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The threats to the individual in their family and personal life in the information society according to the 50+ age generation

Zagrożenia jednostki w życiu osobistym i rodzinnym w społeczeństwie informacyjnym w opinii generacji 50+

Streszczenie. Współcześnie w Polsce funkcjonuje obok siebie, ale i żyje wspólnie ze sobą sześć pokoleń. Najwięcej miejsca w analizach w kontekście rozwoju społeczeństwa informacyjnego zajmuje pokolenie Y, które stanowi obecnie 21% mieszkańców Polski. Znacznie rzadziej wspomina się o innych generacjach, np. o pokoleniu X czy też *baby boomer's*, mimo że mają większy udział ilościowy w społeczeństwie polskim niż „igreki”. Główną płaszczyzną opisu funkcjonowania pokoleń w dostępnej literaturze jest rynek pracy. Brakuje natomiast rozważań dotyczących np. poglądów na temat bezpieczeństwa informacyjnego czy też zagrożeń związanych z przestępczością komputerową lub zmian w funkcjonowaniu rodziny.

W skład generacji 50+ wchodzi: pokolenie *baby boomer's* oraz osoby urodzone przed lub w czasie drugiej wojny światowej. Ramy chronologiczne tej grupy można określić następująco: urodzeni do 1964 roku. Z pewnością generacja 50+ to cyfrowi imigranci, gdyż zdobywali doświadczenia w świecie rzeczywistym. Jednak przynależność do grupy cyfrowych imigrantów nie musi zawsze prowadzić do cyfrowego wykluczenia. To proces skomplikowany i jego przebieg jest uzależniony od wielu czynników. Należą do nich m.in.: płeć, wiek, poziom wykształcenia. Obraz pokolenia 50+ w kontekście cyfrowych umiejętności i kompetencji nie jest jednorodny, szczegółów dostarczają badania Eurostatu, CBOS-u czy też Diagnozy społecznej.

Prezentowane w artykule wyniki badań zostały przeprowadzone w 2015 r., głównym celem prowadzonych badań było zdiagnozowanie poglądów osób w wieku 16–74 lata na temat zagrożeń w społeczeństwie informacyjnym. W trakcie badań zebrano 2298 ankiet, z czego do dalszego opracowania zakwalifikowano 2111. Zagrożenia te rozpatrywano na pięciu płaszczyznach: życia osobistego i rodzinnego, pracy zawodowej, ochrony zdrowia, edukacji i wiedzy, bezpieczeństwa wewnętrznego. Respondenci określali poziom zagrożenia odczuwanego przez siebie oraz dla społeczeństwa.

Ankietowani w obszarze zagrożeń życia osobistego mieli do wyboru jedenaście możliwości i mogli wybrać do trzech zagrożeń. W grupie ankietowanych 50+ najczęściej respondenci wskazywali nowe typy uzależnień, na drugim miejscu ułożono osłabienie więzi międzyludzkich, a na trzecim osłabienie więzi rodzinnych i zanik rodzin wielopokoleniowych. Wśród ankietowanych 11,6% nie miało zdania. Szczegółowa analiza statystyczna pozyskanych danych w grupie 50+ wykazała, że czynnikami wpływającymi na poglądy respondentów są: płeć, stan zatrudnienia, częstotliwość korzystania z sieci, a także ocena własnych umiejętności. Problem zagrożeń jednostki wynikających z rozwoju społeczeństwa informacyjnego w opisywanych badaniach ujęto także z perspektywy ilościowej. Respondenci określali poziom zagrożenia jednostki w określonym obszarze w skali od 0 do 5. Wyznaczyli je z dwóch perspektyw: w stosunku do innych osób oraz w stosunku do siebie, jego wartości wynosiły odpowiednio 2,90 oraz 2,63, co wskazuje na wartości średnie. Znaczący jest fakt, że blisko 40% w grupie 50+ zadeklarowało zetknięcie się z problematyką zagrożeń jednostki w społeczeństwie informacyjnym. Badania wykazały także, że większość respondentów jest przekonana o tym, iż potrzebne są inicjatywy mające na celu uświadomieniu jednostkom zagrożeń wynikających z rozwoju społeczeństwa informacyjnego. Ankiety pokazały, że respondenci z grupy 50+ odczuwają zagrożenia dla jednostki wynikające z rozwoju społeczeństwa informacyjnego, wrażliwość na te kwestie jest nieco silniejsza u kobiet. One częściej postrzegają ją przez pryzmat relacji międzyludzkich. Mężczyźni raczej patrzą na ten problem poprzez optykę technologiczną.

