DISCOURSE ON THE IMPORTANCE OF 'SMART PEOPLE' IN THE SMART CITY CONCEPT

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Abstract

The potential of smart city concepts is sufficient to warrant attention not only universally, but also solitarily to the individual pillars of the concepts. The aim of this paper is to initiate a discussion on the importance of people in today's smart solutions society and to answer the research question, 'Who are the smart people in a smart city concept?' The research tool was determined to be a content analysis of publications in scientific databases supplemented by a questionnaire survey conducted on a sample of university students in Slovakia. The contribution of the paper is in the answer to this question and the author's suggestions on how to bring smart city concepts closer to all people living in the city.

Keywords

smart city, smart people, education, MIL

1. INTRODUCTION

Many smart city concepts have the following 6 pillars: smart economy, smart people, smart governance, smart mobility, smart environment, and smart living, either in this wording or in related terms. There is no doubt about the positive impact of smart solutions for people not only in communities and cities today. As Rovňák and his team point out, smart cities can also be perceived by many people as an 'overengineered world', as a technology-driven place where humans occupy an observational position (Rovňák, Tokarčík and Bakoň, 2018). The fact that the smart city concept will be with us may be indicated by the fact that these concepts have also made it into the renewed Horizon Europe on 100 Climate-neutral and Smart Cities by 2030 (European Commission, 2022). Although UN-Habitat has attempted to criticise the smart city concept and has

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developed a people-centred smart city programme, the smart city concept is still intended as a vision for the future of our cities (UN-Habitat, 2022). Before launching or just creating the concept of changing the city, we asked people what do they need? What do they want? Should we, experts in the fields of urban planning, concept design, economics, IT and many others, design for people the life and the confines in which they will live?

2. THEORETICAL BACKGROUND

The smart city concept has a measurably positive impact on the quality of life of not only residents, but also tourists and other visitors to the city (Woetzel et al., 2018). The notion *'of smart people'* or people as an important element of the smart city concept has been addressed by several authors (Gupta, Mustafa and Kumar, 2017; Giffinger et al., 2007; Peters, 2017; Lam Thye, 2019; Habib, Alsmadi and Prybutok, 2019; Adiyarta et al., 2020; Örselli, Bayrakci and Bilici, 2022). Peters (2017) states that specific strategies can be quite complex for city leaders and citizens, but it is important to devote enough time to the concept to make it understandable to all. As Örselli, Bayrakci and Bilici (2022) point out, technology is considered a major factor in many definitions of a smart city, but this approach can lead to an incomplete perspective in smart city definitions. If a city focuses only on the technological dimension of smart city, the city may be full of technological solutions that will not be used and the city will become a dysfunctional space (Örselli, Bayrakci and Bilici, 2022).

As the authors (Gupta, Mustafa and Kumar, 2017) state in their paper, since 2011, contributions to the smart city have been critically examined from a variety of perspectives, such as science and technology, politics, economics, governmental studies of mentality, and ideological critique. Smart cities in general create a relationship between technology and society. This process, they argue, is related to Actor-Network Theory (ANT), which focuses on the formation of socio-technical networks and how some actors influence them to fulfil their interests.

3. METHODOLOGY

The aim of the theoretical part of the paper is to establish a discussion about the importance of people in the current society of smart solutions.

In this paper, we defined the research question:

Who are the *'smart people'* in the smart city concept?

Content analysis of publications in scientific databases was identified as a research tool. The thesis deals in more detail with the pillar of 'smart people' in terms of the smart city concept. It describes the attributes that smart people should have. Further, it deals with education not only in the field of ICT and describes the concept of MIL.

The aim of the practical part of the paper is to find out whether young people can identify with the definition of smart people from the professional sources. The reason why we focused on young adults is the fact that they are the ones who will spend a significant part of their lives in cities turning into smart cities. The questionnaire was distributed

to students at colleges and universities in Slovakia via social networks in groups between 23/09/2024 and 30/09/2024. The questionnaire was divided into three main parts. In the first part, respondents answered 8 questions, where they had to express their attitude towards sub-statements about how smart people should be on a linear scale from completely disagree (value 5) to completely agree (value 1). The statements were formulated based on a study of the scientific sources on smart people. In the second part, respondents answered 3 questions to find out in which areas they thought they excelled. The third part of the questionnaire concluded with demographic questions. The questionnaire was distributed using Google Forms and evaluated by descriptive statistics in MS Excel.

4. RESULTS

The research set is given by the selection available. 164 respondents participated in the questionnaire survey, with more than 81% of the respondents aged 21–25 years. Over 12% of the respondents are in the age group of 26–30 years and over 6% of the respondents are in the age group of 16–20years. The questionnaire has been validated by reliability test (Crombach's alpha is equal to 0.8522), therefore we assume good internal consistency.

