Maria Nowina Konopka

Jesuit University Ignatianum in Krakow
Institute of Political Science

Web. 2.0: Between Pragmatics and Theory*

Summary

In the early 2000s, in the evolutionary process of the development of new media, the Internet has entered a phase called Web 2.0. This term was very popular in the initial period after it began to function; however, it is slowly losing its importance. In addition, this term is difficult when applied to issues relating to the multifaceted, technologically advanced, situated on the border of many fields and disciplines. Despite that, in practice, society is immersed in new technologies, scarcely engages in cognition issues, refers to the current level of the compilation of the virtual world. This problem is faced by Rafał Maciąg in his interesting monograph *The Pragmatics of the Internet. Web 2.0 as the Environment*. Thus, the purpose of this article is to present selected topics from this book and to critique some of the theses proposed by Maciag. The author of this article also reflects on whether Web 2.0

---

belongs to the realm of pragmatics functioning in a global network, or only to the realm of theory.

KEYWORDS

Internet, Web 2.0, Information and Communication Technology (ICT)

WEB 2.0: MIĘDZY PRAKTYKĄ A TEORIĄ

Streszczenie

W ewolucyjnym procesie rozwoju nowych mediów z początkiem roku 2000 Internet wszedł w fazę nazywaną Web 2.0. Pojęcie to, bardzo popularne w początkowym okresie funkcjonowania, powoli traci na znaczeniu. Dodatkowo zwolenników nie przysparza mu fakt, iż jest to termin odnoszący się do zagadnienia wieloaspektowego, technologicznie zaawansowanego, usytuowanego na styku wielu dziedzin i dyscyplin. Pomimo więc, iż w praktyce społeczeństwo zanurzone jest w nowych technologiach, w niewielkim tylko stopniu angażuje się w poznanie zagadnienia tłumaczącego obecny poziom kompilacji wirtualnego świata. Z problemem tym zmierzył się Rafał Maciąg w interesującej monografii *Pragmatyka internetu. Web 2.0 jako środowisko.* Celem niniejszego artykułu jest prezentacja wybranych wątków z przytoczonej pozycji wraz z komentarzem polemicznym do niektórych zaproponowanych przez autora tez. Ponadto podjęta zostaje refleksja nad tym, czy Web 2.0 należy do sfery pragmatyki funkcjonowania w globalnej sieci, czy pozostaje jedynie w sferze teorii.

SŁOWA KLUCZOWE

Internet, Web 2.0, technologie informacyjno-komunikacyjne

On October 25, 1995, the American Federal Networking Council (FNC) published an official definition of the internet, stating that the

> Internet refers to the global information system that: 1) is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons; 2) is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and 3) provides, uses or makes accessible, either publicly or privately, high level services layered

on the communications and related to the infrastructure described herein [FNC Resolution].

This characteristic refers mainly to the understanding of the global network in terms of technological achievements. Development, when analysed from the perspective of the subsequent amazing achievements of technology, is undoubtedly of paramount importance. You cannot, however, analyse this global medium and not give consideration to such a vital issue as the accompanying process of cultural change. In the above-mentioned definition, it appears, indirectly, linked to the understanding of the concept of "communication services" [Lister et al. 2009, p. 247].

In 2007 Sebastian Kotuła argued, referring to Wikipedia, the flagship project of Web 2.0, that no single, binding definition, which would be precisely defining, had been developed for this concept,

> Some suggest that Web 2.0 is only a buzz word, and under its wings you can put all new Internet initiative. Sometimes the term is attributed to the philosophy of the organization of the site, whether viewed as a kind of trend changing approach to the using the Internet. Finally some also point out that Web 2.0 is an attitude, approach or quality of the mind, and certainly not the technology [Kotula 2007, p. 183].

