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# Digital Media Environments and their Implications: Instagram

## **Abstract**

*At the beginning of the 21<sup>st</sup> century, we find ourselves at the threshold of a new level in the development of digital media. Digital media environments are going beyond the scope of fixed and isolated social environments to become more and more integrated in the everyday lives of individuals up to the point at which it is difficult to distinguish between being connected to the internet and living in the real world. Social networks contribute to this phenomenon since they represent a digital environment within which we are becoming increasingly immersed at the global level. The focus of this text is Instagram as a network whose functioning is organized around the visual element. The aim of this paper is to consider the implications of digital environments by using Instagram as an example within the framework of the theoretical and conceptual framework of digital media environments.*

**Key words:** *digital media, digital media environments, social networks, internet, Instagram.*

The current postmodern era is an era of omnipresent digital media. These media are examined in different theoretical conceptualizations and in different ways, but the focus of this text will deliberately be on the theoretical concept of digital environments. We thus focus on the difference between the modern context of digital media at the beginning of the 21<sup>st</sup> century and the period in which mass media reigned, which includes the early era of the internet. Contrary to previous periods of media development, modern digital media environments have become omnipresent owing to the new information and communications technology (ICT). They are the result of certain technological characteristics of the new era in internet development – high-speed internet service provided by broadband connections and the possibility of accessing the internet on mobile devices so that a fixed point of access is no longer required. This new era in internet development also introduces a different software architecture which functions on the principles of Web 2.0. Web 2.0 principles involve a software architecture organized on the principles of a participative platform, where content is created by the users themselves and the architecture improves with the increasing number of users creating and modifying content from various sources, consequently creating the “network effect”.<sup>24</sup> Taking all of this into account, these digital media no longer have to be consumed separate from other social activities, they create media environments that are increasingly integrated into the everyday life of a modern individual. Furthermore, the last couple of years saw the development of ICT and the so-called “internet of things”; devices are connected through a network, not only to the internet, but also among each other, thus creating a digital infrastructure for the collection of data or managing devices through sensors, enabling the transmission and processing data or providing suggestions based on these. This development additionally integrates devices connected to the internet into the everyday social activities of the individual at the spatial level as well. This media configuration significantly changes the ways in which digital media mediate experience. Modern digital media environments silently function in the background of social reality in a way that is becoming less and less visible and social reality is becoming increasingly dependent on their functioning. This level of digital media integration within social life therefore requires a new theoretical and conceptual framework for analysing media.

The beginnings of this society are examined through different concepts by different theorists. One of these for example is Jenkins’s concept of convergence, in the sense of new media depending on mass, data and telecommunication technologies<sup>25</sup>. This type of society is characterized by new media being more intertwined in such a way that media content becomes a process unobstructedly flowing through them and it is possible to access the same content through different media.<sup>26</sup> Jan Van Dijk calls this a “network society”; a society whose functioning increasingly relies on the infrastructure of social and media networks and these networks become primary forms of organization at all

24 Tim O’Reilly, “What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software”, *International Journal of Digital Economics* 65/2007, p. 17.

25 Jan Van Dijk, *The Network Society*, The SAGE Publications, Thousand Oaks 2012, p. 20.

26 Henry Jenkins, *Convergence culture: Where old and new media collide*, New York University Press, New York 2008, p. 16.

levels.<sup>27</sup> Manuel Castells's concept of a "network society" posits that networks are becoming the main units of organization and key activities are organized through ICT creating a "a space of flows"; the material support of time-sharing social practices, functioning through flows.<sup>28</sup> Scott Lash talks about the "omnipresence of social life being mediated through the media".<sup>29</sup> The scope of digitally mediated social activities really is pervasive today, which is also confirmed by statistical indicators. Eurostat data for the EU region on digital habits in 2017 show that 84% of individuals at EU-28 level aged between 16 and 74 used the internet, of which 72% on a daily basis.<sup>30</sup> In Croatia a percentage of 67% individuals aged between 16 and 74 used the internet in 2017, of which 58% on a daily basis.<sup>31</sup> A total of 65% EU-28 users used the internet on mobile phones or other mobile devices far from work or home, while in Croatia this percentage was 51%.<sup>32</sup> The data is similar at the global level. According to a global research conducted by PEW in 39 countries, 72% of people owned a smartphone in the period 2017-2018 within 17 countries PEW considers to be developed economies, and 86-87% of people used smartphones or the internet at least occasionally.<sup>33</sup> At the same time in 19 countries PEW sees as developing economies or countries, 64% of people used the internet or owned smartphones in the period 2017-2018 (an increase compared to 42% in 2013) and 42% individuals owned a smartphone (an increase compared to 24% in 2013).<sup>34</sup> Furthermore, according to indicators measured through the DESI Index, there was a high percentage of economic activities online in 2017 at EU level; 68% of EU population bought goods or services online, 61% used e-banking services and 21% used apps for booking accommodation from other individuals online.<sup>35</sup> According to data from the Croatian Bureau of Statistics in 2017, 50% of internet users used e-banking services, and 37% used the internet for selling products and services.<sup>36</sup> Using the internet for information and communication is also widely spread; in Croatia 91% internet users mostly use it for reading newspapers and magazines, 88% for finding information on products and services, 72% use electronic mail, and 70% participate in social networks.<sup>37</sup> According to data provided by the DESI Index in 2017, a total of 66% of the population used e-government services

