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THE TEMPORAL DIMENSION OF SMART URBANITY AND TEENAGERS' PERCEPTION OF SIMILARITIES WITH PAST HISTORICAL ERAS

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Abstract: *The paper investigates teenagers' perceptions regarding the similarities between the smart urbanity of today and the past historical eras that they experienced. Smart urbanism refers to the transformation of cities in a way that combines technology, innovation, and sustainability to improve the quality of life for the citizens. The proposed methodology allows participants to freely assign meaning to the concepts explored through the research questions. The findings indicate that teenagers perceive themselves as living in a continuous present, recognize parallels with past historical periods, and express a positive attitude toward digital technologies.*

Key words: *smart urbanity, temporal dimension, time perception, adolescent perception, historical past.*

1. Introduction

The concept of „urbanity" has evolved over time, reflecting social, economic, and technological changes. Initially, "urbanity" referred to the concentration of population in cities, urban density, and the specific characteristics of urban life. Over time, the term expanded to include more complex aspects such as urban culture, urban identity, and social dynamics within the urban environment. While classical urbanity focused on the social and cultural aspects of urban life, "smart urbanity" considers the technological element essential. Sensors, data, algorithms, and digital platforms are employed to support the functioning of cities. "Smart urbanity" does not limit itself to a single aspect of urban life; it aims to improve the quality of life, the efficiency of public services, and environmental sustainability in an integrated manner.

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Smart urbanity entails a distinct identity for cities, which thus become “smart”, setting themselves apart significantly from classical cities. This digital identity is built on multiple levels and has profound implications both for citizens and for the functioning of cities. However, a smart city remembers its past (Minner et al., 2018).