Six years after this publication, the definition created by Tim O'Reilly is regarded as being binding [O'Reilly 2004]. Some of the components of this reference are complemented at times, especially this one, referring to the social nature of change, and described by Mirosław Lakomy as relying on evolution "from the phase of the consumption to the phase of the participation" [Lakomy 2013, p. 45-46]. This new dimension of communication, as it has been described by Włodzimierz Gogołek [Gogołek 2010, p. 162] resulted in a paradigmatic change, for an internet user became the active subject of the communication symmetric network, the creator and distributor of social content, belonging to the general and globally available [Jemielniak 2013, p. 104]. Unlike in the age of Web 1.0, in the Web 2.0 phase, passivity gave way to activity; surfing to participation; a message from the web site modelled on traditional media to social media; communication acts to process [Szpunar 2010, p. 251-262]. The multidimensionality of problems, the interdisciplinary nature of issues and the processuality

of described phenomenon have led to escalating analytical difficulties, or even inability to describe this phenomenon as a whole. The pragmatics of the Internet today determines the path of future developments, forcing a spiral of social, economic, legal, cultural and technological processes into motion. Which of them is of dominant importance? May theoretical descriptions of ongoing changes determine the nature of the social rules of using the global network? Will the wave of technological inventions facilitating access to the network (e.g. mobile devices) and the mutating global economy undergo a theoretical description? And, finally, is the operationalization of the issues in Web 2.0 through the use of traditional terminology still possible? The questions raised here are answered in the monograph *Pragmatics of the Internet. Web 2.0 as an Environment*, that has been written by the researcher Rafał Maciąg. This 280 page book combines theory and pragmatics of the latest phase of development of the Internet.

In the first chapter of his book, the author very briefly presents the technological aspects of the birth of the Internet, conveying the reader through the twists and turns of the historical conditions of its invention. Describing the scientific discovery, Rafał Maciąg clearly elucidates the "technological and conceptual differences, which differentiates the Internet, or a network, from a certain type of its use that virtually subjugates it to itself" [Maciąg 2013, p. 20]. In this context, the author cites a multitude of ideas and theoretical reflections relating to the time of the emergence, formation, and eventually the flourishing of the "New Economy," as it was called by Manuel Castells [Castells 2010]. This concept is found in the literature along with its other equivalents, such as the term proposed by Carl Shapiro, the "Information Economy" [Shapiro 2007] or "The Networked Information Economy" used by Yochai Benkler [Benkler 2008]. The economic aspect has been considered by many theorists, including Maciąg, as constituting a part of the Web 2.0 environment. This concept already appears in the title, and the author derives its meaning from management science. The "environment" is understood in a more holistic way, as a phenomenon that has its specific identity. Maciąg clarifies in the second chapter of his work that this environment "can be conceptually considered as existing, although set up by numerous and interrelated systems" [Maciąg 2013, p. 55]. In this

context, the hypothesis posed at the outset, that Web 2.0 is an environment that requires a precise designation of the research field by the author. Meanwhile, the research approach adopted in the paper is interdisciplinary, with society being its most extensive background for reflections. Maciąg therefore, methodologically correctly, refers to the systems theory of Ludwig von Bertalanffy; this describes the trend towards the integration of different sciences, both natural and social in order to create a conceptual reality, providing a foundation for the interpretation of the Web 2.0 phenomenon. The integrity of these approaches is carried out in the concept of three-aspect analysis which is the core of the analytical order adopted in the work. Firstly, the author believes that the Internet is heavily involved in the technological context, which results in linking the technological output with the cultural field, and secondly, the fact should be pointed that the internet is an area of mythologizing, in connection with which certain beliefs, such as "the network is a space impossible to be grasped" function [Maciąg 2013, p. 68] or "the Internet is a community believing in certain values such as freedom, freedom of expression;" and the myth, which Maciąg is most critical of, that the possibility exists of a comprehensive and synthetic analysis of Web 2.0 [Maciąg 2013, p. 68-70]. The third aspect

> has a complex character and covers business issues defining the Internet as an area of economic activity ruled by the laws of economics as well as the complex social and political issues extending into the sphere of legal issues and cultural consequences [Maciąg 2013, p. 70].

Isolating these fields and making the appropriate argument excludes the organization as a basis for analysis and enforces the need to explore beyond its boundaries, thus in the full variety of sectors and fields which "can be assembled most accurately inside the vast category of the *environment of*" [Maciąg 2013, p. 71]. This reality is examined by the author when he focuses on connecting the aforementioned aspects and sectors with the real world; this is with the practice of their operation, leaving aside the issues of broad theoretical description. For the Internet, in fact, is a projection of various inter-related activities [Maciąg 2013, p. 72] requiring cause-effect analysis, applied to the vast *spectrum* of accompanying processes. Thus, a practical approach, instead of theorizing, is certainly an interesting research proposition.