27 J. Van Dijk, *The Network Society*, p. 20.

28 Manuel Castells, *The Rise of the Network Society*, Wiley-Blackwell, New Jersey 2011.

29 Scott Lash, "Power after Hegemony: Cultural studies in Mutation", *Theory culture & society* 24 (3/2007), p. 70.

30 Eurostat, "Digital economy and society statistics – households and individuals", [https://ec.europa.eu/eurostat/statistics-explained/index.php/Digital\\_economy\\_and\\_society\\_statistics\\_-\\_households\\_and\\_individuals](https://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_households_and_individuals), accessed 10 October 2018.

31 Ibid.

32 Ibid.

33 Pewglobal, "Social Media Use Continues to Rise in Developing Countries but Plateaus Across Developed Ones", <http://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/>, accessed 10 October 2018.

34 Ibid.

35 Digital Economy and Society Index Report 2018, "Use of Internet Services", file:///C:/Users/user/Downloads/3DESI\_ReportUseofInternetServicespdf%20(2).pdf, accessed 20 October 2018.

36 Croatian Bureau of Statistics, "Usage of information and communication technologies (ICT) in households and by individuals, 2017", [https://www.dzs.hr/Hrv\\_Eng/publication/2017/02-03-02\\_01\\_2017.htm](https://www.dzs.hr/Hrv_Eng/publication/2017/02-03-02_01_2017.htm), accessed 20 October 2018.

37 Ibid.

in 2017, and 22% used healthcare services through the internet.<sup>38</sup> Although Croatia lags behind the EU-28 average in some types of internet usage, statistical indicators for EU-28 and Croatia confirm theoretical conceptualizations on the increased dependence of society on networks supported by ICT technologies, which is also true at the global level. Digital channels are becoming more integrated in social reality, in the context of staying informed, as well as participating in social and economic activities or realizing civil rights.

We may therefore conclude that modern digital environments require a new level of theoretical conceptualization. Living in the early era of internet when it was used in the privacy of one's own home through a modem, certainly constitutes a different experience than consuming media content on a mobile phone while standing in line at a bank. The concept of digital environments highlights the individual phenomenological dimension of experience for the user and how network infrastructures are integrated in the everyday level of user experience. Modern media digital platforms are intertwined with our everyday social experience to such a degree that, at the phenomenological level of such an existence, it is difficult to determine the point at which being connected to the internet is separate from the experience of not being connected. Digital media are no longer just media, in the sense of isolated technological devices for the use of which it is necessary to remove oneself from one's social life. On the contrary, when technology is separated from the physical location of use, which is the case in accessing the internet on mobile devices or connecting the urban infrastructure to the internet, digital media become integrated within social functioning to such a degree that they literally become – environments. It is precisely the fact they are not dependent on an actual physical location, but can exist within the social infrastructure, that gives them characteristics of an environment. And since at the macro-level they have become increasingly integrated in the social structure, they become more necessary at the micro-level in order to participate in social activities, which introduces a new level of integration in the everyday life of the modern individual. Since an increasing number of social subsystems depend on digital technologies, which are entwined with complex local and global infrastructures, cultures, societies and environments, a lack of participation in them does not represent only a technological problem, but also the problem of social inclusion<sup>39</sup>. In societies whose functioning largely depends on digital technologies, a lack of participation in digital environments is translated into social exclusion. For example, today social networks are increasingly used for job searching and employment, there are e-services for participating in realizing civil rights or settling civic duties, economic activities such as buying, selling or booking accommodation are also increasingly made online, as shown by previously mentioned statistical indicators. We can assume that for generations growing up in such environments, this type of using technology will be so common, they will be unable to even

38 Digital Economy and Society Index Report 2018, "Use of Internet Services", file:///C:/Users/user/Downloads/3DESI ReportUseofInternetServicespdf%20(2).pdf, accessed 20 October 2018.