Słowa kluczowe: społeczeństwo informacyjne, bezpieczeństwo, późna dorosłość.

Summary. Nowadays, in Poland 6 generations of people co-exist. It is the generation Y that occupies the greatest amount of analysis in the context of the information society development, the generation Y constituting presently 21% of the inhabitants of Poland. The other generations are much less frequently mentioned; for instance, generation X and *baby boomers* are considered to a lesser degree despite the fact that they have the bigger share in the Polish society than the generation Y. It is worth noting that it is the job market in terms of which the description of how the respective generations function is provided. What is missing though are the considerations pertaining to, for instance, the opinions on information safety or the threats related to computer crime or the changes in the manner the family functions. This paper is an attempt to present the opinions of 50+ age group in the context of the dangers emanating from the information society development and from the extensive use of ICT in one's personal and family life.

Keywords: information society, safety, late adulthood.

Characterizing 50+ age generation

50+ age generation consists of *baby boomers* generation and the people born before or during World War II. Speaking about its time-frame, the group en-

compasses the people born no later than 1964. The oldest individuals falling into that group are the persons born before or during World War II and they are presently aged at least 71. They are professionally inactive but it does not imply that they are withdrawn from life. They amount to 10% of the Polish society. The second group falling into the 50+ age generation is *baby boomers*, that is the people born after the World War II up to the early sixties of the XX century. At present, they amount to 25% of Polish inhabitants, whereas at the job market, they constitute 30% of human resources. Jointly, 50+ age generation constitutes 35% of the Polish society. That is the group which cannot be skipped when considering the influence of information society development and new technologies on the life of an individual and bigger communities.

Certainly, the 50+ age generation comprise digital immigrants because they acquired their knowledge in the real world and it is the latter that is a natural reference point for them (Prensky). However, what is worth emphasizing, belonging to the group of digital immigrants does not necessarily lead to digital exclusion. It is a complicated process being dependent on many factors. They include what follows: sex, age, education. Douglas Adams formulated three basic rules describing the attitude of the person to innovations, new ideas or phenomena. The rules are formulated in the following manner:

Rule 1: Whatever exists in the world at the moment of a given person's birth is ordinary and natural to them.

Rule 2: Whatever was invented when the person is aged between 15 and 35 is revolutionary and exciting and one can build one's career upon it.

Rule 3: Whatever was invented when the person is aged over 35 shatters the person's natural order (Nowakowski).

If we assume that the information society in Poland dates back to 1994 – the moment of publishing the policy documents of the First Congress on Polish Information Technology [I Kongres Informatyki Polskiej], then the pre-war and occupation annals entered the era of the information society, being aged at least 50. And almost anybody counting as the *booby boomer* was over 35 years old.

Digital description of the 50+ age generation

When the issue of the digital exclusion is tackled, the age group which is particularly vulnerable to the problem is 50+ age generation but that sta-

te of affairs is subject to dynamic changes. Furthermore, the 50+ age group is not homogenous. Yet, it would be in vain to look for detailed characteristics at Eurostat website. The relevant information is rather to be found in the research by CBOS [Public Opinion Research Center] or by Diagnoza Społeczna [Social Diagnosis], which concerns the entire Polish society and which is conducted in representative groups. The research from 2015 indicates that among the ICT devices, the most popular is the mobile phone. It is used by 72,6% of pensioners, and in the case of the people aged between 60 and 64, that indicator amounts to as much as 88%. About $\frac{1}{4}$ of pensioners makes use of the personal computer and the Internet, whereas the least popular device is the smartphone – being exploited by only 10,3% of the people receiving a pension (Diagnoza społeczna [Social Diagnosis], 2015, p. 383). The dynamism of the growth in the number of people using the Internet in 2003–2015 is observed in all the age groups, also in the group of the elderly. The above is illustrated by the diagram 1.