In the next part of the book, the formation of the utopian idea of the Internet is described. They were born as early as the 1960s and they basically still exist in the virtual environment, as a reflection of the primary values characteristic of liberal societies. It is influenced by the complicated political situation during the times of the formation of counter-cultural foundations, which are manifested in the form of hippie pacifist movements. The creators and specialists of the computer revolution originated from here [Maciąg 2013, p. 75]. They acted "in the shadow of the threat of nuclear annihilation, caused by the military race and imperial intentions of Soviet Russia" and in "the atmosphere dominated by the bureaucratic mechanized forms of social organization;" therefore they strongly felt the need to create an alternative to this situation [Maciąg 2013, p. 75]. Personalized and interactive technology provided an opportunity to fulfil the dream of a new quality society [Maciąg 2013, p. 78] and therefore a pragmatism strongly built up by ideology could be felt at each stage in the creation of the new order. The efficient use of theoretical knowledge, supported by a substantial budget, has led over time to the creation of a dream alternative. Soon, however, the Internet became commercialized, and commercialism slowly took the place of ideology or even the ideology became commercial itself. This generates various conflicts among which the most important is the issue of "property," "control" and finally "responsibility" for the whole of the Internet. A large number of problems that are difficult to solve is the subject of separate consideration of R. Maciąg. He believes, not without reason, that the open structure of the network and the "end-to-end" logic, as the basic assumptions of the Internet, theoretically speaking, preclude a centralized control [Maciąg 2013, p. 87], but the growth of national legislation (EU international, etc.) results in the attempts of legislators to regularize this sphere as well. It violates, however, the essence of the medium and negates rudimentary, although utopian, ideas associated with it. Apologists and technical fundamentalists wanted, in fact, to make a prototype of local autonomy which, as should be noted, has been successful and has led to the formation of different types of institutions and associations involved in the defence of freedom on the Internet, and manifesting objections in connection with attempts to take control over it. Unfortunately, this activity is slowly losing its importance, because the Internet is more and more frequently inhabited by commercial companies. This invasion into the

network has caused greater conflict in the cyber – space environment and has resulted in an open struggle by its creators to maintain real control over the Internet. In this situation, a multiplicity of interests intersecting in the environment of those involved in the global network has been revealed: the interests of the creators of the Internet, the U.S. government and pushing business. In chronological order, these entities and their bargaining position is described by Maciąg, who explores the dark side of the fight for influence on the theoretically "decentralized" and egalitarian environment. On a side note, it is worth mentioning that already at the beginning of the new millennium, both theorists and practitioners predicted imminent quarrels. Manuel Castells has written: "As the Internet becomes the pervasive infrastructure of our lives, who owns and controls access to this infrastructure becomes an essential battle for freedom" [Castells 2002, p. 277]. It seems that this prophecy is being fulfilled almost before our eyes.

In Maciąg's ruminations over the Web 2.0, "a clear manifestation of social issues induced and sustained by technological inventions, which, on the other hand, provide splendid conditions for business activity, can be noticed." It is characteristic for the author to describe the fields of analysis, which create the specific *spectrum* of phenomena. They have an influence on the current shape of the Internet. These are, for instance:

- the change in the logic of network architecture "involving the transfer of the service of commercial internet traffic on numerous, competing team of providers" [Maciąg 2013, p. 101] in the place of the one National Science Foundation Network;
- the proliferation of the World Wide Web project in 1993;
- the emergence of reports showing the impact of modern technology on the efficiency of the organization which are believed to have enabled the revival of the efficiency of the U.S. economy in the second half of the 1990s [Maciąg 2013, p. 106];
- the implementation of specific political solutions, such as President Ronald Regan's rejection of Keynes's theory and replacing it by the eclectic pragmatism of Reaganomics [Maciąg 2013, p. 111].
- The results of the fuel crisis from the 1970s, which resulted in the need to seek new markets, "leading to their release and the globalization of capital" [Maciąg 2013, p. 109].