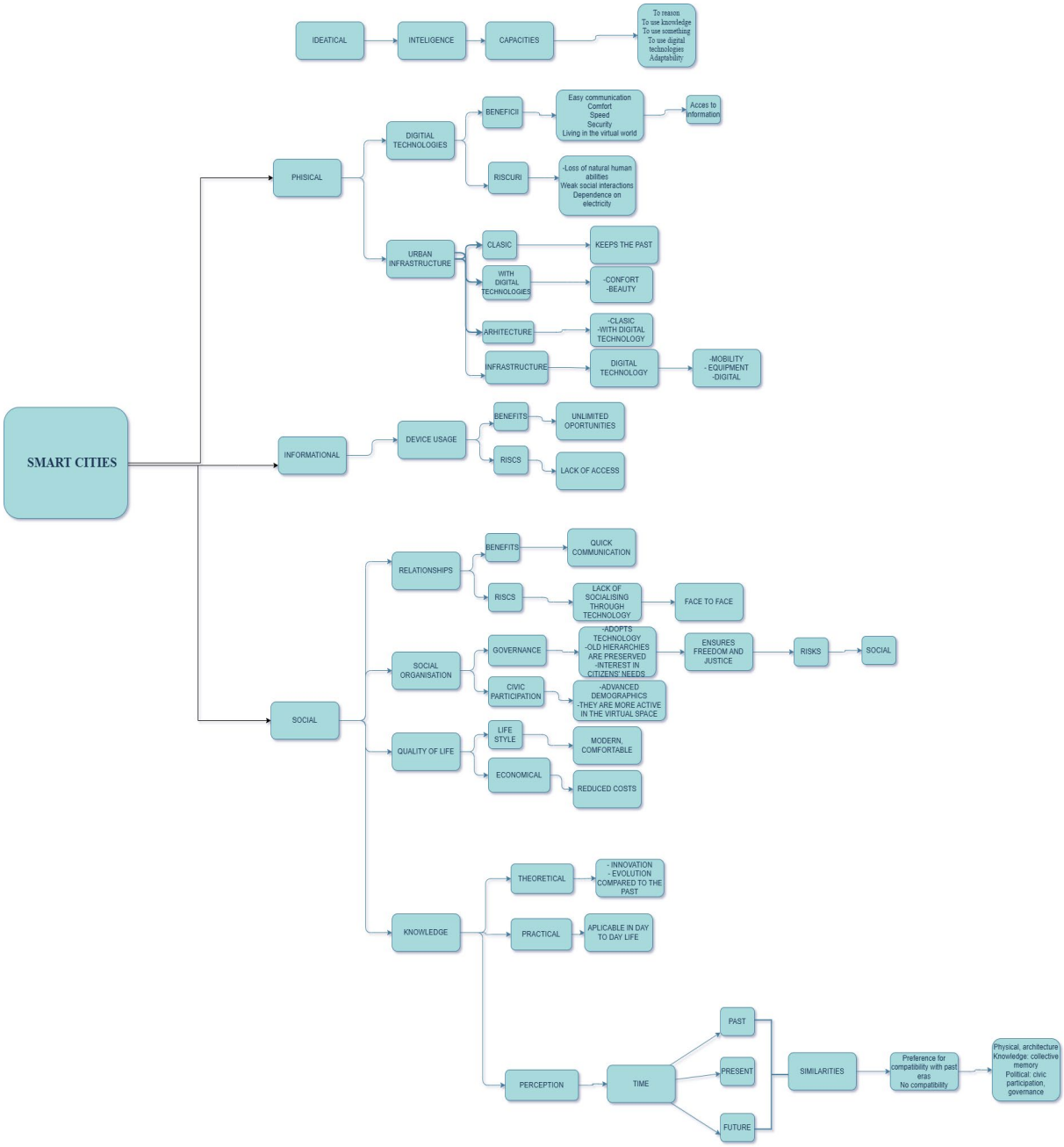

Fig.. 1. *Conceptual map of smart cities: dimensions, benefits and risks*

The conceptual map included in this study was developed as a visual tool to organize and synthesize the multidimensional aspects of the "Smart Cities" phenomenon, as perceived by the participants. It reflects the major thematic categories that emerged from the data — physical, informational, and social — and highlights the interconnections between concepts such as digital technologies, urban infrastructure, device usage, social organization, and knowledge dynamics. The purpose of this map is twofold: first, to illustrate the complexity and interdisciplinarity of the topic, and second, to facilitate a clearer understanding of how participants relate to key components of smart urban environments. By visually representing these relationships, the conceptual map supports the interpretive analysis and demonstrates how technological, informational, and social dimensions intersect in the construction of meaning around smart cities.

Additionally, the map captures perceptions of time (past, present, future), revealing how participants situate themselves in relation to technological evolution and societal change. This tool also emphasizes the perceived benefits and risks associated with each domain, offering insight into how digital and physical infrastructures are integrated into everyday life.

As it can be seen from the map, adolescents' perceptions of smart cities significantly shape their attitudes toward preserving historical landmarks. As digital natives, they often envision urban environments that integrate technology with cultural heritage, leading to a nuanced understanding of urban development. This perspective influences their commitment to preserving historical landmarks, as they recognize, accept, or reject the importance of maintaining local identity amidst modernization.

1.1. Adolescents and their perceptions of Smart Cities

Studies, focusing increasingly on how young people interact with urban environments and perceive new technologies, highlight both positive and negative aspects of adolescents' perceptions of smart cities. Young adolescents have grown up with technology and integrate it naturally into their daily lives, making them digital natives (Bennett et al., 2008). Many adolescents value the conveniences provided by technology such as smart public transportation, bike-sharing platforms, or service-finding applications (Williams & Williams, 2005).

Them being the future- decisions regarding the development of smart cities have a significant impact on their lives (Iannone et al., 2019). Young people have the potential to shape the future of cities through their civic participation and consumption preferences (Lloyd & Clark, 2001). The ability to stay connected at all times and access information quickly is highly valued (Watkins, 2009). Young people are also environmentally conscious and appreciate eco-friendly initiatives (Milner, 2013).