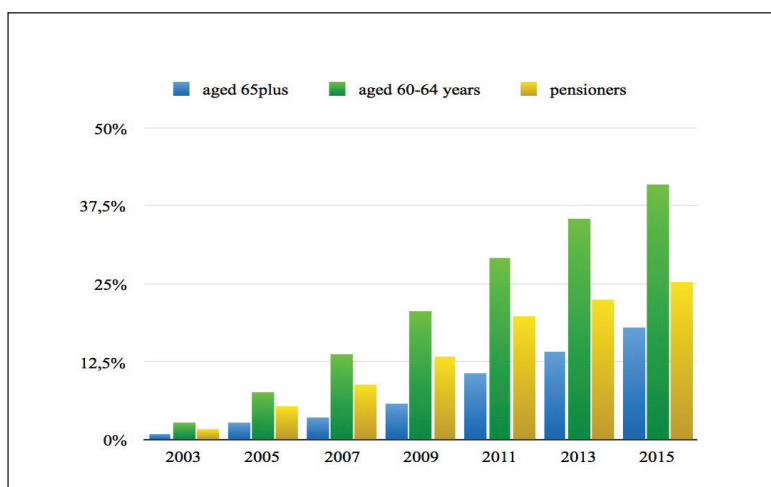


Diagram 1. The dynamism of the growth in the number of Polish Internet-users in the chosen age groups
Source: elaboration based on sources (Diagnoza społeczna [Social Diagnosis], 2015, p. 384–386).

The detailed research shows the older part of the 50+ age generation is „TV- and press-oriented”, that is as much as 74,6% of pensioners watch TV at least 2 hours a day and 63,1% of them read the press at least an hour a week. Only 2,1% of pensioners use mobile Internet. For this generation,

TV is the most frequently used information channel. According to the data from 2015, pensioners devote daily 196 minutes on average to TV-watching, 30 minutes to reading press and 16 minutes to Internet. The correlation is noticeable: the older the age group, the more time it devotes to TV-watching (Diagnoza społeczna [Social Diagnosis] 2015, p. 390).

The community of Polish Internet users is explored by other centres; the research by CBOS from 2015 confirm that belonging to the group of Internet users decreases with the age of its users. And so, for the 65+ age group, the share amounted to 15%, whereas for the people aged between 55 and 64, the share was as high as 39%. The Internet activities for adult users are highly diversified. They mainly use online magazines, then comes Internet TV (watching series), and the third position is occupied by blog reading. These users do not avoid Internet radio either. The details are represented in the diagram 2. The data indicated a relatively high degree of reading in the 50+ age group.

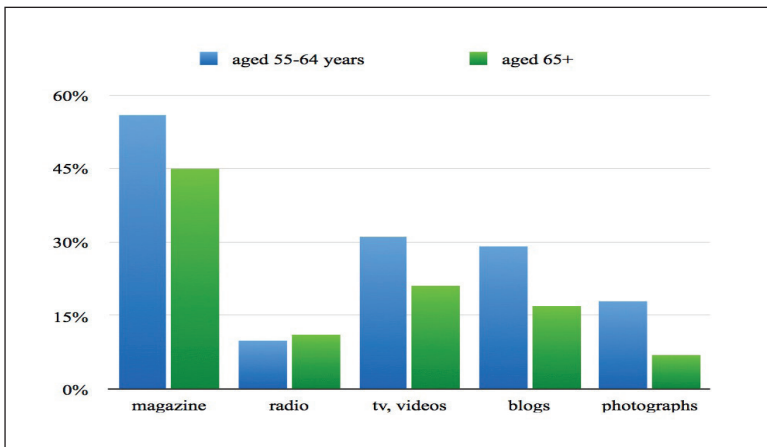


Diagram 2. Adult users' Internet activity last month before conducting the research
source: my own work (Internauci, 2015, p. 13).

The Internet users aged 50+ are also active in social networking sites. The above-cited CBOS research, conducted in exclusively Polish groups, indicated that in the age group 55–64, the share of users is 44% and for the group aged 65+, it amounts to 21%. That digital description would not be complete were the opinions held by grey-army Internet users (colloquial equivalent for grey-haired Internet users) left unconsidered. They not only quite

realistically judge their own skills but also they do realize how their lack of competence influence how the senior citizens perform as family members or members of the society. The research conducted by Łukasz Tomczyk with the small group of respondents – 50 participants of UTW [University of the Third Age] in Cieszyn – indicate that senior citizens record as the effect of the lack competence with respect to ICT first and foremost: the limited access to current news and the impoverished socializing with the loved ones – 28% of the respondents. Then followed the social isolation – 20%, and third came the lack of the opportunity to make use of the e-baking, the impoverishment of the social and political life and the ineptitude in many areas of life – 12% (Tomczyk, 2010).