39 Massimo Ragnedda, "Reducing and preventing digital discrimination: Digital inclusion strategies in Europe", in Massimo Ragnedda, Bruce Mutsaviro (ed.), *Digital inclusion: An international comparative analysis*. Lexington books, Langham, Boulder, New York, London 2018, p. 6.

imagine different ways of functioning, but also that living in these media environments will have implications for the development of the human mind, to an extent that is difficult to fully ascertain at this moment.

In this text we shall look more closely at social networks as an example of such digital environments.

Social networks can be defined as digital environments in which content is completely or partially created by its users through using the technological platform enabling communication with other users. Social networks are part of pervasive social digital environments for which we can claim to have encouraged the spread of these networks, given the frequency of their usage. According to data by the Croatian Bureau of Statistics for early 2017, social networks were the most common purposes of internet usage in Croatia (71%).<sup>40</sup> According to Eurostat data, the percentage at EU level is 67%.<sup>41</sup> Research by PEW determined a rising trend of using social networks at the global level, and data from 2017 shows that two thirds or more of the adult population in developed countries use social networks; this includes data for the U.S. (69%), Australia (69%), Canada (68%), Sweden (67%), United Kingdom (60%), France (53%), Germany (40%), Israel (68%) and South Korea (69%)<sup>42</sup>. However, countries considered to be developing economies also have a high rate of social network usage among the adult population and these percentages continue to grow, in countries such as Vietnam (53%), the Philippines (49%), Jordan (75%), Lebanon (72%), Argentina (65%), Chile (78%), Nigeria (42%), Ghana (39%) and Kenya (39%).<sup>43</sup> These statistical indicators imply an increasing level of integration of social networks within the everyday life of the modern individual. In analyzing this phenomenon in 2011, sociologist Sherry Turkle noted how in modern society, the individual is constantly connected to a mobile device and to his/her social contacts towards which the mobile device serves as a portal.<sup>44</sup> In this way modern individuals actually never leave their home emotionally, which is seen in the phenomenon of constant connectedness.<sup>45</sup> She examines the implications of such a situation for the modern self which finds it usual to be distant from the place it physically occupies, at the same time experiencing a virtual and almost physical simultaneity of the place it does not occupy, concluding that the new standard of the modern self is the state of being “connected and absent”<sup>46</sup>. We might actually say that the state of constant

40 The Croatian Bureau of Statistics, “Usage of information and communication technologies (ICT) in households and by individuals, 2017”, [https://www.dzs.hr/Hrv\\_Eng/publication/2017/02-03-02\\_01\\_2017.htm](https://www.dzs.hr/Hrv_Eng/publication/2017/02-03-02_01_2017.htm), accessed 15 September 2018.

41 Eurostat, “Individuals-internet activities” <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do> accessed 15 September 2018.

42 Pewglobal, “Social Media Use Continues to Rise in Developing Countries but Plateaus Across Developed Ones”, <http://www.pewglobal.org/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/#table>, accessed 20 October 2018.

43 Ibid.

44 Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other*, Basic Books, New York 2011, p. 229.

45 Ibid., p. 222.

46 Ibid., p. 229.

connectedness through mobile phones and social networks is normalized, especially in the context of young generations growing up in these digital environments. This text aims to determine some implications for a life in such an environment.

### **Determinants and implications of digital environments on the example of Instagram**

It is clear that modern digital environments increasingly focus on visual content. A new social network in which the visual principle is at the basis of its functioning appeared in 2010 on the wave of broadband internet connection combined with smartphones with better cameras. User activities on the Instagram social network are completely organized around the visual element. Posting photos on user profiles is at the centre of this networks' functioning, and they are posted by the users themselves. Users can "follow" other people's profiles, meaning they determine on their profiles how they will view posts by other users. After the user posts a photograph, it becomes instantly visible to all other owners of profiles following a particular profile, and to a lesser extent to those who do not follow it. It should be noted that the functioning of Instagram is mainly organized around interactions between different profile owners on the topic of posting photos. Each posted photograph offers other users with the possibility to comment or "like" the photo – a social practice through which users show one another they appreciate the photos posted. But textual elements come second on Instagram and we can say that social interaction on that social network is based on posting photographs. Ever since this social network appeared, its popularity has been rising quickly, especially among younger age groups. It is indicative that the number of Instagram users reached one billion in June 2018.<sup>47</sup> Statistics on internet usage from the U.S. show that 71% of young people aged 18-24 use Instagram, of which 60% visit it on a daily basis, and 51% use it several times a day.<sup>48</sup> Statistical indicators show that younger generations, i.e. generations growing up in pervasively digital environments, use this social network the most. What are the implications of being immersed in these digital environments?