Newly developing information and communication technologies were technological support for the emerging businesses at that time, enabling unprecedented mobility and communication. IT companies are therefore on the one hand the first beneficiaries of the emerging new economy; on the other hand, they influence its shape themselves. Once set in motion, the machine generated huge profits, which were cynically characterized by Thomas Friedman, comparing "the boom on the market of new technology companies to the gold rush during which the highest earnings were generated by the sales of Lewis, pickaxes, shovels and renting hotel rooms than by gold taken from the earth" [Maciąg 2013, p. 112]. As a result, on 10 March 2000, the phenomenon of a "speculative bubble crack" was observed, the result of which was that many companies, which values were purely speculative and were not based on the assets they actually possessed, lost up to 80% of their value within a few years (e.g. Yahoo or Amazon). According to M. Castells, this was because of the evolutionary departure from a balanced situation in the financial markets, to permanent change, guided by the logic of chaos, resulting from millions of decisions taken at the same time in many places around the world and making financial decisions based on the information circulating in the network, beginning from rumours and leaks, the impact of which it is hard to overestimate, and finishing on reliable experts analysis [Maciąg 2013, p. 121-125]. The model, which is different from those previously used, and is nowadays called Web 2.0, had to be built on this shaky foundation. This solution has been forced by the pragmatics.

In defining the main subject of his inquiry, Rafał Maciąg refers to the article of Tim O'Reilly, *What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software*, as well as to other articles he has written, which refine and clarify some topics arising in connection with the evolutionary nature of the changes. In his original article, O'Reilly presented "a scheme, including a conceptual map of the phenomenon and defines seven major topics designating a new form of internet, called Web 2.0" [Maciąg 2013, p. 132]. Analysis of each of the seven topics has become a kind of axis around which Maciąg creates his further reasoning. Starting from the general, the discourse is becoming more and more detailed, the background – technological development – however, accompanies a whole discussion, which is based on specific references to facts, figures, people

and institutions. Thus, the book has become a sort of guide with the exact map, which is applied to the recent history of important media names, dates and places. This part of the book, as opposed to the first part, is written in a colourful, simple, sometimes touching language that can at times be perceived as colloquial, which improves the naturalness, reflecting the character of the analysed medium. So we can say that the author felt well and semantically reflected the difference between theory and the pragmatics of the network.

The second part of the book begins with the seemingly banal statement that the Web is a platform; it does not have a single creator or owner [Maciąg 2013, p. 135], and its users, using open standards, have the ability to establish cooperation between themselves freely. O'Reilly writes that the platform has become "an intelligent intermediary" [Maciąg 2013, p. 136]; it is the space "between", governed by mechanisms unknown to economics. Services, mediation, space, and assistance, which effectively manage customer independence, have become commodities. These customers constitute a reservoir of knowledge, because, referring to the famous words of Pierre Lévy, "No one knows everything, everyone knows something, all knowledge resides in humanity." Harnessing Collective Intelligence hidden in the network can provide, economically speaking, a competitive advantage. The mentioned collective intelligence is the foundation of Web 2.0, because the platform is capable of absorbing the intelligence, knowledge and expertise of its users. Using blogs as a kind of emanation of individual experience, knowledge, opinions and competence is also described by Maciąg in the concept of collective intelligence. The phenomenon of RSS (Really Simple Syndication) technology, which allows the syndication of content from a set of distributed data, is connected with it. Blogs and RSS have even become the spark in paradigm change, because, as Jenry Jankins claims, Web 2.0 is a platform through which we can learn from others so easily. Building a technological knowledge-based space, in turn, has resulted in the creation of *knowledge space* [Maciąg 2013, p. 145]. This knowledge is also used for mercantile purposes, because the economic phenomenon that Chris Anderson has termed "a long tail" can be observed [Anderson 2010]. It is worth emphasizing that the Internet creates only the *market*, and the users themselves create its value (for example, implementing the system of recommendations). Thus, the