The methodology of my own research

The research was conducted in 2015, the questionnaires were collected within the student project supervised by the author at the faculty of internal security in the academic year 2014/2015. The research was conducted in kujawsko-pomorskie voivodeship. That region is located in the north-central part of Poland and it definitely does not belong to the national leaders when it comes to the information society development. What testifies to it is the majority of indicators from 2015, for example the access to the Internet in the households in kujawsko-pomorskie – 66,0%, while the national average was 75,8%. The percentage indicating the share of people regularly using the Internet in that voivodeship was 55,9% while the average in Poland was 64,8%. The share of employees regularly using computers in their companies amounted to 34,2% whereas the national average 43,3% (Społeczeństwo informacyjne w Polsce, 2015). The main purpose of the conducted research was to diagnose the beliefs held by the people aged between 16 and 74 concerning the issue of the threats present in the information society. These were considered in five dimensions:

- personal and family life,
- professional work,
- health protection
- education and knowledge,
- Internal security.

The respondents were specifying the level of danger experienced by themselves and the threat to the society. Due to the subject matter of the paper, our considerations will be restricted to the first area. The purpose

of the research led to the determination of the main and detailed research problems.

- What kind of dangers in the area of family and personal life are regarded as dominating by the surveyed people from 50+ age group?
- What level of danger in the realm of personal and family life do the respondents indicate on the five-degree scale?
- To what degree do sex, employment status, the frequency of using the Internet and the evaluation of one's own abilities of using ICT influence the sense of the danger to oneself in the area of personal and family life stemming from the information society development?

In the scrutinized research, dependent and independent variables occurred.

- The dangers to the individual in the area of personal and family life are understood broadly. The selection of the relevant dangers was determined by the primary literature.

Sex.

- Employment status – specifying the professional status of the respondent. The respondent was allowed to choose one option: being a school pupil or a student; being a pupil or (disjunctively) a student and working; disability pension, pension, professional work, being on a sick leave, being unemployed or others.

- The frequency of using the Internet – the respondent was given four options: not using the Internet, using it occasionally, using it regularly (understood as at least three times a week), using it daily or almost daily.

- The evaluation of one's own abilities of using ICT according to the scale assumed in the questionnaire. The respondent was given six options to choose from: no abilities, insufficient abilities, sufficient abilities, good abilities, very good abilities and having no opinion on the subject.

- The level of dangers to the individual in the area of his or her personal and family life— that level was determined by assigning a natural number ranging from 0 to 5. The following scale was assumed: 0 – no danger, 1 – a minor level of danger, 2 – a low level of danger, 3 – an average level of danger, 4 – high level of danger, 5 – a very good level of danger.

The indicators were students' answers in the questionnaire as well as their answers according to the said scale. The choice of research sample was non-random and the decisive factors were that of economic and organizational nature – the research was virtually conducted without any cost. Specifying the issue of the selection of research sample, the choice of the subjects

was an instance of convenience sampling. The only conditions to be met were the age of respondents – 16 – 74 and residing in kujawsko-pomorskie.

The questionnaire contained 10 questions with the short personal information. The overall number of questionnaires collected was 2298 out of which 2111 were admitted to further study. The group of respondents from 50+ age group contained 275 people, which amounted to 13% of the overall number of people surveyed. Within 50+ age group, 51% of them were males. The average age for the subjects of the survey amounted to 58,2 years, the median – 56 and the mode – 50. That collection proved to be diversified in a statistically significant sense with respect to age $V=13,4\%$ and right asymmetrical. In the 50+ age group under survey, 33,5% did not use the Internet, 31,6% did so only occasionally, 14,5 regularly, and 20,4% did so on a daily basis. The structure of the subjects under survey with respect to employment status is represented in diagram 3.