In examining this phenomenon we should turn to predictions made by the philosopher Paul Valery as early as 1928, when he noted that in the future artworks will achieve a sort of omnipresence in a way that it will be possible to invoke them at a place where someone is using some kind of device; *Just as water, gas, and electricity are brought into our houses from far off to satisfy our needs in response to a minimal effort, so we shall be supplied with visual or auditory images, which will appear and disappear at a simple movement of the hand, hardly more than a sign. And just as we are used to, if not entrapped by, various types of energies flowing into our homes, we shall consider it perfectly normal to receive ultrafast variations or oscillations collected by our*

47 Statista, "Number of monthly active Instagram users from January 2013 to June 2018", <https://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/>, accessed 10 September 2018

48 Pewinternet, "Social media use in 2018", <http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/>, accessed 10 September 2018.

*organs.*"<sup>49</sup> If we read Valery in the context of Instagram which is available on mobile phones, his prediction is literally delineated – the photographs which often are artworks, are available to users with a simple hand gesture on the screen of their mobile phone, disappearing just as easily. It is also absolutely impossible to examine the implications of the developing new media environments without taking into account the theories of Marshall McLuhan who stated in 1970s that medium is a message since it changes the speed, manner and scope of human actions and relationships<sup>50</sup>. That is to say, technology is not neutral – its design changes the principles of social functioning to a high degree. Other theorists later offered similar theories. Neil Postman notes in the 1990s that the use of technology is somewhat limited by its own design<sup>51</sup>. At the same time, users also adapt technology to their own needs using it in certain ways<sup>52</sup>. For example, the social phenomenon of “influencers” (from the word “influential” implying popularity) represents an unintended result of using social networks created by the users themselves. Influencers are individuals who have the power to influence social trends through social networks, mainly Instagram and Facebook. They have a large number of so-called “followers” on social networks, i.e. other users of this app who follow their Instagram profiles. Due to the large number of followers of each influencer, his/her profile represents a potential platform for communicating towards a great number of other users. The position of an influencer has therefore developed into a new social status in the last couple of years. We might even call it a profession, since influencers make money through their posts, by integrating products into images thus becoming a communication channel for advertising products. Economy reacts fast to technological innovations it deems effective and companies were quick to incorporate these new social practices into their business. According to Eurostat data for 2017, a high percentage of companies in EU-28 use social networks, and this percentage has significantly increased compared to 2013<sup>53</sup>. In 2017, a percentage of 45% companies used at least one social network, of which 84% used it to develop their brand and advertise products. These percentages show an increase of 17% compared to 2013 and have increased more than the use of any other type of social media, such as blogs<sup>54</sup>. Up to 40% companies used social media in order to develop their brand or advertise their products<sup>55</sup>. Managing an Instagram profile has become a new profession in recent years, and advertising through social networks and the use of social networks for marketing purposes is developing into a common social practice. Social practices of collecting and analysing

49 Benjamin Walter, “The Work of Art in the Age of Mechanical Reproduction”, <https://www.marxists.org/reference/subject/philosophy/works/ge/benjamin.htm>, accessed 20 September 2018.

50 Marshall McLuhan, *Understanding media: The extensions of man*, London and New York, McGraw-Hill 1964, p. 10.

51 Neil Postman, *Technopoly: The Surrender of Culture to Technology*, Vintage Books, New York 1993, p. 7.

52 Robert Kraut i Malcom Brynin., “Social Studies of Domestic Information and Communication Technologies“ in Robert Kraut, Malcom Brynin and Sara Kielser, ed., *Computers, phone and the internet: Domesticating information technology*, Oxford University Press, Oxford 2006, p. 8.

53 Eurostat, “Enterprises using social networks in 2017 and in 2013”, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Enterprises\\_using\\_social\\_networks,\\_2017\\_and\\_2013\\_\(%25\\_of\\_enterprises\).png](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Enterprises_using_social_networks,_2017_and_2013_(%25_of_enterprises).png), accessed 20 October 2018.