value of the service is determined not only by the manufacturer, but also by its users, simultaneously blurring the line between the traditional concept of the producer and consumer (i.e. prosumerism[1]), and passing to the individual objectified information about the product. These data are arranged in a hierarchy in the form of socially created charts and quotes, which, on the one hand, are an indicator of quality and popularity; and on the other, they generate the said *value* themselves. Similar structures are also produced by companies that, aggregating information about links, recreate their hierarchy, and then offer them back to the customer as a new service, based on the same pre-aggregated, distributed knowledge of WWW users. The leader of this technology is Google. Its core activity is the exploitation of human knowledge and the management of it to make it a self-contained commodity. Due to the chaos prevailing in the Internet, the significance of the browser as a tool cannot be underestimated, as it enables individuals to gain faster access to information and facilitates, poring through thickets of random links or a manual search of network content. Another example of collective intelligence is a folksonomy or method of bottom-up social determination of the structure using the dictionary created by them. The value of community folksonomy is spontaneous, appointing and valuing some Internet resource by reconstituting the state of the culture that is characteristic for these communities and the implementation in the virtual world of a cultural matrix existing in reality.

In the tenth chapter of the monograph Rafał Maciąg focuses on providing strictly technological analysis, giving that part of the discourse the metaphorical title: Data is the Next Intel Inside. This is a direct reference to the aforementioned article of O'Reilly, in which he paraphrased the Intel marketing slogan and draws attention to the potential of the internet *interior*. The product, invisible from

---

[1]   As we can read at Don Tapscott "With Web 2.0, the companies in virtually every industry can change their customers in the manufacturers – that is prosumers. The prosumerism is not only a simple extension of customisation, concentration on the customer or any other phenomenon which comes down to the fact that companies are developing basic products and letting customers decide about details. We can observe the prosumerism, when both, manufacturers and customers, actively participate in the formation of current products and services" [Tapscott 2010, p. 350].

inside and physically intangible is a source of big profits. Economic creativity associated with the knowledge of social expectations, supported by technological capabilities, allows the conversion of internet content-distributed resources in the aggregated database. The new product is created by overbuilding additional solutions on the data base, which together form a cloud (cloud computing), and so remote, territorially unassigned and not physically existing disk storage. Other solutions rely on the co-creation of a new product on the basis of the cooperation between the existing components (e.g. mushup). Technological development leads to a "growing complexity, not only in the area of algorithms, but also of a growing number of conceptual solutions" [Maciąg, p. 218]. As a result of the formation of intangible property, the logic of their distribution changes, as we can read in the next part of the paper End of the Software Release Cycle. According to this logic, users are involved in the process of product creation. By transferring programs to the server, one transfers responsibility for their using, as well as the responsibility for self-service, onto the surfers. This treatment has a psychological impact, translating directly into the final quality of service, in terms of technology. The online platform is in fact a collection of innumerable services, selected by the user himself, making them a unique offer, the best possible, because it has been self-chosen, and is tailored to the individual needs of the Internet user. The phenomenon of the current development phase of Web 2.0 means the fact that, without specific knowledge, or intellectual involvement, the Internet user is able to compose and use the programs offered to him. The key to this success are Lightweight Programming Models; the concept *light* relates primarily to the simplicity, reproducibility, intuitiveness of using software. The superimposing of these technical values on the social aspect of environment cooperation causes the phenomenon of "innovation in submitting" [Maciąg 2013, p. 232]. It is, according to Maciąg one of the key structural features of Web 2.0, joining itself to the activity of a number of pages, supporting

> complex, cooperative, flexible, modular model of functioning, emerging in theoretical studies (...). It sets out very clear framework and environmental determinants, which is created in this way: the environment, both of informatics and have an organizational nature [Maciąg 2013, p. 232].

At the end of his deliberations Maciąg characterises the basic elements of hard market pragmatics, referring back to the words of O'Reilly: "useful software, written above the level of a single device will bring income for a long time" [Maciąg 2013, p. 239]. This observation is connected with the evolution of the network concept, which becomes a computer with time, a provider and receiver of services, the field, in which a human communicates with machines that work for him, on equal rights (the so-called Internet of things). Maciąg presents the Android system as an example that embodies O'Reilly's predictions, and is a phenomenon that is based on the idea of the major importance of Rich User Experiences. The issue concerns the possibility of technology related to graphical applications, allowing individuals to feel greater satisfaction in contact with the software that react quickly, are graphically interesting and meet the needs of the user, where they are easy to operate the picture, load immediately and provide support or complement functioning in the real world. Their attractiveness and popularity is made possible by the connecting of technological, social, cultural and linguistic knowledge.