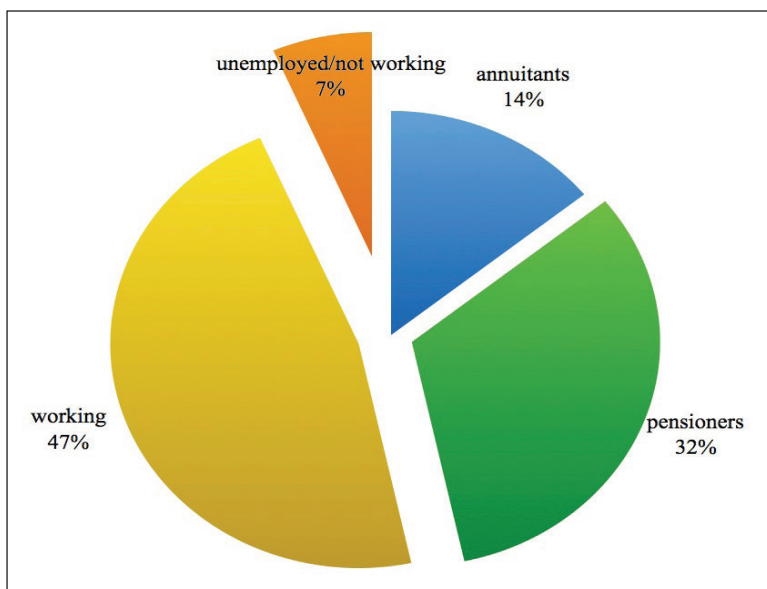


Diagram 3. The structure of respondents with respect to their employment status
source: my own research.

The respondents most often indicated that they used the Internet at home – more than a half of the respondents, and almost 20% of them – at work.

It was only 1,5% of the subjects under survey belonging to 50+ age group that indicated that they make use of public hotspots. The group of 33% of the respondents did not indicate a single place, which is understandable because the same percentage of the respondents declared that they do not use the Internet at all. The respondents also evaluated their respective skills pertaining to the use of technology of information-communication nature. 18,9% of the respondents evaluated them as insufficient, 23,6% as sufficient, 16,4% as good, only 2,9% as very good indeed. The group of 6,5% could not evaluate the level of their respective skills in the relevant area.

In the personal information box the question about one's place of residence and the one about one's education were skipped. It was done deliberately: the place of residence is not quite as relevant as it used to be a few years ago. First of all, information society is more mobile than industrial – people migrate much more frequently. Second, the place of residence does not determine the future events in one's life as much as it did before. The fact of living in the village is not equivalent to working in the agriculture. What is more, a part of city dwellers move to village areas and new technologies enable them to carry on with their jobs (e.g. telework). What was also skipped was respondents' education. The indicators of scholarship [academic education] these days differ from the ones dating back to 20–40 years ago – very much alike the status of GCSE examination or the higher education.

The threats in family and personal life

The respondents in the realm of the threats to their personal life had at their disposal eleven options and they were allowed to choose up to three of them. In the surveyed 50+ age group, the respondents indicated usually the new types of addiction – 42,2%, and second came the weakening of interpersonal relations – 41,5%, while third came the weakening of family times and the decline of multi-generation families – 32%. Among the respondents, 11,6% did not take a stand. The details are represented in the diagram 4, in which for the sake of comparison the opinions held by the students pertaining to the threats diagnosed a year ago were stated. It transpires that both groups differ slightly in terms of the perception of the threats.

The detailed statistical analysis of the data obtained in the surveyed 50+ age group revealed the statistically significant correlation between sex and the respondents' opinions on the issue of the dangers. It was confirmed by the chi-square test. The value χ^2 amounted to 23,88, the critical value

being 16,919 and significance level being $\alpha=0,05$. The differences between men and women are most conspicuous in the category of family ties and the decline of multi-generation families – this option was indicated by 43% of women and as little as 21% of men. The second best option indicated was computer-illiteracy, for which 18% of men opted and 6% of women did so. The third place was occupied by the weakening of interpersonal relations. That problem was indicated by 47% of the female respondents and 36% of male respondents. What follows is that females pay more attention to interpersonal relations.