On the other hand, some studies show that young people are concerned about excessive data collection and the potential misuse of such information (Lenhart et al.,

2011). There are worries that new technologies might exacerbate social and economic inequalities. Some young people express concern about the increasing dependence on digital devices and their impact on mental health (Rogers & Pilgrim, 2021).

1. 2. Adolescents' perceptions and relationship with the Past

Some studies indicate that young people idealize certain aspects of the past, such as face-to-face social interactions or time spent in nature (Lesko, 1996; Kristeva et al., 2007). Due to their exposure to technology and global information, adolescents have higher expectations for the cities they live in. They are not content with merely consuming existing technologies but seek to actively participate in shaping the cities of the future. Adolescents embrace the integration of technology, valuing how smart city technologies can enhance the preservation of historical sites through virtual tours and augmented reality, making cultural heritage more accessible (Riganti, 2017).

Young people express a desire to participate in governance by directly engaging in urban planning and advocating for the inclusion of historical landmarks in smart city initiatives (Shtebunaev et al., 2023). Preserving historical landmarks is seen as an essential endeavor for maintaining local identity, which adolescents value in the context of rapid urbanization (Vlasenko & Ivanova, 2017). Adolescents align their values with sustainability, recognizing heritage preservation as a contribution to community resilience and diversity (Azpiazu Izaguirre et al., 2021).

On the other hand, some adolescents may prioritize technological advancements over historical preservation, considering digital technologies as indicators of progress. Traditionally, young people have been marginalized in these discussions, seen more as future citizens than active participants. However, their perspectives and values have the potential to shape more inclusive urban environments. Although it is assumed that this segment of the population possesses digital skills, there is a significant digital divide within it, with varying levels of awareness. This finding is inconsistent with the assumption that all young people are equally equipped to engage in smart city initiatives (Shtebunaev et al., 2023).

What shapes perceptions are the common themes and values expressed by adolescents. A surprising result highlighted by studies is the critical stance of adolescents toward existing models of smart cities. While it is often assumed that they are enthusiastic about technology, many have expressed skepticism about how these models are implemented and their real benefits for the community. This criticism indicates a deeper understanding of urban issues than is often recognized, challenging the notion that young people are simply passive consumers of technology (Shtebunaev et al., 2023). Rather than a uniform desire for high-tech solutions, adolescents have emphasized the importance of community, sustainability, and social equity (Shtebunaev et al., 2023).

The desire to participate in civic life is present among adolescents, indicating that young people are not only ready to get involved but also have valuable perspectives. This finding challenges the common perception that young people are uninterested in civic issues (Shtebunaev et al., 2023). The urban environment plays a crucial role in shaping young people's values, with perceptions and values evolving in response to urbanization and smart city practices (Vlasenko & Ivanova, 2017). The findings suggest that young people become more active and engaged after moving to urban centers, being more adaptable and optimistic about urban innovations (Riganti, 2017).

This observation challenges the stereotype of theories that portray young people as passive recipients of urban life, depicting them instead as proactive individuals seeking self-fulfillment and participation in various activities, including education and engagement in solving community problems (Vlasenko & Ivanova, 2017). Education is a core value among young people, closely linked to social mobility and personal development. This connection provides a nuanced understanding of how urbanization influences the aspirations and life choices of young people (Riganti, 2017; Vlasenko & Ivanova, 2017). Studies on the perspectives of young people aged 14-17 in Europe regarding World Cultural Heritage (WCH) and its preservation have revealed Eurocentric thinking patterns (Röll et al., 2020).

