marks a major shift in work interaction patterns in the modern era.

Digital transformation also changes the way workers build a sense of togetherness. Changes in work relationships also have an impact on the formation of professional solidarity. Technology-mediated interactions reduce opportunities for informal encounters, which often form the basis of social attachment. Solidarity is built through online forums, messaging groups, or digital professional networks. This form of solidarity is functional and based on common interests. The experience of togetherness is more structured and planned. The spontaneity of interaction is reduced because communication takes place through predetermined channels. This affects the sense of empathy and emotional closeness between workers. Work solidarity is undergoing adjustments to suit the logic of digital technology. These conditions confirm that patterns of solidarity now follow the rhythm of technology-based interactions.

Technological changes have not only shifted work patterns but also reorganized organizational authority. The structure of digital working relationships also affects the distribution of power

within organizations. Access to systems and data has become a new source of authority. Individuals or units that manage technology have a strategic position in decision-making. Work relations have become more technocratic because legitimacy is based on mastery of the system. Experiences of subordination can arise when workers feel they do not understand the mechanisms that govern their work. Digital knowledge inequality widens the power gap in work structures. Interpretation of this condition shows that digitalization forms a new hierarchy that is not always visible to the naked eye. This situation marks the emergence of a pattern of domination based on digital capacity.

The digital era has brought about different working standards from previous traditional patterns. Digital-based work has shaped a new work ethic that emphasizes speed, flexibility and continuous availability. Work value is measured through quick responses and the ability to adapt to system changes. This experience influences how individuals assess professional success. Failure is often understood as an inability to keep up with the digital pace. The structure of work relationships becomes a space for continuous self-evaluation. Individuals compare themselves to dynamic digital standards. This reading shows that digitalization shapes intense work relationships and demands a high level of psychological readiness. This confirms the new demands inherent in professionalism in the modern work environment.

Digital transformation has also shifted workers' perceptions of the meaning of stability in their careers. Changes in work relationships through digitalization also impact the meaning of job security. Dependence on digital systems makes jobs vulnerable to technological change. Workers feel uncertain about the sustainability of their roles. The structure of work relationships no longer promises long-term stability (Zonova & Sheveleva, 2022). This experience shapes a pragmatic and adaptive work orientation. Individuals are more focused on developing skills relevant to digital systems. Work relationships are understood as temporary relationships that are constantly being renewed. This interpretation confirms that digitalization changes the way humans interpret job continuity. This phenomenon shows that job security is now more determined by digital adaptation capacity.

The development of big data expands the consequences of digitalization on modern work dynamics. Overall, digitalization and big data form a complex and layered reconstruction of work relations. Work relations become more impersonal, measurable, and mediated by digital systems. Human work experience is reinterpreted through data indicators and efficiency logic. Professional solidarity, work identity, and power structures are undergoing adjustments. Work is understood as a fluid and ever-changing experience. This analysis shows that work relations in a digital society are the result of the encounter between human experience and technological systems that influence each other. This overall picture emphasizes the close interaction between technology and human work experience.

Digital Interaction Patterns, Social Solidarity, and Access to Welfare

Advances in communication technology have shifted the way people experience presence and build social relationships. Developments in digital technology have reshaped social interaction patterns through shifts in communication media and the way social presence is experienced. Interactions that previously relied on physical encounters now often take place in synchronous or asynchronous virtual spaces. Individuals build relationships through text, voice and visual messages that are produced and consumed rapidly. This experience changes the way the meaning of presence is understood because connectedness no longer requires physical proximity. Social relationships are built through the intensity of digital communication, which can take place without any time limits. In everyday life, individuals interpret social attachment through the frequency of messages, signs of engagement, and online responses (Fabbri, 2018). This pattern forms new habits in establishing social relationships that are more technically measurable. Social interactions have undergone a form of adjustment that requires the ability to read digital cues as a substitute for direct expression.

The development of digital space presents a new form of solidarity that transcends traditional geographical boundaries. Digital solidarity is understood as an extension of associative solidarity that emphasizes the role of digital communication in maintaining solidarity between generations (Hwang et al., 2022). Social solidarity in digital space develops through mechanisms that do not always depend on geographical proximity. Individuals can feel connected to groups that share similar interests, values, or experiences even though they have never met in person. Solidarity is built through shared narratives, digital symbols, and participation in online activities. A sense of togetherness emerges through the exchange of stories, emotional support, and symbolic recognition (Palumbo & Cavallone, 2022). However, this form of solidarity is fluid because attachments can change as interests and platform dynamics

change. Social bonds are not always long-lasting because they depend on the continuity of digital interactions. The interpretation of this kind of solidarity shows that social attachment is undergoing a transformation from a territorial to a network-based form. This condition marks a shift in solidarity towards a flexible and digitally networked pattern of connectedness.