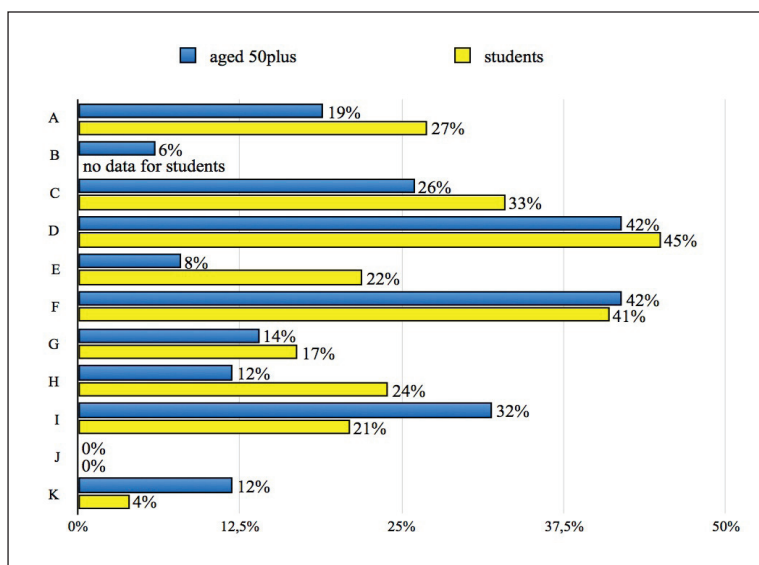


Diagram 4. The respondents' opinion pertaining to the threats in the realm of family and personal life

A – dehumanization of interpersonal relations; B – limiting the access to information by introducing fees or other measures; C – the individual being controlled and his or her privacy infringed upon; D – new types of additions; E – digital exclusion; F – weakening of interpersonal relations; G – the diversification of the society in terms of the access to new technologies; H – computer-illiteracy; I – the weakening of family ties and the decline of multi-generation families; J – others; K-I have no opinion on it

source: my own work.

The next element taken into account was the employment status. The detailed data is presented in the diagram 3. Chi-square test indicated that the employment status is related to the respondents' opinion in a statistically significant way; the value χ^2 amounted to 68,29, the critical value being

40,1133 and the significance level being $\alpha=0,05$. The greatest diversification of the beliefs was observed in the category of new types of addictions. It was opted for by 26% of annuitants and 24% of the pensioners. As much as 53% of the employed and 39% of the professionally inactive also opted for the above-stated category. That sensitivity to the issue of new addictions has reputedly many sources. The person professionally active more often keep in touch with the younger generation than the people aged 65+ both on the level of the family as well as at work. And generation Y and Z have bigger problems with being addicted to new technologies than older generations.

Another great diversification was observed in the category of the individual being controlled and his or her privacy infringed upon. That danger was recognized by 18% of the annuitants, 26% of pensioners and 37% of the employed and only as little as 11% of the professionally active people.

The respondents who are employees face the inspection of their activities in ICT realm by their respective employers. It does not merely reduce to restricting the access to Internet sites at the workplace but a certain type of monitoring of the employees' profiles at the social networking sites. Some group of employers pay attention to social networking profiles even at the stage of recruitment and that is why the employees resort not only to auto-censorship but also deliberately create their own image in social media. A great diversity in opinions was observed in the category *decreasing the ability of accessing information by introducing fees or other restrictions*. As much as 22% of people professionally inactive paid attention to that issue. On the other hand, in the case of the employed and those receiving disability pension, that indicator was at the level of 5% and 4% when it came to pensioners. The explanation of such a distribution only in terms of the respondents' income is not correct. Due to the incompleteness of the scrutinized research, one can only make some suggestions, e.g. interests, information competences etc.

What was also observed was the statistically significant correlation between the frequency of using the Internet and the opinions on the issue of the danger in the area of one's personal and family life. The chi-square test confirmed it. The value χ^2 amounted to 102,99, the critical value being 40,1133 and the significance level being $\alpha=0,05$. The biggest diversification was noticeable in the category of new addictions. They were signaled most often by the people regularly using the Internet. As much as 73% of such respondents noticed the problem. In the case of people using the Internet on a daily basis, the percentage amounted to 57%; while for the people not using the Internet, the problem proved significant only for 23% of such

respondents. The great diversification of the beliefs was also visible in the category of the individual being controlled and his or her privacy being infringed upon. This type of danger seemed significant for 54% of daily Internet users, for 38% of the respondents using the Internet regularly and only for 10% of the respondents not using the Internet at all.