54 Ibid.

55 Eurostat, “Social media – statistics on the use by enterprises”, [https://ec.europa.eu/eurostat/statistics-explained/index.php/Social\\_media\\_-\\_statistics\\_on\\_the\\_use\\_by\\_enterprises](https://ec.europa.eu/eurostat/statistics-explained/index.php/Social_media_-_statistics_on_the_use_by_enterprises), accessed 20 October 2018.

data users leave behind when using social networks have also developed, and this data is then used for predicting future user behaviour and upcoming economic trends. These are some of the economic implications in the development of the digital environments of social networks. We might ask whether predictions of user behaviour based on their behaviour within digital environments shall become an everyday social practice in the future and will it perhaps spread outside the scope of social networks?

I shall also review some cognitive implications of spending a large amount of time in digital environments oriented towards the visual element. If we take into account the frequency of spending time in these digital environments, what consequences might this have on the development of the human brain? The neuroplasticity of the human brain makes it highly likely that the brain will also adapt to the new types of modern digital environments<sup>56</sup>. Recent research do point to changes in the functioning of the human brain in relation to being exposed to digital networks in the last twenty years, and this includes changes in the way we read in the sense of more time being spent on searching and “scanning”, i.e. going through the text quickly, looking for key words, nonlinear reading and more selective reading with less time being spent on deep and concentrated reading as well as a reduced ability for continued concentration<sup>57</sup>, lack of focus on the abstract and increased focus on the concrete<sup>58</sup>. However the relation between the frequency of using digital media environments and an increased cognitive ability to do several activities at the same time (“multitasking”) has also been determined<sup>59</sup>. On the other hand, psychological research shows that informal learning environments consisting of television, videogames and the internet, create students with lower cognitive skills levels – they strengthen the visual-spatial intelligence and weaken the high-level cognitive processes; abstract words, awareness, reflection, inductive reasoning in problem-solving, critical thinking and imagination, while listening to the radio and reading nurture imagination and the development of higher cognitive skills<sup>60</sup>. Taking all of this into account as well as the visual and spatial character of digital environments, the question is whether continued activity in digital environments with fast-changing visual stimuli and a lack of deep content shall become the new norm for the mind of the future? Will the brain of the future be better in visual-spatial orientation and less prone to abstract and critical thinking? Abstract thinking is necessary in order to add characteristics to objects and think about them on a more complex level, separate from the objects

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56 Susan Greenfield, *Mind Change: How digital technologies are leaving their mark on our brains*, Random House, New York 2015, p. 22.

57 Ziming Liu, “Reading behavior in the digital environment: Changes in reading behavior over the past ten years“, *Journal of Documentation* 61 (6/2005), p. 705.

58 Geof Kauffman i Mary Flanagan, “High-Low Split: Divergent Cognitive Construal Levels Triggered by Digital and Non-digital Platforms“, *ACM Conference on Human Factors in Computing Systems* 2016 <https://www.medicaldaily.com/reading-screen-versus-print-abstract-concrete-385257>, accessed 5 September 2018.

59 Reem Alzahabi i Mark W. Becker, “The association between media multitasking, task-switching, and dual-task performance“, *Journal of Experimental Psychology Human Perception & Performance* 39(5), str. 1485-1495.

60 Patricia Greenfield, “Technology and informal education: what is taught and what is learned“, *Science* 323 (5910/2009), pp. 69-71.



themselves. We must ask ourselves whether the reduced capability of this type of thinking will result in reduced implications for the capacity of analysing more complex ideas as well as the agency of the human subject.

According to a research by the Royal Institute of Mental Health in the UK, on a sample of more than 1400 young people aged between 14 and 24, there are some other problematic implications in using Instagram. Based on the consequences it has on the health and wellbeing of young people, Instagram has been ranked as the social network with the highest level of negative consequences for mental health compared to all other social networks<sup>61</sup>. Young people graded their health and wellbeing in relation to the use of each social network with marks ranging from -2 to +2, after which the average mark was calculated for every network – Instagram was the last, i.e. the fifth on this list. Factors deemed relatively more positive in relation to Instagram were: self-expression (expressing one's own feelings, thoughts, ideas), self-identity (the ability to define who a person is), emotional support (empathy and compassion by families and communities), community building (feeling like a part of a community of like-minded people). But what is problematic is the increased number of negative factors with higher values in relation to Instagram; sleep (the quality and quantity of sleep), body image (how a person feels in relation to one's own body), the so-called "fear of missing out" or FOMO – the feeling that a person must remain connected to the internet because otherwise he/she worries things are happening without him/her, bullying (threatening or violent behaviour towards someone), anxiety (the feelings of worry, nervousness or discomfort).<sup>62</sup> The concluding report from this research therefore provides strong recommendations for public policies, among which significant ones in the context of using Instagram include the recommendation to integrate warnings on the excessive use of the network in case of a longer period of usage, the recommendation on marking photographs which have been digitally manipulated, and the recommendation to identify users who might have mental health issues and discretely point them to potential sources of psychological support.<sup>63</sup> This is the only currently available research carried out on a larger sample in relation to Instagram and points to some problematic implications of using this social network as well as recommendations aiming to reduce negative implications.