Online interactions are now the main arena for the formation of constantly evolving social rules. Digital interaction patterns influence how social norms are formed and enforced. Communication norms develop through collectively repeated online habits. Individuals learn to adjust their language, response tempo, and forms of expression to be accepted in certain digital communities (Turja et al., 2023). Violations of these norms often result in social sanctions in the form of online exclusion or reduced recognition. This experience shapes a reflective awareness of the limits of acceptable behavior. Social norms change more rapidly because they are influenced by platform dynamics and communication trends. Social interaction becomes a space for continuous learning about digital ethics. This interpretation shows that social solidarity in the digital world is supported by norms that are dynamic and collectively negotiated. This confirms that digital ethics continue to be shaped through adaptive collective practices.

Changes in information technology now determine how people access their welfare rights. Access to welfare increasingly depends on the ability to interact with digital systems. Public services, social assistance, and economic opportunities are largely distributed through online platforms. The modern phase of the digital economy is now taking shape, with the emergence of numerous online platforms that are the result of interactions between individuals seeking goods and services (Rakhimova et al., 2021). Individuals with adequate digital literacy find it easier to access these services. Conversely, groups that are less familiar with technology face the risk of social marginalization (Tovar Cardozo, 2023). In this case, the challenge of technological inclusivity shows that access to welfare is not only determined by the availability of digital services, but also by the gap in skills and technological adaptation capabilities among social groups (Ramle & Mardikaningsih, 2022). This experience influences the way welfare is perceived as a right that requires certain technical prerequisites. Interaction with digital systems has become the main gateway to social resources. Interpretation of this condition shows that welfare is no longer socially neutral, but rather tied to the ability to adapt to technology. This situation confirms that access to welfare now depends on the individual's capacity to cope with digital demands.

The digitization of public administration presents a new pattern of relations between society and institutions. Digital interaction patterns also shape the relationship between citizens and institutions. Administrative communication takes place through standardized system interfaces. Individuals interact with automated procedures that minimize personal dialogue. This experience affects their sense of closeness to social institutions. Trust is built through the smooth running of the system and the clarity of information, rather than through interpersonal relationships. When the system runs smoothly, institutions are perceived as being effective. However, when disruptions occur, individuals often feel alienated because they cannot find a space for dialogue (Yudina & Alekseenko, 2020). In increasingly complex digital practices, public trust is also influenced by data protection and information security managed by institutions (Darmawan & de Jesus Isaac, 2023). This interpretation shows that digital interactions change the way institutional legitimacy is built in social life. This shows that institutional legitimacy now depends more on the performance of digital systems.

Digital media has now become the main platform for the formation of collective action by the community. Social solidarity in the digital space is often manifested through online collective action. Individuals join campaigns, support rallies, or public discussions that take place through digital media (Duenas-Cid et al., 2023). This participatory experience creates a sense of involvement in common issues. Solidarity is built through shared concerns and symbolic expressions. However, this involvement does not always continue in social actions outside the digital space. The experience of togetherness is episodic and depends on the momentum of the issue. Interpretation of this pattern shows that digital social solidarity is intense but often temporary in nature. This phenomenon shows that digital solidarity is more often present as a brief response to a particular issue.

The digital space presents new mechanisms in the formation of self-image and social recognition. Digital interactions influence the formation of social identity. Individuals present themselves through profiles, posts, and responses that can be observed by their social networks. Identity is constructed through deliberate image curation. This experience influences how individuals understand social recognition. Solidarity is often formed based on the compatibility of the identities presented. Differences in views can

trigger fragmentation because algorithms bring together individuals with similar preferences. Social interactions become more segmented (Achmad, 2022). This interpretation shows that digital social solidarity develops in a polarized space. This condition confirms that digital identity plays a major role in shaping contemporary social connectivity patterns.