Over 72% of respondents strongly agree or tend to agree with the following statements: 'Smart people should have a lifelong desire to learn,' (72.44%); 'Smart people should be able to work/live in an ethnic plurality. (Ability to work/live even in an ethnically mixed group/community/city.)' (76.28%); 'Smart people should be flexible,' (76.28%); 'Smart people should be active in public life. (For example, if they can vote on a participatory budget – they get involved, if they see opportunities for improvement they propose projects, participate in elections.)' (72.44%).

Approximately 65% of respondents strongly agree or tend to agree with the statements 'Smart people should have some level of education,' (64.10%) and 'Smart people should be creative' (66.67%).

Most respondents agreed with the statement 'Smart people should keep an open mind. (In case of new discoveries, they are willing to dialogue and discuss new phenomena in society)' (83.97%). Right behind it is the statement 'Smart people should be able to work/live in social pluralism. (Ability to work/live also in a group/community/city with people of different social backgrounds.)' (82.69%).

Most of the shortcomings to the subjective evaluation of their person were cited by the respondents as lack of participation in public life (66%) followed by lack of creativity (49%) and reluctance to lifelong learning (46%). On the contrary, according to subjective self-assessment, they excel most in flexibility (33%) and have a sufficient level of education (23%).

5. DISCUSSION

As stated by Gupta, Mustafa and Kumar (2017), smart people should have a lifelong zeal to learn and should be able to exist in social and ethnic plurality. Openness is a quality of smart people, as well as flexibility, i.e. to adapt to changes in the environment as well as to contribute creativity to learning. Smart people have a democratic mindset and participate in public life (Gupta, Mustafa and Kumar, 2017).

Similarly, Giffinger defines smart people in his 2007 paper, stating, *'Smart people are defined not only by the level of qualification or education of citizens, but also by the quality of social interactions related to integration and public life, and openness to the 'outside' world,'* (Giffinger et al., 2007, p. 15). He goes on to list social and human capital (smart people) factors such as the level of education, propensity for lifelong learning, social and ethnic pluralism, flexibility, creativity, cosmopolitanism/open-mindedness, and participation in public life. These factors are also supported by Lombardi (Lombardi et al., 2012) and Nam and Pardo (Nam and Pardo, 2011).

Cities are built for people and human factors need to be considered in the planning process. Örselli, Bayrakci and Bilici (2022) also mention that *'In this context, -considering the purpose and scope of smart cities- beyond a top-down political approach, it will be possible to build the smart cities of the future as a result of the creation of a model that updates itself according to the demands of citizens or users and also with the participation of citizens,'* (Örselli, Bayrakci and Bilici, 2022, p. 384).

Lam Thye (2019) also lists six basic pillars of a smart city (smart governance, smart economy, smart mobility, smart living, smart environment, and smart people), and the human factor is considered the key to building and developing a smart city. He points out that the ICT skills of residents must be sufficient to benefit people, as ICT is one of the main features of a smart city (Lam Thye, 2019).

In this context, it is important to mention that people who have less ICT skills must not be forgotten in the city's smart concept. Stakeholders in the development of city smart concepts are mostly politicians, consultants, academics, technology companies, and the most important group of stakeholders – citizens – is often forgotten (Simonofski et al., 2017). They are the ones who will have to live in transformed cities. We also consider the inclusiveness of the smart city concept to be important, as not everyone in the city is an active young person under 30. A wide range of people of different ages (children, adolescents, active, retired), different educational backgrounds, different nationalities and different customs live in the city. The smart city concept needs to be adapted to all of these.

It should be noted that although technology forms the basis for community interaction, it is in fact the last factor that concerns smart city creators as it is rapidly evolving and changing. As the experience of the world's pioneering smart cities shows, the factors of education, innovation, digital democracy and marketing are crucial. The key in this regard is not the issue of 'what' type of technology is available, but how 'effectively' this technology is used (Stratigea, 2012). Descant's (2018) report from the Smart Cities Connect Conference in Kansas City highlighted practical examples of the challenges

of implementing smart city concepts without the inclusion of people. Questions were asked: If people do not own devices such as a computer, tablet, or smartphone, how can they use public wifi, for example? And how useful is this for them (Descant, 2018)?

5.1 Education

Many authors (Firmin and Genesi, 2013; More, 2015; Deloitte, 2016; Zhuang et al., 2017; Team TTR, 2018; Glasco, 2019) have addressed the importance of smart education in the smart city. Demonstrating the importance of smart learning plays a leading role in culture in stimulating vitality for urban innovation and provides scientific support for citizen experience (Huang et al., 2015, in: Zhuang et al., 2017). Smart learning includes new media, QR codes to access and share content, the use of virtual reality system, online video lessons (Adecco Group, 2018) or smartphones (More, 2015). Glasco (2019) defines smart education as a model of learning that is interactive, collaborative and visual using digital technologies that need to be able to be controlled. Glasco further highlights a report by the U. S. Department of Education (2017) that suggests the existence of a so-called digital divide between students who are active users of ICT and those who use technology to passively consume content (U. S. Department of Education, 2017).