And what are the implications of such digital social environments in the sense of social relations? Results of a qualitative research I carried out in 2014 as part of my doctoral thesis, among 50 young people in Croatia aged between 20 and 30, examining types of modern digital technologies usage, have shown that digital channels are highly integrated in the lives of young adults in Croatia in relation to friendships and the way they use them for being constantly connected to friends that are geographically not far away and for easing the friendships where there is less physical contact due to unfavourable structural circumstances such as moving to another country or less possibilities

61 Royal Institute of Mental Health, "Status of Mind: social media and young people's mental health and wellbeing", <https://www.rsph.org.uk/uploads/assets/uploaded/62be270a-a55f-4719-ad668c2ec7a74c2a.pdf>, accessed 13 September 2018, p. 18.

62 Ibid., p. 23.

63 Ibid., p. 24.

of spending time together due to different obligations.<sup>64</sup> Subjects stressed the possibility of shared online activities as an aid in maintaining friendships but added the inadequacy of these types of relationships without at least some physical interaction.<sup>65</sup> However, in relation to digital media being integrated in their lives, it seemed indicative that they considered digital channels as a key way for arranging and maintaining relationships in case of short- and long-term physical separation.<sup>66</sup> We should highlight that at the time this research was conducted, Instagram was still not as popular in Croatia as it is today, and in their responses subjects mainly focused on Facebook in relation to social networks. These results however provide us with a clearer context in relation to Instagram usage.<sup>67</sup> Research by Elisa Serafinelli in 2017 shows that sharing photographs on Instagram enables users to feel as if they are part of other people's experiences and in this way contributes to maintaining relationships through the social practice of "telling stories" on someone's experience.<sup>68</sup> Instagram is a social network that functions beyond the practice of merely sharing photographs since the practice of photograph sharing can also create social ties, social interactions and multimodal communication.<sup>69</sup> But to what a degree, at which levels and what types of relationships does Instagram create?

Research by Serafinelli has shown that most of her subjects who use Instagram see it as an unusual social network that shapes social relations mainly through visual communication as opposed to other verbally-centric networks<sup>70</sup>, which supports the theoretical premise of this paper. Users see Instagram as a social network gathering users around similar interests which represents a basis for advancing online interaction.<sup>71</sup> However in this research subjects also highlighted that Instagram usage needs to be complemented by physical interaction.<sup>72</sup> In other words, subjects do not see Instagram as a means enough in itself for maintaining relationships, they believe it is possible to maintain relationships through it when combined with physical "face to face" interactions. The Serafinelli research further shows that subjects report reduced possibilities for communication on Instagram (since this app has a reduced possibility for sending messages), the superficial type of communication focusing on photographs and they see communication as mainly focused on shared interests.<sup>73</sup> Instagram is therefore seen as less efficient in maintaining relationships than Facebook and is viewed as potentially useful only for forming relationships, but combined with other social networks. Even in this case communication started on Instagram often moves to other

64 Iva Paska, *Nove oblike razmerij in njihove posledice: prijateljstvo med mladimi v pozni moderni*. Fakulteta za družbene vede Ljubljana 2014, p. 205.

65 Ibid., p. 205.

66 Ibid., pp. 211-212.

67 Elisa Serafinelli, "*Digital Life on Instagram: New Social Communication of Photography*", Emerald Publishing Limited, Bingley 2017, p. 83.

68 Ibid., p. 83.

69 Ibid, p. 52.

70 E. Serafinelli, "Analysis of Photo Sharing and Visual Social Relationships. Instagram as Case Study.", p. 8.

71 Ibid, p. 10.

72 Ibid., p. 22.

73 Ibid., p. 14.

social networks, most commonly Facebook or a “face to face” interaction in the physical world.<sup>74</sup> The previously mentioned research by the Royal Institute of Mental Health, where the factor of actual relations (maintaining relationships with friends) was given a relatively low value is also similar to these results.<sup>75</sup> Based on these findings we might wonder whether Instagram perhaps has a different function which does not necessarily relate to forming or maintaining relationships, but to sociability.