A set of characteristics of Web 2.0, proposed by O'Reilly and discussed in detail by Maciąg, emphasizes the pragmatic nature of this phenomenon. In the next parts of the paper, Maciąg underlines the economic benefits, which are intentionally implemented and influence society's cultural tissue. These changes, having their source in technology, give direction to the changes taking place, setting the path of progress once again. So the self-reinforcing spiral of needs, opportunities, and pragmatics works.

The ambition of the author of the book *Internet Pragmatics* was to finish his analysis by showing the multi-dimensionality of the issue, and pointing out that the environment like Web 2.0 is a phenomenon that is difficult, maybe even impossible, to grasp at all. This environment is a living tissue, consisting of so many independent systems, components and processes, that any attempt to describe this phenomenon is almost insanity or even scientific arrogance. Perhaps this is because the author does not mention political issues, security, ecology or the emergence of new paradigms in education and upbringing in the twenty-first century. He points to the practical dimension of the issue by presenting the things as they are, and trying to subject them simultaneously to scientific, theoretical

analysis. This task has been executed professionally, watching the differently understood pragmatics of Web 2.0. For it seems that the very concept of Web 2.0, although undoubtedly epistemologically significant, has the character of, quoting Kotula once again, a "buzzword, under whose wings you can put all the new Internet initiative." By changing the macro-social level into micro-social, one can observe a significant dissonance between the theory and practice of Web 2.0. This happens because when we operate on a daily basis in the world of new technology, we do not notice how far they have become for us a natural extension of reality. Web 2.0 has become a living environment and is woven into almost all the manifestations of human activity. Even more astonishing is that the cognitive curiosity associated with an in-depth reflection on the term is not accompanied by the immersion in new technologies. There is no doubt that in recent years, the number of people with access to the Internet obtained through a variety of information and communication technologies grows (Chart 1).

Chart 1. Using information and communication technologies in Poland in the years 2003-2013.
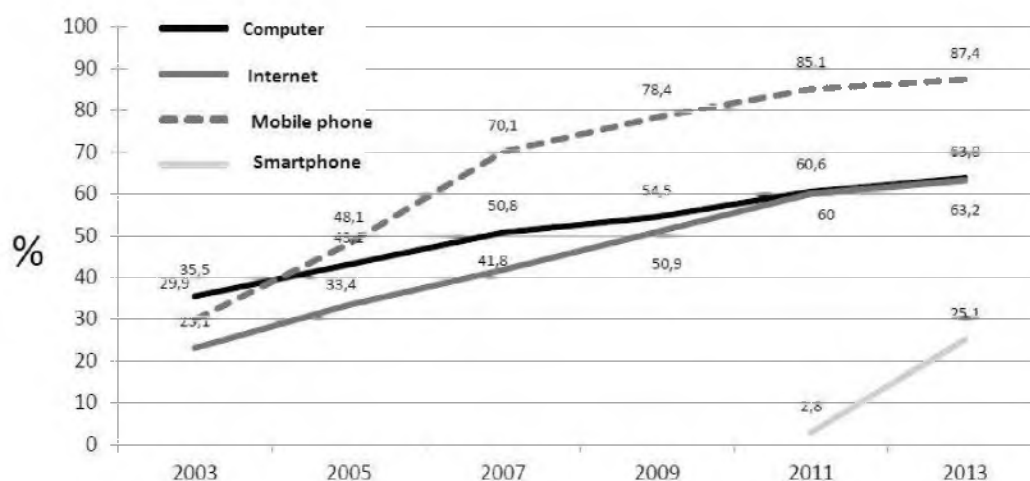
Source: [Czapiński, J., Panek, T. (eds.) 2013, p. 336].