The third plane reflecting the greatest diversity was the danger specified as the weakening of interpersonal ties. The highest value of that variable was observed in the regular and daily Internet users – 55% and 52% respectively. The respondents using the Internet occasionally pointed at that particular danger at the number of 40%. The lowest value, that is merely 30%, was recorded in the case of the people who were not Internet users at all. What is also interesting is the comparison of two opposing groups, that is the respondents not using the Internet at all and the ones who use the Internet on a daily basis. The representatives of the first group most frequently indicated the weakening of family ties and vanishing of multi-generational families – 37% of indications. The second position was occupied by the weakening of interpersonal relations – 30% and the third best was the category of new addictions – 23% of indications. What is telling is the fact that as much as 26% of the respondents of that group did not indicate any single danger. They stated that they hold no opinions on that subject. For the sake of comparison it should be added that in the group of the respondents using the Internet daily, the share of the people holding no opinions on that issue was only 2%. For daily Internet users, the biggest danger proved to be new types of addictions – 57%; the second most popular choice was the control exerted over an individual and the infringement of his or her own privacy – 54% and the weakening of interpersonal relations – 52%. The differences in the evaluations of these two groups are quite meaningful. The last element which was taken into consideration was the evaluation of one's own abilities of using ICT. What was noticeable proved to be the relation between that evaluation and the opinions held on the issues of dangers to the individual in the area of personal and family life. For example, as much as 26% of the persons who judged that they do not have the ability to use ICT did not indicate any danger at all. In the case of the remaining groups, the share of the people not holding any opinions on the subject fluctuated between 2% and 12%. There occurred still some other differences; yet, the closer statistical analysis was hindered because the group of people who judged their own skills as very good was rather small – it amounted to merely 8 persons.

The problem of the dangers emanating from the development of information society can be approached from a quantitative perspective. And

it was the stance taken in the scrutinized research in which the respondents specified also the level of the threat to the individual in a given realm resorting to the scale ranging from 0 to 5*. They specified it from two distinct perspectives: relative to other people and relative to themselves. As a result of the conducted research, the data was obtained, which is demonstrated in the table 1.

Table 1. The chosen statistics pertaining to the threats to the individual in the information society in the realm of family and personal life

Statistical measures	Felt relative to other people	Felt relative to oneself
Mean	2,90	2,63
Modal	3	2
Median	3	2
Coefficient of variation	48,59%	58,94%
The number of people who did not take a stand	49 people	59 people

Source: my own work.

It transpired that in the case of the evaluation of the threat, it was difficult to specify the statistically significant correlations between the level of danger and such properties as sex, the frequency of using the Internet or the employment status etc. What is telling is the fact that 39,3% of the respondents in the 50+ age group admitted being acquainted with the issue of the threats to the individuals in the information society. However, 28,4% states that they cannot recall such a fact and 32,4% did not take stand on the subject. The respondents were allowed to indicated at most 3 source of information. The sources most frequently indicated was film/reportage/documentary and a discussion on the radio and/or the TV, which indirectly confirms the fact that the generation 50+ devote most time to TV-watching. However, the third place indicated was occupied by Internet networking sites and then the discussions among friends and relatives. The research also

* In survey research the following scale was assumed: 0 – the lack of danger, 1 – a minor level of danger, 2 – a low level of danger, 3 – an average level of danger, 4 – high level of danger, 5 – a very high level of danger.

showed that the majority of respondents is convinced that what is needed is the initiatives aimed at making people realize the dangers stemming from the information society development. The detailed data is presented in the diagram 5. It also points to the dissatisfaction in this respect but also to the fact they realize the gravity of these problems.

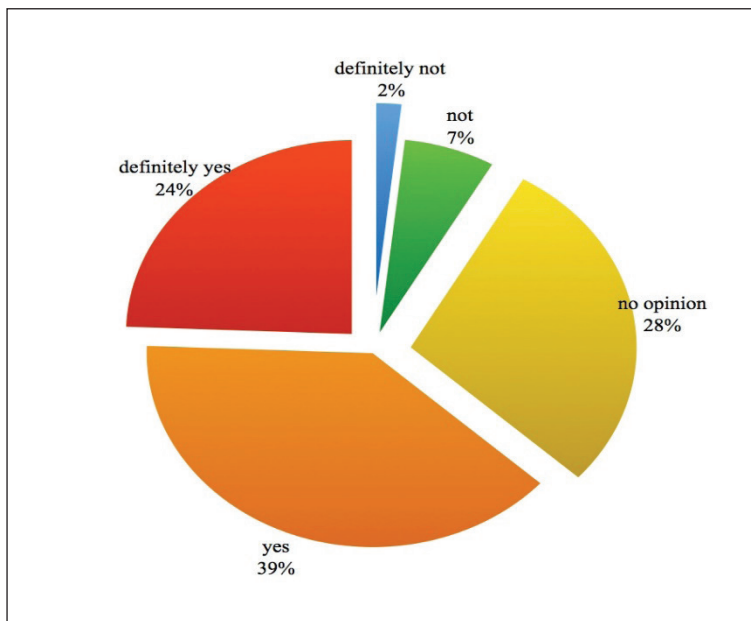


Diagram 5. The opinion by the respondents related to the need for actions for the sake of making individuals aware of the dangers stemming from information society development. Source: my own work.