It is clear that posting photographs on Instagram has implications related to the social status of the individual. Posting a photograph on Instagram rarely functions as merely mediating information, it often communicates the social status of the individual. This communication is implicit, with two distinct levels. The first level is communicated through the content of the photograph – the location or material surroundings, clothes representing a certain status symbol thus reflecting the social status of the individual. However there is another implicit level of communication; the amount of social interaction beneath the posted photograph in the world of visual digital social environments also implies or transforms into a status position. For example, the number of followers on the influencers’ pages is seen as an indicator of their social status, and they are considered to be socially influential due to the communicative reach toward a great number of individuals. These social practices promote the phenomenon of normalizing social status based on the amount of information a person is capable of attracting within digital environments. What does this phenomenon imply?

It primarily points to a social reality in which influence on social networks is transformed into economic and consequently other types of social influence and shows the strength of the pervasive digital media environments currently developing in the real world. Furthermore, if the number of social interactions on social networks has come to reflect social status, then an increase of social interactions may come to represent the goal of social actors, with the purpose of improving social status. Self-representation on social networks requires strategic behaviour with the purpose of attracting interactions by other users and consequently increasing one’s own reputation.<sup>76</sup> In other words, self-representation on social networks necessarily includes the strategic creation of communication to the level that it becomes a necessary skill. Van Dijk and Van Deursen call this strategic creation of communication “impression management” and believe this type of behaviour requires certain skills.<sup>77</sup> Skills they define as necessary are the skills of attracting attention online and the skills of developing one’s profile.<sup>78</sup> The development of new professions can also be analyzed through the same prism of strategic self-representation. Just like influencers, these professions did

74 Ibid., p. 30.

75 Royal Institute of Mental Health, “Status of Mind: social media and young people’s mental health and wellbeing”, accessed 13 September 2018., p. 23.

76 Khadija Coxon, “Attention, Emotion and Desire in the Age of Social Media”, in C.G. Prado (ed.), *Social media and your brain: Web-based communication is changing how we think and express ourselves*. Prado (ed.), Praeger, Santa Barbara, Denver, 2016, p. 41.

77 Alexander Van Deursen and Jan Van Dijk, *Digital skills: Unlocking the Information Society*, New York, Palgrave Macmillan 2014, p. 34.

78 Ibid., p. 34/35.

not exist in the previous period of internet development, such as digital marketing strategists. This profession is the realization of strategic behaviour on social networks; the task of a digital strategist is to develop a strategy of social network posts in order to popularize a certain company or product. We can therefore conclude that the politics of self-representation in modern digital environments really becomes not only a socially desirable and necessary skill but even a profession. We can only ask ourselves whether such frames of functioning within a media environment provide for any type of reflexion.

At the beginning of the 20<sup>th</sup> century, Walter Benjamin wrote about the inescapable loss of uniqueness of an individual work of art in the process of its mechanical reproduction combined with the opening up of new possibilities of its use<sup>79</sup>. The questions Benjamin poses for the era of mechanical reproduction are still relevant: “How can we think about subjectivity in the era of digital reproduction? What does it mean to examine oneself after we have been absorbed by inauthentic and politicized images?”<sup>80</sup> These questions gain a new dimension in the era of pervasive digital environments which arrange interaction around visual elements. This is no longer a matter of what it means to think of oneself but *whether we are even capable of self-reflection and do we perceive that we are being absorbed by inauthentic images of digital environments such as Instagram?* In other words, is there even a separate space within these modern digital environments and the human immersion in their pervasiveness, necessary for the development of reflexivity? This is followed by the issue of representation in relation to reality. Scenes in photographs posted on Instagram are mostly set up with great care. The photographs are also often beautified through configurations offered by the application itself. We might even say that self-representation on Instagram is becoming a normalized mode of communication – setting up a scene before shooting a photograph for Instagram is becoming a common social practice. We might claim, in the manner of sociologist Erving Goffman, who developed the idea of a social “background” i.e. the difference between the “foreground” of a social performance and the backstage in which the social actor prepares for a social performance<sup>81</sup>, that the setting up of the background is normalized and is becoming the usual social practice in social networks that are organized around the visual element. This then posits the question on the discrepancy between self-presentation and reality as well as the normalization of this self-presentation and the potential negative consequences resulting from this. The following questions are also posed: How much space do we even have for reflexivity in the pervasive digital media environment which tends to use self-presentation as a necessary precondition for action, i.e. a skill needed for social inclusion? How much space is left for critical evaluation in digital media environments where self-presentation is the norm?

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79 Benjamin Walter, “The Work of Art in the Age of Mechanical Reproduction”, accessed 20 September 2018.