Access to the Internet in the phase of Web 2.0 development emerges as an active involvement in social networks. According to Gemius, 90% of Polish internet surfers make use of such services (i.e. 17 331 644 users) [Obremski 2013]. Most of them visit them daily or

several times a month[1], and the most popular of them is Facebook, which is appreciated by almost 70% of Internet users; visited at least once a day by 51% of users, several times a week by 17%, and a few times a month by 9% of Internet users [Jasiołek 2012]. These data clearly show the extent of the impact and even the prevalence of Web 2.0 use that leave no doubt as to their practical application. The situation looks slightly different in the case of searching for knowledge about the subject under discussion. The phenomenon of declining interest in the topic discussed can be noticed here. The charts below show that the time of the mass searching for information about Web 2.0 is over. The concept is no longer fashionable, or is slowly disappearing, both, in Poland and globally.

Chart 2. The number of queries for "Web 2.0" in Poland in the years 2005-2013.
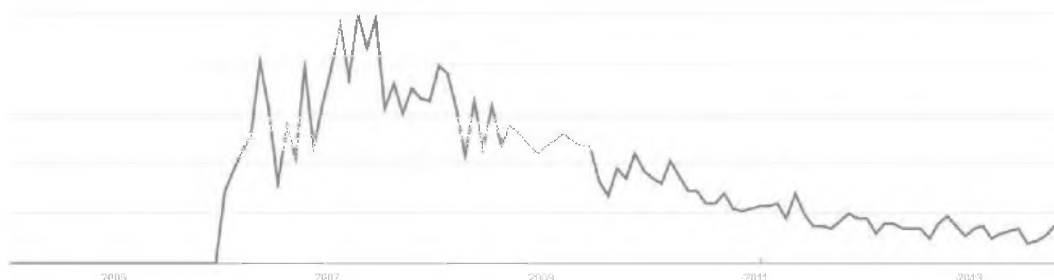
Source: Own, based on the analysis of Google Trends, November 2013.

Chart 3. The total number of queries for "Web 2.0" in the years 2005-2013.
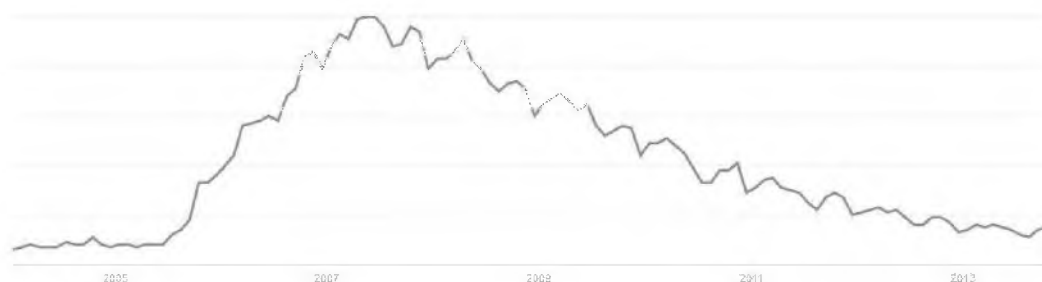
Source: Own, based on the analysis of Google Trends, November 2013.

---

1   *Socjalni Polacy – jak często odwiedzamy portale społecznościowe*, <http://biznes.
     onet.pl/socjalni-polacy-jak-czesto-odwiedzamy-portale-spol,18562,5297159,-
     news-detal: (accessed: 20.10.2013).

Therefore, it seems that the term Web 2.0 related to the phase of development of the Internet is too narrow a concept, having a technological connotation, and consequently the stage of euphoria is slowly becoming a thing of the past. While it is difficult, based on Google Trends, to conclude unequivocally about the saturation of interest in the tested concept, this still is one of the most dynamic indicators when it comes to mapping the current public interest, measured by the number of searches of information, and so informing about whether and to what extent Internet users look up information on a particular topic. A supporting tool could be the statistics on the number of pages returned in search results for a given phrase. Also this study shows that the peak of the interest in the concept of Web 2.0 took place in the years 2009 to 2010. To sum up, it should be stated that Web 2.0 belongs to the realm of pragmatics of functioning in the network, rather to the realm of theory.