50+ age group, quite like other groups, when evaluating the level of danger, stated that the others are more threatened than they themselves are. That mechanism is visible in much research conducted by the author (Stachowiak, 2012, Stachowiak, 2015). The research proved that the respondents from 50+ group felt the dangers to the individual stemming from the information society development. Still, women in this group are more sensitive to the threats than the men from this group are. The former more often perceive them through the eyes of interpersonal relations. Men perceive this problem rather from the angle of technology.

Conclusion

The author's research indicates that the issues connected with perceiving the dangers stemming from the information society development are complex and complicated. First and foremost, one should consider those issues on different planes, starting from considering the internal security and finishing with the reflections upon personal and family life. The explorations proved that there are statistically significant correlations between the opinions held by the respondents and their traits such as, for example, their sex, employment status, the frequency of using the Internet and the age group a person belongs to. That is why the specifics of each generations should be taken into account while designing the information-education projects raising the issues of the dangers in the information society. Still, it should be borne in mind that one should not restrict oneself to one age group exclusively because it can give rise to the ghettoization of such initiatives (Słowińska, 2014). In connection with the dynamics of the growth of the information society, it would be advisable to create the generationally diversified groups of leaders who would be to deal with organizing, programming and implementing the thematic projects related to the issues of the dangers in the information society.

Bibliography

- Diagnoza społeczna* (2015), J. Czapiński, T. Panek (eds.), Contemporary Economics Warszawa.
- Internauci 2015, Komunikat z badań BS 90/2015, CBOS, Warszawa.
- Konieczna-Woźniak R., *Uczenie się jako strategia pozytywnego starzenia się*, „Rocznik Andragogiczny” 2013, p. 185–200.
- Majchrzak K., *Międzypokoleniowy projekt „Przywracanie Pamięci Miastu”*, „Rocznik Andragogiczny” 2014, p. 498–502.
- Malec Rawiński M., *Fenomen długowieczności i starzenia się z perspektywy auto/biograficznej*, „Rocznik Andragogiczny” 2014, p. 283–295.
- Słowińska S., *O „gettoizacji” aktywności kulturalnej seniorów*, „Rocznik Andragogiczny”, 2014, p. 271–282.
- Spółeczeństwo informacyjne w Polsce. Wyniki badań statystycznych z lat 2011–2015*, Główny Urząd Statystyczny, Warszawa.
- Stachowiak B. (2012), *Socjalizacja studentów do społeczeństwa informacyjnego na przykładzie Litwy, Niemiec, Polski, Republiki Czeskiej i Ukrainy: a comparative study*, Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika, Toruń.

- Stachowiak B. (2015), *Spostrzeżenie przez studentów zagrożeń w obszarze życia osobistego oraz rodzinnego wynikających z rozwoju społeczeństwa informacyjnego*, [in:] J. Bednarek, A. Andrzejewska, *Cyberprzestrzeń, człowiek, edukacja*, vol. 2, Oficyna Wydawnicza Impuls, Kraków.
- Tomczyk Ł. (2010), *O wykluczeniu cyfrowym seniorów w zinformatyizowanym świecie. O wykluczeniu cyfrowym seniorów w zinformatyizowanym świecie*, [in:] Z. Zieliński (ed.), *Rola informatyki w naukach ekonomicznych i społecznych. Innowacje i implikacje interdyscyplinarne*, Wydawnictwo Wyższej Szkoły Handlowej, Kielce, p. 140–150.

Internet sources

- Nowakowski K., *Cyfrowi tubylcy vs. cyfrowi imigranci*, available at: <http://www.socjalnety.pl/cyfrowi-tubylcy-vs-cyfrowi-imigranci> (access: 20.12.2015).
- Prensky M., *Digital Natives*, Digital Immigrants, available at: <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf> (entered many times in the period 2010–2015).