



CHARACTERISTICS FOR THE BEHAVIOUR OF SOCIAL NETWORKS USERS IN GERMANY

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Abstract. Against the background of a comprehensive milieu analyses of Internet users, which were performed between 09/01/2012 and 09/18/2012, factors and correlations between the usage of traditional media, Internet services and social networks within the German market were analysed. It was possible to use 1,607 completed questionnaires, filled in by German users of social networks, for the analysis. The gathered information was applied to test several sub-hypotheses. These were formed to support the main hypotheses which, in turn, were created to research the transfer of existing descriptions of lifeworlds onto Internet users and to investigate how these descriptions can be extended to characterise the online environment. The analysis displays for the actual frame group that several sub-hypotheses relating to the sector of gender specific media consumption, differences between using the internet on a mobile device or a computer, usage of specific functions in combination with mobile Internet, the specific characteristics of social network users for people with business approaches, as also the transfer of offline hobbies into the Internet could be evaluated. For the analysis, the methods of exploratory factor and correlation analyses were used to support and confirm the hypotheses.

These results established the fundamentals for an upcoming comparison, performed on the basis of the existing lifeworlds, which is intended to support the hypotheses in the main research of the doctoral thesis, and to transfer existing milieu theory approaches from the real world into social networks.

Key words: *social networks, user behaviour, brand preference, consumer segments, economic sociology*

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Introduction

At the present time, the Internet has become a pillar as communication medium in the Marketing mix. With growing opportunities in the sector of customer acquisition, customer loyalty and social media, it is becoming more and more important to understand customer groups and their usage of the Internet in detail. Because of this, it has become increasingly important for companies and their marketing departments to understand the various customer groups found on the Internet, and realise the similarities between them and the behaviour of real life customers and interested parties, that is, if compared to the interaction within the society and the traditional media. The background of the research is comprised of the sociological principles of lifeworlds. It is investigated whether these lifeworlds can be transferred to

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social networks, more specifically, to virtual groups of people. This is done in order to confirm the possibility of applying these essential sociological principles also for the investigation of the Internet industry, thus providing basic principles for a segmentation of Internet users.

According to (Bourdieu, 1980, p. 183), the society consists of accumulations which can only be represented by short-lived and mechanical states of equilibrium. (Schulze, 1992, pp. 176-197) supports this approach of stipulating and choosing relationships on the basis of the character and shape. The term 'social milieu' (Becker, Becker and Ruhland, 1992, p. 80) combines groups of people who are similar in terms of their outlook on life and life style. Consequently, the group has the same living environment (Hradil, 2006, pp. 87-125). The term 'social milieu' (Hradil, 2006, pp. 278-284) denotes a grouping of people that have a similar mentality and often a common 'factual context' (region, district, professional life, etc.). (Flaig, Meyer and Ueltzhöffer, 1994, pp. 109; 124) shows similar characteristics of the description of the living environment, in the context of the living motives as those described by Bourdieu. The most commonly used form of defining the strata and the social environment (Flaig, Meyer and Ueltzhöffer, 1994, p. 55) is the so called Sinus representation (Sinus-Darstellung). The basis for the frequently used Sinus-milieus (Schulze, 1992, p. 391) was set by (Hradil, 1987, p. 131). It contains and broadens the approach by Bourdieu (Vester et al., 1993, pp. 40-41). (Vester et al., 1993, p. 195) points out that the Sinus-milieu (Flaig, Meyer and Ueltzhöffer, 1994, p. 59) is not defined by socio-economic characteristic, but by criteria of one's lifestyle and value orientation. This information is and can be used to differentiate populations and to study people's preferences (Sinus Institute, 2011; Sigma Institute, 2011). The investigation can also take place on a time background, thus grasping the changes in the society. Among other things, this approach is used to describe the political socialization (Vester et al., 1993, pp. 329-354), whereby seven types of sociation for the Federal Republic of Germany can be distinguished, based on the Sinus-Milieus and age structure (Vester et al., 1993, p. 355). This approach has also been used to research Internet users in Germany and Great Britain (Lichy, 2011, pp. 470-475), and differences in the online communication behaviour can be observed. The social differentiation, that is, the connection between personal preferences, the social position and the benefits from the use of the Internet and social networks, has so far not been investigated in the Federal Republic of Germany. As concerns the unresolved issues regarding 'social media' and 'social networks', it is obvious that the foundations of the social structure analysis lie in the market segmentation of Internet and social network users. An estimate of the number of users of a population can be obtained from the approach of social structure analysis. The population can be analysed in terms of certain forms or market segments. Hence, more detailed properties of the development of social networks, web applications, social media activities or customer group analyses can be deduced. In order to confirm the theoretical fundamentals the following (primary) hypothesis has been proposed:

H: The consideration of a participant's lifeworld leads to more reliable results than analysing the sample without taking lifeworlds into account.