2. Research Objectives

In alignment with the principles of constructivist grounded theory methodology, the present research did not begin with rigid, predefined objectives. Instead, research directions were progressively constructed through an iterative process of data collection and inductive analysis (Charmaz, 2008). Nevertheless we can say that the objective is to explore how adolescents aged 14-16 years old perceive and construct meanings related to the temporal dimension of smart urbanism, including representations of past, present, and future in technologically mediated urban environments.These objective was not imposed in advance but emerged through the participants' narratives, reflecting meanings grounded in their lived experiences. By privileging openness and reflexivity, the research sought to generate context-sensitive theoretical insights that may inform future empirical and theoretical inquiries into the intersection of adolescence, temporality, and smart urban environments.

3. Methods

This research used the methodology of constructivist grounded theory. The sociological literature on this topic strictly refers to the relationship between the temporal dimension of smart urbanity and adolescents' perceptions regarding similarities to past historical periods, where the relationship is considered insignificant. In this case, a qualitative methodology is recommended (Morse & Field, 1995).

One advantage of the grounded theory methodology (Charmaz, 2008) is that it does not require prior conceptualization, allowing for openness to any meaning (Denzin & Lincoln, 2000). The methodology suggested allows unrestricted use of any meanings that study participants may suggest for the concepts introduced through the research questions. The lack of the need for initial hypotheses can lead to new explanatory possibilities and serve as a propaedeutic for future quantitative research.

The research was conducted on a group of 25 adolescents aged 14-16 from the city of Ploiești, 9th grade students from two local technological high schools, using the unstructured interview method. Data interpretation was carried out using the qualitative grounded theory methodology, employing inductive coding.

3.1. How adolescents perceive the Smart City

The concept of a "smart city" is defined by elements such as "essential technology," "robots and machines," "AI-equipped systems," and "innovations that simplify life." Technology is seen as having various levels of development, with smart cities characterized by "advanced technology". Digital technologies and AI are perceived as indicators of a city's intelligence.

The attribute of intelligence is viewed as transferable, borrowed from living beings, and manifests through "capacities" such as reasoning, learning from past experiences, adapting, resolving crises, creatively using digital technologies, and excelling in specific domains. In their opinion, digital technologies offer opportunities described as "endless."

Respondent 3 defines intelligence as "the capacity to excel in a field where a solution to a problem has not yet been found." Adolescents distinguish between classical and digital technologies.

Respondent 8 and Respondent 11 emphasize the non-transferable characteristics of urban intelligence, highlighting their manifestation in modern infrastructure, architectural development, rapid transportation systems, public safety, technological innovation, and the adaptability of institutional frameworks.

Respondents 5, 8, and 13 express critical views regarding the exclusive reliance on electricity, virtual environments, and artificial intelligence, perceiving such dependency as potentially detrimental to human capacities and social dynamics. Their concerns refer to the loss of manual skills ("we forget to do manual things"), the negative impact on mental health ("detrimental to mental state"), and the vulnerability of urban systems in the event of power outages ("power outages lead to catastrophes").

Respondent 15 points out that, within the social dimension of smart cities, hierarchical structures tend to persist despite enhanced connectivity that facilitates communication. The respondent underlines the necessity of democratic governance, advocating for a leadership model mediated by technology, yet firmly grounded in the principles of advanced democracy.

The non-transferable characteristics of a city's intelligence are reflected in elements such as "modern infrastructure", building construction, rapid transportation, safety and security, innovation, and evolving institutions. Adolescents positively value access to information, environmental protection through control and efficiency, and economic efficiency through "lower costs."

Adolescents recognize the benefits of smart cities brought by the manifest characteristics of intelligence, but they also identify risks, both in the physical dimension and in human relationships, which they describe as marked by low collaboration and a focus on public image.

Adolescents express negative views regarding exclusive dependence on electricity, the virtual world, and AI, as they perceive these to diminish human capacities or harm social life.

On the social dimension, hierarchical organization persists in smart cities, even with the connectivity that facilitates communication. Governance remains democratic, and digital technologies do not fundamentally alter social organization. Social-political freedom and justice are still present but are perceived as being limited by control, which adolescents view as a risk.