The integration of digital technology in public services has also changed the way people assess social justice. Access to welfare through digital systems has implications for the sense of social justice. Data-based selection processes are perceived as objective because they use measurable indicators. However, individuals often do not understand the assessment mechanisms used. The management and optimization of big data in institutional decision-making reinforces the perception of objectivity, while also giving rise to demands for transparency so that decisions can be understood by the public (Ali & Darmawan, 2023). This lack of clarity affects trust in the system. Interaction with technology creates a distance between life experiences and administrative decisions. Interpretation of this condition reveals a tension between system efficiency and the experience of social justice.

Advances in communication technology have also shaped different patterns of interaction between age groups. Digital interaction patterns also influence intergenerational relationships. Generations that have grown up with technology have different communication habits from previous generations. These differences affect how intergenerational solidarity is built. Social interaction requires adjustments in language and media to achieve mutual understanding. Communication gaps can arise when technological preferences are not aligned. This interpretation shows that digital technology shapes the dynamics of solidarity in society.

The digital era has positioned online networks as one of the key factors in the distribution of welfare. Social welfare is influenced by an individual's ability to build effective digital networks. These networks provide access to information, employment opportunities, and social support. In terms of the digital economy and technology-based supply chains, the integration of big data and digital systems strengthens connectivity between economic actors and expands opportunities for participation in modern welfare networks (Putra & Arifin, 2021). In terms of platform-based economies and services, legal protection for digital transactions and relationships is an important element in maintaining a sense of security and the sustainability of community welfare (Faridi et al., 2023). Digital interactions have become a new form of high-value social capital. Individuals who are able to manage online networks gain social benefits. Conversely, limited networks narrow access to welfare.

Technology-based communication has also changed the way humans express and understand empathy. Digital interaction patterns shape different experiences of empathy. Emotional expressions are conveyed through symbols, text, or visuals that have limited meaning. Individuals learn to interpret empathy through brief digital signs (Tovar Cardozo, 2023). Emotional solidarity is built through quick responses and virtual presence. However, the depth of emotional understanding depends on the ability to read digital cues. This interpretation shows that social empathy is undergoing a form of adjustment in online interactions. This phenomenon marks a shift in empathy towards a more concise form based on digital signs.

The development of digital technology has brought about a new order in social relations and the distribution of welfare. Overall, digital interaction patterns shape social solidarity and access to welfare through network mechanisms, online norms, and technology-based systems. Solidarity develops in fluid and segmented virtual spaces. Access to welfare increasingly depends on digital literacy and the ability to build online relationships. Interactions between individuals, communities, and institutions take place through standardized systems. This analysis shows that digital technology shapes new structures of social interaction with broad implications for communal life. This overall picture emphasizes that social life is now increasingly determined by digital logic.

CONCLUSION

This study shows that the development of digital technology and the use of big data are shaping structural changes in human social life through the restructuring of work relationships, interaction patterns, and welfare distribution mechanisms. Work relationships are moving towards forms that are increasingly mediated by digital systems, measurable, and dependent on data logic. This pattern affects how individuals perceive work, social recognition, and security in their professional lives. Social interactions are shifting from face-to-face encounters to fluid and segmented virtual networks, so that social solidarity develops through new mechanisms that no longer depend on geographical proximity. Access to welfare is increasingly linked to the ability to adapt to digital systems and technological literacy. These findings collectively confirm that digital technology does not stand as a neutral instrument, but rather as a social

structure that shapes human experiences, meanings, and relationships as a whole.

The theoretical implications of this study lie in strengthening the sociological understanding of the relationship between technology and social structures. Digitalization and big data need to be understood as forces that shape new social orders that work through individuals' daily experiences. For the development of social science, this study provides a conceptual basis for reading changes in work relations, social solidarity, and welfare as a single, interrelated social process. Practical implications arise for institutions, policymakers, and economic actors who need to be aware that digital systems affect the quality of social relations and the sense of justice. This understanding is important so that the development of data-based technology and services remains in line with human needs and the sustainability of social life.

Further studies are recommended to expand the theoretical reading by involving interdisciplinary perspectives such as technology ethics, digital political economy, and social psychology. Such an approach can enrich our understanding of the dynamics of meaning, power, and subjective experience in digital society. In addition, further studies could examine variations in social experiences between groups based on age, social class, and level of digital literacy. A more comparative literature review between social regions could also provide a broader picture of differences in patterns of adaptation to technology.

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