80 Ibid.

81 Erving, Goffman, *The presentation of self in everyday life*, Penguin books, London, New York 1990, pp. 13-18

## In conclusion

The purpose of this paper was to review some of the implications present in modern digital media environments now emerging. In order to establish the theoretical framework for digital media environments as part of which we examined Instagram, some determinants of these environments have been established. The most important feature is that digital media environments are increasingly present in everyday lives of individuals and are characterized by a high level of integration in the everyday social tissue which brings a different phenomenological experience than the experience of living in previous periods of media development. This experience is characterized by being immersed in media content throughout the day, to the level that tends to overflow into visual and spatial environments in which it has become increasingly difficult to ascertain the border between being connected to the internet and physical reality.

I examined some of the possible implications of such digital environments by using the example of Instagram. Economic implications are mostly present in the speed of integrating these environments in the field of economics and then in the creation of new professions embodying this politics of representation which becomes a precondition for participation in such environments. At the level of social relations, implications are reflected in structuring relationships through social networks; sharing activities organized around photographs is becoming a new social practice that structures relationships. However, the functioning of Instagram is difficult at the level of more intimate communication due to technical characteristics of reduced possibilities for communication through messages and therefore we can conclude that its function is focused more on communicating social status. Transforming the amount of interactions in digital social environments into social status in the real world as well represents another implication which further blurs the limits between virtual and physical reality. Also there is the normalization of a politics of self-representation to the level of its being turned into an increasingly necessary skill so that the individual might achieve certain aspects of social inclusion. We can assume that in such a social context, the capacity for critical reflection on digital environments is reduced. Young generations who mostly use such digital environments are the most vulnerable group in this context. We cannot disregard the negative cognitive implications, primarily those pointing to reduced capacities of higher cognitive processes such as abstract and critical thinking.

What position are we to take on these implications? How can we reduce their negative impact, when the increasing immersion in the omnipresent digital environments is unstoppable? One of the options in these times of overpowering visuality in the context of pervasive digital environments should be stressed over and over again – the role of social and humanistic sciences. Starting from Badiou's idea that philosophy should start from a point outside the system it problematizes if it aims to provide the foundation to the modern world<sup>82</sup>, we can state a similar case for humanities and social sciences. In their epistemological position which is (not necessarily) quantitative and

82 Alain Badiou, *Metaphysics of Real Happiness*, Kulturtreger, Zagreb 2016, pp. 35-36.

positivist, they hold the possibility of maintaining a certain level of objectivity (or should we say subjectivity?) in relation to the increasing quantification and rationalization of a society in which implications of digital environments are normalized. It is precisely this distance that allows primarily the awareness and then the critical examination of the immersion within digital environments regardless of this phenomenon becoming increasingly unobserved. On the other hand in the context of increased integration of digital environments in everyday life, it is legitimate to ask how far can education in the social sciences and humanities reach. One of the implications of digital media transforming into environments is that human beings grow up while being immersed in them. At the same time this also means that the encounter with digital environments within the everyday framework happens before these individuals reach the education system which should provide them with the tools for critical thinking upon these, and we might expect this to result in a lack of critical separation necessary for the analysis of digital environments outside the reference framework they establish. We should therefore conclude that education on the usage of digital environments, including the critical reflection on these, should be incorporated in an early phase of the education system. Also, the possibilities of incorporating a critical approach to usage should be considered within the digital environments themselves. This requires the participation of social structures with the means of regulating digital environments or education on these as well as the development of appropriate public policies. Modern times represent only the beginning in the development of digital environments, which is unstoppable in the direction of their pervasiveness. We should therefore think about necessary interventions in their development and/or ways of their being used. The life of future generations within these environments depends on the foundations established today.

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# Digitalna medijska okruženja i njihove implikacije: Instagram

## Sažetak

*Na početku 21. stoljeća nalazimo se na pragu nove razine razvoja digitalnih medija. Digitalna medijska okruženja izlaze iz fiksnih izoliranih društvenih djelokrugova i sve se više integriraju u svakodnevnicu pojedinca do razine na kojoj postaje teško razlučiti granicu između spojenosti na internet i stvarnog svijeta. Tome doprinose i društvene mreže kao podvrsta digitalnih okruženja u koju smo sve više uronjeni na globalnoj razini. U prvom planu ovog rada je Instagram kao mreža čije je funkcioniranje organizirano oko vizualnog. Namjera je rada promisliti implikacije digitalnih okruženja na primjeru Instagrama u okvirima teorijskog konceptualnog okvira digitalnih medijskih okruženja.*

**Ključne riječi:** digitalni mediji, digitalna medijska okruženja, društvene mreže, internet, Instagram.



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