This primary hypothesis is supported by various sub-hypotheses which are based, first of all, on qualitatively described results, and second of all, on pure explorative descriptions and approaches which can be validated. This is done in order to support the triangulation of the research methods. For this purpose, three supporting hypotheses have been proposed.

Ha: The selected lifeworlds reveal characteristics, relating to their consumption preferences, which can be described as typical for the respective lifeworld.

Hb: The lifeworlds show characteristics, relating to the use of the Internet, which can be described as typical for the respective lifeworld.

Hc: In a direct comparison of the milieus, the selected lifeworlds reveal significant changes in the results of the SH1-SH10.



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In order to confirm the theoretical model, the results of Ha-Hc are tested on a quantitative basis, with an emphasis on the use of explorative methods. Since this is a fundamental research, this methodological approach was chosen. In order to carry out the subsequent analysis, a questionnaire was developed on the theoretical principles (defined) by Pierre Bourdieu, and its usability was, at first, investigated by means of action research, in the form of qualitative interviews. Afterwards, the survey was adjusted to the contemporary period and patterns of internet use. This was achieved within the framework of qualitative workshops, group and brainstorming discussions, as well as by means of a qualitative association survey, which allowed, due to the high number of participants, the performing of a quantitative analysis of the frequencies of qualitative entries. In addition, a quantitative survey was conducted, on the basis of prior qualitative research, to determine the influencing variables of online surveys. Finally, pre-tests of the questionnaire were performed, using small groups, in order to arrive at comprehension questions. The pre-tests also allowed maintaining the bounce and error rate as low as possible, and increasing the number of completed questionnaires. This was done in order to ensure a number of completed questionnaires necessary for a substantial quantitative analysis. The later analysis of SH1-SH10 is performed on the basis of correlation and factor analyses, while the emphasis in this paper falls on ten of the eight possible investigations.

There are different approaches for the calculation of correlation coefficients. The rank correlation coefficient by Spearman (Schira, 2005, p. 95) is used for ordinally scaled data; the Product Moment Correlation Coefficient by Pearson (Schira, 2005, p. 94) and Bravais-Pearson (Mayer, 1989, p. 93) is used for metrically scaled data. According to (Cohen, 1988, p. 82) correlations at $r = .10$ are regarded as insignificant, from $r = .30$ as medium and from $r = .50$ as large. (Bühner/Zielger, 2009, pp. 613-614) refer also to the effect size, according to Cohen and (Eid, Gollwitzer and Schmitt, 2011, p. 508). The results of the correlation analysis form the basis of the factor analysis. Factor analysis is derived from the beginnings of correlation analysis in the field of psychology (Pawlik, 1971, p. 21). The first factor model was developed by (Spearman, 1904, pp. 256-278). The currently used methods are the principal component model (Pawlik, 1971, p. 58), which was introduced Harold Hotelling in 1933, and the major axis model, also developed by Hotelling. These methods are based on prior calculations of correlation analysis (Pearson, 1901, pp. 559-572). Various methods are used for the calculation of the exploratory factor analysis (Bühner, 2011, p. 298). For the scope of factor analysis, (Köhler, 2004, p. 99) indicates that the sample size should be 5 times larger than the number of variables in the survey. (Bühner, 2011, pp. 325-326) recommends using at least 500 data sets, and at least 1000 for a likelihood ratio test. Various recommendations are made for the loading of various factors. (Backhaus, Erichson and Weiber, 2011, p. 362) suggests that a high loading starts from > 0.5 . (Bagozzi/Baumgartner, 1994, p. 402) see the factor loading of 0.4 as a threshold starting from which the loadings can be taken into consideration. Thus, factor loadings depend on the sample; as concerns samples with an N under 70, only the factor loadings over 0.65 should be considered. (Köhler, 2004, p. 98) regards 0.3 as the limit of the factor loading and points out that the significance at this level is only 10%. Based on his literature review, (Schuhmacher, 2006, p. 98) states that a factor loading of 0.3-0.4 means minimum statistical significance, a range from 0.4-0.5 implies low significance and 0.5-1 indicates strong statistical significance. According to (Bühner, 2011, p. 371), factor loadings starting from 0.30 or 0.20 are of practical significance. Additionally, the significance of loadings, whether strong or low, depends on the sample size. (Bühner, 2011, pp. 370-371) states that at $N=400$ the $r > 0.129$, at $N = 600$ the $r > 0.105$, at $N = 800$ the $r > 0.091$ and at $N = 1.000$ the r is significant by > 0.081 . This may also influence the choice and number of the factors. (Reinboth, 2007, p. 37) states that there are no rules as to how the number of factors should be correctly defined. The factors with a low significance should be removed within the model and, at this point the experience of the user is of importance. Additionally, it is important to take into consideration that the unrotated solutions are, as a rule, not open to interpretation (Kopp/Lois, 2009, pp. 15-17). The Kaiser-Meyer-Olkin measure (KMO), which indicates whether variables can even be explained by factors, must be