Adolescents perceive governance in smart cities as shaped by technology, yet they note variations in its execution:

Civic participation is seen as active through digital platforms, yet lacking direct involvement, which adolescents believe affects social interactions.

Although the differences between smart cities and classical cities are clear we also recognize notable similarities.

On a social level, there are perceived similarities in mentalities, as the fundamental nature of human beings remains unchanged.

Social memory plays a crucial role in identifying these similarities with the past. This type of memory is reflected in the architecture of smart cities, which, despite technological advancements, retains traces of the past. Thus, the past and present coexist in these urban spaces. Historical continuity is seen as vital, with the past understood as a process that defines the origins of a human community and evolves alongside events and experiences.

Adolescents recognize the significance of historical continuity and its role as a foundation for understanding the present and future.

While the segmentation of time into past, present, and future is socially accepted, adolescents perceive time as something that can be transcended. They associate this transcendence with individual choices and practices that challenge the traditional societal perception of time's linear flow.

The perception of historical time among adolescents is shaped by narratives established at specific points in history, primarily conveyed through formal education in schools. However, informal education and personal preferences also play significant roles in shaping their understanding. Adolescents express diverse interests in historical

periods, from Ancient Greece to the socialist era, though these preferences often remain in the realm of imagination, as they view the present as superior in quality and relevance.

The future is perceived as a potential extension of the present, envisioned as a continuous 'now' enabled by augmented reality. This perspective redefines time, rendering it spatial and immersive, while blurring the boundaries between temporal segments.

This emerging view of time and space demonstrates how technology influences adolescents' understanding of history, present realities, and future possibilities, reshaping traditional concepts of temporal progression.

4. Results

The study outlined a perception profile of adolescents regarding the temporal dimension of smart urbanity. Respondents demonstrated nuanced understandings of the concept of "intelligence," attributing to cities a set of non-transferable characteristics, which they associate with tangible, localized phenomena such as "modern infrastructure," architectural innovation, rapid transportation, safety and security, technological progress, and evolving institutional systems. For instance, Respondent 8 stated that „smartness cannot be moved; it is about what the city is built with and how it works", while Respondent 11 emphasized the importance of "innovation and safety that define the urban experience."

Adolescents positively value smart cities for the access to real-time information, environmental regulation, and enhanced economic efficiency through "low costs" and optimized resource management. However, their perspective also reveals critical awareness of the associated risks, particularly on the physical and relational dimensions. Respondents 5, 8, and 13 expressed skepticisms about an overreliance on electricity and artificial intelligence, which they perceived as impairing human agency and social life. Their concerns included remarks such as: "We forget to do manual things," "AI is detrimental to our mental state," and "Power outages lead to catastrophes."

From a social perspective, adolescents recognize that despite technological connectivity, traditional hierarchical structures persist. As Respondent 15 observed, "Connectivity helps us talk faster, but doesn't change who's in charge. Democracy should still lead, just better, through tech." Thus, while smart governance is accepted as a necessary adaptation, it is perceived as meaningful only when embedded within an advanced democratic framework.

Respondents pointed to the continued existence of socio-political freedoms and justice, but with caveats related to pervasive digital control, which is viewed as both a benefit and a constraint. While differences between classic and smart cities are acknowledged—particularly in infrastructure and technological functionality,

respondents noted continuities in mentality and social values, suggesting that „humans have preserved their original structure."

Civic participation is recognized as active yet superficial: adolescents engage through digital platforms but report a lack of deeper involvement. As one respondent noted, "We comment, we vote online, but we don't really change things with our hands." This disconnects impacts personal autonomy and collective agency.

The concept of "social memory" was also highlighted, with several respondents emphasizing the preservation of historical identity through architectural elements. The past is not erased in smart cities; instead, it is integrated: "We see the past in buildings. It's like it's still there, watching," stated one participant. The historical past is understood as a dynamic process, inseparable from the present, and meaningful to the community's evolving identity.