From Deloitte's US Digital Learning Survey (2016), up to 75% of teachers believe that digital learning content will completely replace print textbooks in the next ten years. The most used ICT devices include laptops (56% of teachers use a laptop), followed by desktop computers (54%), tablets (51%), interactive whiteboards (45%), smartphones (28%), chromebooks (23%), special readers (5%) and other wearable devices such as smartwatches (3%). For all these smart learning tools, there is an assumption of a certain level of ICT proficiency. No similar Delloite survey has been carried out in Slovakia or Europe, but in 2012 the results of a research collaboration between European Schoolnet[2] and the Université de Liège in Belgium were published. The result is that students in Slovakia have lower levels of broadband access and speed than the EU average, but student and teacher usage is higher than the EU average. Students' confidence in their ICT skills is higher than average, while teachers tend to rate themselves lower. Professional development in ICT seems to be rather uneven, but support measures for the use of ICT in teaching and learning are higher than the European average in the percentage of students in schools with ICT coordinators (European Schoolnet and University of Liège, 2012).

The Institute for Information Industry (III) believes that only smart education can produce quality people who will create the ideal smart city (Team TTR, 2018). The pressure to successfully integrate ICT into education appeals not only to digital skills, but also to resourcefulness, effective communication, teamwork and the ability to produce high-quality projects (Firmin and Genesi, 2013).

[2] European Schoolnet is a network of 33 European Ministries of Education based in Brussels, Belgium. As a non-profit organisation, it aims to bring innovation to teaching and learning. Website: http://www.eun.org/.

5.2 Media and information literacy

UNESCO adopted a resolution on the urgent need to integrate media and information literacy in 2019 as part of the 7th Information Literacy Week, because although the topic has been addressed since the 1980s, it is perceived as insufficient in the progress of improvement. The need for information, media, digital and other literacies is aimed at making people think critically. Efforts are being made to create the so-called MIL cities, where education will also move into informal settings, and not only take place in formal settings (schools, museums, universities, journalists) and use digital technologies, ICTs. Smart cities need smart citizens, and education is the way to get there (Ortiz, 2020; Grizzle, 2019). MIL is defined as the sum of media, information literacy, and ICT skills. It is the approach, evaluation (to understand and use) to produce media and information in different forms in a critical and effective way dealing not only with media news, but with all kinds of information.

The MIL concept is a natural evolution of the smart city and the city of knowledge; to be truly sustainable, cities must also be MIL cities. This means educating, empowering city dwellers of all ages and social classes, as well as different stakeholders from the most traditional to the least traditional, to create collaborative networks and to critically, ethically, truly creatively and responsibly use the new infrastructure and technologies that today's cities have to offer (Ortiz and Yanaze, 2020).

6. CONCLUSION

Survey respondents assume that smart people should be educated throughout their lives, should be open to an ethnically mixed society, should be flexible, and should take an active interest in the public life around them. We were intrigued to find that it was in the subjective assessment that as many as 66% of respondents cited poor participation in public life as their shortcoming.

Why is there low engagement with governance among young people in the survey when they see it as important to people as part of smart cities (smart people)? Is the fault in the availability of participatory local or state governments? The steps that are already happening in Slovakia, such as participatory budgeting, publication of business contracts, and various city apps, are probably not enough to bring them close enough to the people. On the other hand, the fact that our respondents are less concerned with participation in public life may also stem from their personal lives, where we do not know if other more primary human needs are being met at all.

In third place in the ratings of subjectively perceived shortcomings, they cited their own unwillingness to pursue lifelong learning. If today's young people are to become smart people in the future as part of the smart city concept, then we should think about several issues. Where does the reluctance to pursue lifelong learning stem from in our respondents? We have not explored whether they only want to be educated in an institutional form. Perhaps the non-formal education method would be accepted. These questions could be part of an extension of this survey.

Regarding smart city concepts, we consider it necessary to define all their pillars, not

excluding 'smart people'. People who live in cities described as smart need to have several qualities and capabilities to be comfortable living in the city. They should be flexible, adaptable, ICT-savvy, inclined to lifelong learning and to their own community, open to ethnic diversity and to discussing values. In imagining the search for such a 'smart' person who would meet the above-mentioned criteria, the author encountered a confrontation with her subjective reality in her immediate surroundings. We suppose that it may be difficult for people to meet the given criteria. On the other hand, we reflect on ICTs, on their definition. How to verify whether a person knows how to work with ICT. Based on personal computer skills, or based on working with a smartphone/tablet? But what we think is important is to consider how much people should adapt to the concept and whether the concept should adapt to people.

Therefore, we propose the following solutions: such as offline engagement of people in governance, through dedicated offices where people without access to ICTs could have their say or participate in an online survey, door-to-door and telephone surveys. Furthermore, free digital education, the existence of representatives from the communities in the management committees, continuous feedback from citizens, the possibility to remove permissions for data collection (cookies) in city applications, the simplification of city applications and their compatibility with the possibility of interconnecting them, the ratio of bottom-up initiated projects (such as in participatory budgeting) to top-down ones, transparency in communication and publication of contracts with business partners. The author believes that these solutions could also be part of the evaluation in the Smart City indices.

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