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investigated (Backhaus, Erichson and Weiber, 2011, p. 343; Bühner, 2011, p. 347), as well as the Barlett-Test (Reinboth, 2006, pp. 125-126; Backhaus, Erichson and Weiber, 2011, pp. 341-342).

The evaluated data of ISS2012 confirm that the respondents are private Internet users with a personal Internet connection and a place of residence in the Federal Republic of Germany. Thus, the Internet users are characterised by a set of demographic data (such as 892 female and 715 male participants; the average year of birth: 1983, median: 1987, mode: 1991; Internet since average: 2000 median: 2001; 431 of the 1,607 participants did not have mobile Internet access). The data in this respect, as well as regarding the family status, matches the number of persons living in a household. The average number of persons per household is 2.62, with a median/mode of 2 people. Fundamentally, higher education entrance qualification is mentioned most often. The number of times higher education entrance qualification (Abitur) is mentioned is almost the same as the number of entries containing the status of student. The income group of under 10,000 € is indicated as the mode which can be associated with the high number of students and pupils. The median shows the exact average income level of 35,000 - 44,999€. A comparison of the main demographic and Internet usage data, as well as a review of findings described in other studies, it seems that the population obtained is not a perfect representation of the basic population. But it must also be considered what features characterise a sample if certain sets of features are not available, or there is the question of representativeness: 'This question to which there is no answer, shows that it is essentially meaningless to speak about a "representative" sample. Variations of the sample distribution are not an exception, but rather the rule' (Stier, 1999, p. 159). Deviations must, therefore, be expected. Random samples allow, however, drawing representative conclusions. It must also be taken into consideration that statements on representative surveys or representative samples have no precisely defined quality criteria (Esser, Hill and Schnell, 1992, pp. 314-315) and that this information represents a random sample for a later evaluation of predefined customer segments, based on lifeworlds. In general, it can be stated that a complete sample group consisting mostly of young and active Internet users has successfully been obtained. Other sectors of the society have been reached and covered as well. Therefore, the sample is ideal for demonstrating the possibilities of analysing the lifeworlds of the Internet users as well. An examination of the sub-hypotheses should provide new and significant information on the general behaviour of social network users, as well as confirm existing assumptions. With this information, significant basements foundations for the usage of social networks are set, including information which can be used for product development approaches in the sector of mobile and Internet communities in the context of Web 2.0, including the ability to understand customers in greater detail for marketing approaches. The investigated hypotheses provide a good basis, first of all, for the testing of the hypotheses from the preliminary research, and, second of all, for the subsequent confirmation of Hc. The investigate hypotheses also support Ha and Hb, during a milieu comparison, by means of continuing descriptive investigation and evaluation, thus confirming the primary hypothesis at least qualitatively, but with quantitative elements.

Research results and discussion

Based on the collected data, the following section contains an examination of SH1-SH8 from the main research on user behaviour in social networks. The sub-hypotheses are analysed in order to determine their validity. They are used to further examine different lifeworlds with the aim of supporting the main hypotheses. The analysis is performed on the basis of the outlined theoretical fundamentals. Based on the particular scale type, the methods used for correlation analysis are product-moment correlation (PMC) by Pearson and Spearman's rank correlation coefficient (SRCC). As concerns factor analysis, it was carried out with a rotation, namely, the varimax rotation (Kaiser, 1958, pp. 187-200). The anti-images were taken into consideration as well. In addition, principal axis factor analysis was used as a basis for the factor



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analysis. The KMO of the respective area of analysis is indicated for each EFA. All results display a two-tailed significance level of 0.01 (Stier, 1999, pp. 245-246). The sub-hypotheses with the respective additional sub-hypotheses are studied in an ascending order. A closing statement as to whether the sub-hypothesis can be regarded as confirmed is provided.