Regarding time perception, adolescents largely accept the traditional segmentation into past, present, and future. However, they challenge the rigidity of this structure, viewing time as a social construct that can be personally redefined or overcome. For example, some respondents referred to practices that "stop time" or help them "disconnect from how society tells us to live." This aligns with Lefebvre's notion of "lived space," which can be extended to a "lived time" — a more fitting framework to capture adolescents' subjective temporal experiences.

Historical narratives are primarily shaped through formal education, particularly school, though informal influences and personal interests (e.g., fascination with Greek antiquity or the socialist era) also contribute. Nevertheless, these preferences are largely symbolic or imaginative, as the present is valued as the most "real" and "rich" temporal experience. One respondent noted, "The past is cool to think about, but only the present matters." The future is often envisioned as a continuous, immersive present, potentially enabled by augmented reality, which adolescents perceive as spatial and immediate.

This perception profile suggests that adolescents are increasingly inclined toward a subjective experience of time, decoupled from institutional norms, and mediated by technological and educational frameworks. The integration of "lived time" into discussions of urban temporality may offer a more authentic understanding of how younger generations relate to smart cities and their evolving temporal landscapes.

5. Conclusions

This study outlined a nuanced profile of adolescents' perceptions regarding the temporal dimension of smart urbanism. Participants demonstrated the capacity to differentiate between transferable and non-transferable characteristics of intelligence in urban environments. The latter—such as modern infrastructure, architectural design, rapid transport, security, innovation, and institutional adaptability—are regarded as distinctive features of smart cities.

Adolescents emphasized access to information, environmental sustainability through controlled systems, and economic efficiency as valuable benefits. However, they also articulated concerns regarding potential risks—including diminished human interaction, reduced collaboration, overreliance on technology, and an overemphasis on public image.

Despite enhanced connectivity, the social structure of smart cities is perceived as hierarchical and largely unchanged, with democratic governance persisting but constrained by mechanisms of control. While digital platforms facilitate civic engagement, the lack of direct interpersonal interaction is seen as affecting the quality of social life.

Participants also noted continuities with the past, particularly in mentalities and social behaviors. Social memory plays a key role in this recognition, especially through the preservation of architectural elements. Adolescents value historical continuity, seeing the past as an ongoing process that informs the present and shapes collective identity.

They challenge the linear segmentation of time, viewing time as transcendable through individual actions, experiences, and creative reinterpretations. While temporal categories—past, present, future—are socially accepted, adolescents increasingly interpret the present as a permanent „now", heavily mediated by immersive technologies such as augmented reality.

6. Discussions

The findings suggest that adolescents' experiences of temporality in the smart city context resonate with Henri Lefebvre's theory of "lived space" (espace vécu). According to Lefebvre (1991), space is not a neutral or merely physical construct but a socially produced phenomenon, shaped through human experiences, interactions, and cultural meanings. His triadic model—perceived space, conceived space, and lived space—captures the layered complexity of how individuals relate to their environments.

Building on Lefebvre's work, the present study introduces the notion of "lived time" as an analytic framework for understanding the subjective temporalities articulated by adolescents. Just as lived space accounts for emotional, experiential, and symbolic dimensions of spatial life, lived time enables an interpretation of time that is fluid, relational, and deeply personal, rather than strictly segmented or imposed by societal norms.

In this sense, smart urbanity is not only experienced spatially but also temporally, with adolescents perceiving a kind of temporal immersion in which historical continuities coexist with future projections. Their experience of time, like their experience of space, is shaped by technological mediation, social memory, and critical reflection on their environment.

This theoretical lens supports a deeper understanding of the intertwined nature of time and space in contemporary urban life and reinforces the relevance of Lefebvre's

work in exploring new urban paradigms. Furthermore, it aligns with the "right to the city" (Roulier, 2022), emphasizing the importance of youth voices and subjective experiences in shaping the future of urban living.

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