BIBLIOGRAPHY

Anderson, Ch., 2010, *The Long Tail: How Endless Choice is Creating Unlimited Demand*, Random House.

Benkler, Y., 2008, *Bogactwo sieci. Jak produkcja społeczna zmienia rynki i wolność* (*The Wealth of Networks: How Social Production Transforms Markets and Freedom*), Warszawa.

Castells, M., Castells, M., 2003, *Galaktyka internetu. Refleksje nad internetem, biznesem i społeczeństwem* (*The Internet Galaxy: Reflections on the Internet, Business and Society*), Poznań.

Castells, M., 2010, *Społeczeństwo sieci* (*Network Society*), Warszawa.

Czapiński, J., Panek, T. (eds.), 2013, *Diagnoza społeczna. Warunki i jakość życia Polaków* (*Social Diagnosis. Conditions and Quality of Life in Poland*), Rada Monitoringu Społecznego [Social Monitoring Council], Warszawa.

Gane, N., Beer, D., 2008, *New Media*, New York.

Gogołek, W., 2010, *Komunikacja sieciowa. Uwarunkowanie, kategorie, paradoksy*, Warszawa.

Jakubowicz, K., 2011, *Nowa ekologia mediów. Konwergencja i metamorfoza*, Warszawa.

Jemielniak, D., 2013, *Życie wirtualnych dzikich. Netografia Wikipedii największego projektu współtworzonego przez ludzi*, Warszawa.

Kotula, S.D., 2007, *Web 2.0 – współczesny paradygmat internetu*, in: *Oblicze internetu. Architektura komunikacyjna sieci* (*Web 2.0 – the modern*

paradigm of the Internet, in: *The face of the Internet. Network communication architecture*), ed. M. Sokołowski, Elbląg.

Lakomy M., 2013, *Demokracja 2.0. Interakcja polityczna w nowych mediach*, Kraków.

Levinson P., 2010, *Nowe, nowe media* (*New, new Media*), Kraków.

Lister M., Dovey J., Giddings S., Grant I., Kelly K., 2009, *Nowe media. Wprowadzenie* (*New Media. Introduction*), Kraków.

Maciąg R., 2013, *Pragmatyka internetu. Web 2.0 jako środowisko* (*The Pragmatics of the Internet. Web 2.0 as the Environment*), Kraków.

Noor Al-Deen, H.S., Hendricks, J.A. (eds.), 2013, *Social media. Usage and impact*, Lexington.

Ricardo F.J., 2009, *Cyberculture and New Media*, Amsterdam – New York.

Shapiro C., 2007, *Potęga informacji. Strategiczny przewodnik po gospodarce sieciowej* (*Information Rules: A strategic Guide to the Network Economy*), Gliwice.

Szpunar M., 2010, *Nowe media a paradygmat kultury uczestnictwa*, in: Graszewicz, M., Jastrzębski, J. (eds.), *Teorie komunikacji i mediów 2*, Wrocław.

Tapscott D., 2010, *Cyfrowa dorosłość. Jak pokolenie sieci zmienia nasz świat* (*Digital adulthood. How the network generation is changing our world*), Warszawa.

The Internet Galaxy: Reflections on the Internet, Business, and Society, 2002, Oxford University Press, Oxford.

Netography

Federal Networking Council (FNC), *Definition of "Internet"*, <http://www.nitrd.gov/fnc/Internet_res.aspx>.

Jasiołek, K., *Jak często odwiedzamy portale społecznościowe*, <http://www.komputerswiat.pl/nowosci/internet/2012/45/jak-czesto-rodacy-odwiedzaja-portale-spolecznosciowe-%28infografika%29.aspx>.

Obremski, M., *90% internautów korzysta z serwisów społecznościowych*, <http://www.rp.pl/artykul/996789.html?print=tak&p=0>.

O'Reilly, T., *What is web 2.0?*, <http://oreilly.com/web2/archive/what-is-web-20.html>.

Socjalni Polacy – jak często odwiedzamy portale społecznościowe, <http://biznes.onet.pl/socjalni-polacy-jak-czesto-odwiedzamy-portale--spol,18562,5297159,news-detal>.