SH1: An increasing household income has a positive and significant impact on the living environment of the participant. SH1a: There is a significant correlation of at least $\rho > -0.3$ between the household income and the time when an Internet connection is installed in the household. The SRCC shows a value of -0.306 between the variables of household income and the beginning of Internet use. This means that the higher the gross income of a household, the sooner it started using the Internet. SH1a can be considered as confirmed. *SH1b: There is a significant correlation of at least $\rho > +0.3$ between the household income and its residential environment.* An SRCC of $+0.401$ exists between the variables of household income and the residential environment. This means that the size and independence of the living environment increase with household income. SH1b can be considered as confirmed. *SH1c: There is a significant correlation of at least $\rho > +0.3$ between the household income of the participant and his educational qualification.* The SRCC shows a value of $+0.299$ between the variables of household income and the educational qualification. It can be assumed that a higher educational qualification leads to a higher household income, and a higher household income allows achieving a higher educational qualification. Unfortunately, SH1c cannot be considered as confirmed. SH1 can be considered as confirmed, provided that SH1c tends to be considered as confirmed as well. A significant SRCC value of $+0.352$ can be observed between household income and car ownership, while a high negative SRCC value of -0.112 exists between household income and the wish to own a car. There is also an SRCC of $+0.316$ between household income and the owning a dishwasher. A rising household income seems to lead to a more positive social environment, provided that it includes property, education, a better living environment, as well as technical facilities. Additionally, there is an SRCC of $+0.147$ between the household income and gender. In this case it means that an increasing household income correlates with the male gender with a value of $+0.147$.

SH2: There is a significant and positive correlation between particular media content and gender. SH2a: There is a significant correlation of at least $\rho > +0.3$ between the female participants and consumption of romantic films. A PMC/SRCC of $+0.458$ can be observed between the gender of the participant and the preference for romance films. The calculated value indicates a correlation of $+0.458$ between the female gender and romance films. Although the level of $+0.5$ was not reached, this correlation is very high. SH2a can be considered as confirmed. *SH2b: There is a significant correlation of at least $\rho > +0.3$ between the male participants and consumption of action films.* A PMC/SRCC of $+0.342$ can be detected between participants of the male gender and the preference for action films. The sub-hypothesis can be considered as confirmed. In addition, it is worth mentioning in this context that the male gender and the preference for war films, which tend to contain action, correlate with a value of $+0.223$ (PMC/SRCC). SH2b can be considered as confirmed. *SH2c: There is a significant correlation of at least $\rho > +0.3$ between the male participants and consumption of TV content relating to sports.* There is a PMC/SRCC of $+0.331$ between the male participants and the preference for TV content relating to sports. It is additionally revealed that there is a PMC/SRCC $+0.255$ between the broadcaster Sport1, which focuses on sports, and the male gender. This correlation is the highest between the male gender and a certain TV station, which supports the assumption that sports, is watched more by men. SH2c can be considered as confirmed. *SH2d: There is a significant correlation of at least $\rho > +0.3$ between the female participants and consumption of romantic literature.* There is a PMC/SRCC of $+0.387$ between the female participants and the preference for romance literature. This confirms the assumptions that romance literature, as well as romance films, are usually enjoyed by women. SH2d can be considered as confirmed. Basically, the various sub-hypotheses of SH2 indicate that certain types of content show a tendency towards a specific gender, regardless of the medium. The differentiation between the genders is shown also by other types of content. As concerns female participants, there is a PMC/SRCC of $+0.191$ with drama films and $+0.212$ with literature belonging to the drama genre. The situation is similar with detective



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stories which have a correlation of +.189 with female participants. As regards TV content, there is a PMC/SRCC of +.172 between the female participants and cooking shows, +.187 with soap operas and +.190 with TV films. As concerns literature, higher correlations can be observed for the male gender. There is a correlation of +.173 between male participants and comic books, +.181 with science fiction, +.208 with scientific journals and +.247 with trade magazines. By definition, trade magazines do not have to be scientific. These can also be specialised magazines about hobbies, such as cars, business and crafts. As concerns films, science fiction has a correlation of +.261 with the male gender. Regarding other demographic data, none of the variables of the residence, marital status, level of education, household income, or family status have a more significant impact on the media consumption as gender. None of the mentioned variables has a correlation exceeding +/-1. SH2 can be considered as confirmed.

SH3: There is a highly significant correlation of at least $\rho > +0.5$ between the duration of Internet use during the week and at the weekend. In the following, the values refer first to a population of $n=1,607$, including all the participants, and a population of $n=1,177$, including the participants who indicated the availability of mobile Internet in advance. *SH3a: There is a highly significant correlation of at least $\rho > +0.5$ between the duration of using the Internet on a desktop computer during the week and at the weekend.* There is a highly significance SRCC value of $-.724/-0.745$ between using the Internet on a desktop computer during the week and at the weekend. SH3a can be considered as confirmed. *SH3b: There is a highly significant correlation of at least $\rho > +0.5$ between the duration of using the Internet on a mobile device during the week and at the weekend.* There is an SRCC of $+0.864/+0.776$ between using the Internet on mobile device during the week and at the weekend. SH3b can be considered as confirmed. *SH3c: There is no correlation of at least $\rho > +0.3$ between the duration of using the Internet on a desktop computer or a mobile device.* There is an SRCC of $-0.051/+0.045$ between using the Internet on a desktop computer during the week and a mobile device during the week. There is an SRCC of $-0.068/-0.001$ between using the Internet on a desktop computer during the week and using the Internet on a mobile device at the weekend. There is an SRCC of $-0.061/+0.011$ between using the Internet on a desktop computer at the weekend and using the Internet on a mobile device during the week. There is an SRCC of $-0.030/+0.139$ between using the Internet on a desktop computer at the weekend and using the Internet on a mobile device at the weekend. In addition, there is no significance of the measurements, or a significance of the level of 0.01. Sub-hypothesis SH3c can, therefore, be considered as confirmed, since the correlation with the other values is low. SH3 can be considered as confirmed.

SH4: There is a positive and significant correlation between the duration of using the Internet on a mobile device and the use of certain functions within social networks. *SH4a: There is a significant correlation of at least $\rho > +0.3$ between the time spent online from a mobile device and the intensity of uploading pictures.* There is an SRCC of $+0.280$ between uploading of pictures and using the Internet on a mobile device during the week. There is an SRCC of $+0.256$ between tagging friends in messages and using the Internet on a mobile device at the weekend. SH4a can be considered as unconfirmed. *SH4b: There is a significant correlation of at least $\rho > +0.3$ between the time spent online from a mobile device and the intensity of tagging friends in pictures.* There is an SRCC of $+0.232$ between tagging friends in pictures and using the Internet on a mobile device during the week. There is an SRCC of $+0.211$ between tagging friends in messages and using the Internet on a mobile device at the weekend. Therefore, SH4b can be considered as unconfirmed. *SH4c: There is a significant correlation of at least $\rho > +0.3$ between the time spent online from a mobile device and the intensity of tagging friends in messages.* There is an SRCC of $+0.262$ between tagging friends in messages and using the Internet on a mobile device during the week. There is an SRCC of $+0.241$ between tagging friends in messages and using the Internet on a mobile device at the weekend. Therefore, SH4c can be considered as unconfirmed. *SH4d: There is a significant correlation of at least $\rho > +0.3$ between the time spent online from a mobile device and the intensity of using the location function.* There is an SRCC of $+0.347$ between the use of the location function and using the Internet during the week. There is an SRCC of $+0.346$ between using the location function and using the Internet at the weekend. SH4d can be considered as confirmed. *SH4e: A significant factor can be*



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defined for the functions of SH4a-SH4d. The factor analysis (KMO, 910; Sig by Barlett, 000) shows a factor of 4, which is composed of the mentioned functions with the appropriate loading. In detail, the factor consists of the functions: tagging friends in pictures with a loading of +.692, tagging friends in messages with a loading of +.684, sharing one's location with a loading of +.430 and uploading images with a loading of +.508. These are followed, by posting status messages with +.329 and, among others, the social network WhatsApp with +.234. The network WhatsApp fits in this overview as a network which has no connection to the Internet as it is used on a desktop computer. This connection is supported by the factor of 5 of the analysis. Due to this factor, SH4d can be considered as confirmed. It was possible to confirm only two of the five sub-hypotheses. It can therefore be debated about whether there is a connection between the mobile Internet and the usage of certain functions, which is why SH4 is not considered as confirmed. In this case, further research would be necessary, since the connection can be different even when viewing certain target groups. The correlation between the mentioned functions and the mobile Internet is much more significant than between the functions and using the Internet on a desktop computer. There are significant correlations between the functions themselves which suggest that the use of certain functions depends on the use of others. This is also evident in SH4e which generated a matching factor; however, due to the different scaling in the factor analysis, the time spent online has not been evaluated.

SH5: There is a significant correlation between social networks and the intensity of their use. SH5a: There is a significant correlation of at least $\rho > +0.3$ between social networks with the same user layers. The examination of the correlations showed an insignificant value of $\rho > +0.3$ for the networks G+, Hi5, ICQ Jappy, Kwick, Stay Friends, Wer-kennt-Wenn, WhatsApp and YouTube. These are mostly networks, which, either, have been fighting with a constant loss of users in 2011 and 2012, or fulfil simple chat service functions, thus operating on a sub-area of social networks, or as part of the Google network. As concerns other networks, there is a PMC of +.338 between MySpace and MSN Live: two networks which have suffered a substantial loss of users in the past. It is conspicuous in this context that there is also a correlation of +.332 between the intensity of use of the VZ Netzwerke and that of MySpace. There is a PMC of +.511 between the social networks in the sector of business networks, which will be discussed in detail later. One of them, Xing, also correlates with Flickr (+.318) and 4SQ (+.318). Apart from that, there are significant connections between the networks.

Table 1

Correlation matrix for the intensity of the use of social networks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Flickr (1)	1	+385	+406	+420	+372	+353	+282	+363
4SQ (2)	+385	1	+408	+276	+419	+400	+267	+431
Instagram (3)	+406	+408	1	+314	+245	+361	+329	+373
LastFM (4)	+420	+276	+314	1	+247	+295	+355	+280
LinkedIn (5)	+372	+419	+245	+247	1	+390	+208	+338
Pinterest (6)	+353	+400	+361	+295	+390	1	+317	+297
Spotify (7)	+282	+267	+329	+355	+208	+317	1	+232
Twitter (8)	+363	+431	+373	+280	+338	+297	+232	1

Source: author's calculations based on the information gathered from the ISS2012

This evaluation gives a very different result; there is a strong connection between particular networks of the English-speaking world, which have different target audiences. Regardless, SH5a can be considered as confirmed. *SH5b: Significant factors consisting of social networks can be defined.* The factor analysis (KMO .915; Sig. by Bartlett .000) shows three factors consisting mainly of social



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networks, from the survey questions focusing on the use of the Internet. Factor 2 is most interesting, as it mainly includes English-language networks, each of which occupies a market niche. The first factor contains mainly niche networks and is led by certain new networks which focus on special users groups or web functions. This factor has a loading of +.625 for 4SQ, followed by Instagram with +.597, Flickr with +.572, Pinterest with +.557, LinkedIn with +.541, LastFM with +.477, Twitter with +.474, Spotify with +.428, and Xing with +.412. In addition, this factor is one of the few with a strong negative loading of -.041 for chatting, of -.063 for tagging friends in pictures and -.137 for playing games on social networks. Afterwards, the analysis shows an additional factor, factor 7, which consists mostly of older networks or networks which are not evident in the correlation analysis. The factor for MSN Live has a loading of +.535, followed by +.470 for ICQ, +.467 for MySpace, +.441 for Jappy, +.406 for VZ Netzwerken, +.325 for Kwick and +.306 for YouTube. In addition to this, there is the peculiar factor 12 with a positive range and the value +.497 for Stayfriends, +.312 for Wer-kennt-wen and +.307 for VZ Netzwerken. In contrast, there appears a very interesting range of factors with negative loadings. Here, WhatsApp has a loading of -.112, Spotify has -.140, the use of social networks for chatting has -.190 and YouTube has a negative loading of -.225. This shows the distinctiveness of the factor, as well as perhaps of the other niche networks that differ significantly from the very modern and new networks Spotify and WhatsApp. SH5b can be considered as confirmed. Both SH5 sub-hypotheses can be considered as confirmed. Therefore, SH5 can be considered as confirmed.

SH6: There is a significant correlation between the intensity of using business networks, specific users and the factors motivating them to use business networks. SH6a: There is a significant correlation of at least $\rho > +0.3$ between the intensity of using business networks and the motivation to find business partners and customers. Both networks (Xing and LinkedIn) have a PMC which exceeds +.3. There is a PMC of +.372 between LinkedIn and the motivation to search for customers and business partners. There is a high PMC of +.434 between Xing and the motivation to search for customers and business partners. Therefore, SH6a can be considered as confirmed. *SH6b: There is a significant correlation of at least $\rho > +0.3$ between the intensity of using business networks and the motivation to search for jobs using social networks.* In general, however, job search is associated with the intensity of using the two networks (LinkedIn and Xing). There is a correlation of +.268 between LinkedIn and job search, and +.305 between Xing and job search. Due to the fact that both networks are very similar and no such correlations can be seen for other networks, it is assumed that career change is a motivational factor for using Xing and LinkedIn. SH6b is formally regarded as unconfirmed. Nevertheless, a notable correlation exists; especially Xing exceeds the significant limit. *SH6c: There is a significant correlation of at least $\rho > +0.3$ between the motivation to find business partners and customers and to search for jobs using social networks.* There is a PMC of +.470 between both motivations. SH6c can be considered as confirmed. *SH6d: There is a significant correlation of at least $\rho > +0.3$ between the motivation to find business partners and customers and to establish contacts within social networks.* There is a PMC of +.368 between both motivations. Establishing contacts in social networks has a PMC of +.199 for LinkedIn and +.220 for Xing. Therefore, SH6d can be considered as confirmed. *SH6e: A significant factor can be defined for the functions of SH6a-SH6d.* Factor No 5, provided by factor analysis (KMO .915; Sig by Barlett .000) is led by the search for business partners with a loading of +.668, and followed by the use of networks for job search with +.608, the intensity of using of Xing with +.537, LinkedIn with +.454, and the intention to establish contacts with +.412. Therefore, SH6e can be considered as confirmed. *SH6f: There is a significant correlation of at least $\rho > +0.3$ between the intensity of using business networks and the educational qualification of the user.* There is an SRCC of +.324 between LinkedIn and the educational qualification of the participant. There is an SRCC of +.409 between Xing and the educational qualification of the participant. SH6f can be considered as confirmed. *SH6g: There is a significant correlation of at least $\rho > +0.3$ between Xing and LinkedIn.* There is a highly significant PMC of +.559 between the intensity of the use of both business networks Xing and LinkedIn. SH6g can be considered as confirmed. UH6a-UH6g indicates a very specific situation regarding the users of business networks. As



already determined during the interviews, business networks are used in order to make career changes and create new opportunities. In addition, it is confirmed that the level of education is of importance when speaking about the use of these networks. SH6b was not confirmed, but it shows a clear trend for the German market. This raises the question of how similar the significance of LinkedIn and Xing is. Based on the measured significance, a high similarity can be expected. It can be expected that here by a speciality for German users exists, which focusses the usage of those networks more work related as users with a more international mind. The rest of the sub-hypotheses were confirmed. Based on the intensity of the variables LinkedIn/Xing, establishing contacts, household income, job search, search for business partners, regression analysis (Stier, 1999, pp. 248-250) shows an R value of .454 for the calculation of Xing and a value of .352 for the calculation of LinkedIn. This also strengthens the link between these variables and points to certain characteristics of the user layer of business networks. Therefore, SH6 can be regarded as confirmed if the hypothesis focusses on the German market of business networks only. For an international approach the SH6 cannot be considered as confirmed.

SH7: There is a significant correlation between the intensity of using the Internet for political discussions and the intensity of using communication functions. SH7a: There is a significant correlation of at least $p > +0.3$ between the motivation to hold discussions relating to politics and the intensity to leave comments. There are positive PMC values between the motivation to discuss political issues and posting comments. However, the correlation for the commenting of content has only a PMC of +.294 and making comments in general has the value of +.238. In addition, discussing events shows a PMC of +.249. None of the points has a correlation value of +0.300. Consequently, SH7a is regarded as unconfirmed. A general tendency appears nonetheless, that the intensity of holding political discussions is related to openness and intensity of making comments in general. *SH7b: There is a significant correlation of at least $p > +0.3$ between the motivation to hold political discussions and to exchange opinions.* There is a PMC of +.442 for the intensity of the motivation to exchange opinions. In addition, the motivation to discuss political issues correlates with the intensity of discussing events with +.617 and discussing TV content with +.329. SH7b can be considered as confirmed. *SH7c: There is a significant correlation of at least $p > +0.3$ between the motivation to hold discussions relating to politics and to share web-sites within social networks.* There is a PMC of +.315 between the motivation to discuss political content and the intensity to share websites on social networks. Therefore, SH7c can be considered as confirmed. Additionally, further noteworthy PMCs have appeared. The motivation to discuss content relating to politics correlates with the intensity to share content among people with a value of +.259, with the intensity of sharing videos in social networks with a value of +.258, and with using social networks to exchange content with a value of +.314. It also seemed striking during the investigation that the motivation to discuss content relating to politics correlates significantly with the intensity of creating content with a value of +.327. Furthermore, there is a PMC of +.239 with the intensity of using blogs, which is the highest correlation value for blogs, as well as the strongest correlation between the Internet services. *SH7d: A significant factor can be defined for the functions of SH7a-SH7c.* Factor analysis (KMO .914; Sig. by Barlett .000) indicates a factor, led by the motivation to discuss the daily events with a loading of +.688, and followed by discussing politics with a loading of +.632, discussing TV content with +.457 and exchanging opinions with +.386. SH7d can be considered as confirmed. Formally, SH7 cannot be considered as confirmed, since SH7a was not confirmed. SH7 basically shows that politically active people, who share content related to politics, are generally of communicative nature and share other types of content as well, but in general SH7 is regarded as unconfirmed.

SH8: There is a significant correlation of at least $p > +0.3$ between the user's degree of interest in listening to music as a leisure activity and the intensity of taking part in online services which offer music. As concerns leisure activities, listening to music and listening to music on the Internet has a PMC of +.486. In addition, leisure activities correlate with watching videos on the Internet with a value of +.294. There is a highly significant correlation of +.509 between listening to music on the Internet and watching



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videos on the Internet. The strong correlation might have the explanation that people consume music in the form of music videos. In addition, there is a correlation of +.300 between listening to music on the Internet and consuming TV content on the Internet. There is no such connection between leisure activities and watching television. It is interesting that the above points of leisure activities and the use of Internet functions have a negative correlation with spending time with the family as a leisure activity. Basically, SH8 shows that one's hobbies can be transferred to the Internet. Therefore, SH8 can be considered as confirmed.

Conclusions, proposals and recommendations

The results of the analyses display a positive trend. In general, it is evident that the findings of the preliminary research can be proved. The results also made it possible to gather a large number of online and offline behaviours, and to make specific assertions concerning the examined user layer. In addition to the discussed SHs, two additional SH, related to Facebook usage, usage of security settings and music consumption, could be confirmed. The results must be viewed, however, against the validity of the sample.

In particular, the sub-hypotheses reveal quite a homogeneous trend. SH1 partly demonstrates the influence of the salary on the quality of life, while SH1c is barely unconfirmed (by .001). This was also evident in the verification of SH2 along with SH2a, SH2b, SH2c and SH2d which were confirmed. As regards demographic data, there is a question of whether these fundamental statements also prove a layer overlap, so that it can be used as a confirmation of the main hypotheses. The SH3, along with SH3a, SH3b and SH3c, was confirmed completely. It also raises the question of how the intensity changes in different lifeworlds. As concerns SH4, SH4a, SH4b and SH4c, these were not confirmed to the required extent; however, the factor established in SH4e contains components which previously did not exceed the threshold value. SH5a and SH5b provide an interesting representation of the differentiated market of niche networks. It needs to be further investigated if there are groups of people who are usually present, more specifically, how the user structure would differ under specific circumstances. This includes the obtained factors which partly show interesting negative loadings and give a significant summary of dying networks. SH6, which is mostly based on the preliminary research, can be seen as partly confirmed. The sub-hypotheses SH6a, SH6b, SH6c and SH6d show an interesting situation. SH6b does not reach the value of +0.3 for LinkedIn, which begs the question if this could be regarded as a satisfactory level. The validity of the hypotheses and the determined connections can also be confirmed by a factor in SH6e, which has also demonstrated a connection of SH6f. As regards SH6, it can be viewed as confirmed, as mentioned, for Germany, but not in an international context. It would be interesting, in general, to see if the values shift in a different age or lifeworlds setting, or the data on the users is universal. During further analysis, additional information can be gathered especially from this research question. SH7 was not confirmed, based on the results for SH7a. SH7b, SH7c and SH7d were confirmed and support with this the tendency of SH7a; further research is necessary in order to obtain more precise results. It would have to be investigated separately if people who mainly communicate online would rather discuss politics, or people who discuss politics mainly communicate online. This begs the question about the type of interaction this illustrates. Such an investigation is not, however, the focus of this paper and is not a supporting factor for the main hypotheses, which research in the direction for differences in user segmentations. The confirmed SH8 shows an example that it is possible to transfer certain types of leisure activities to the Internet. The example with the consumption of music suggests that primarily passive hobbies can undergo such a transfer. This could be investigated in a separate elaboration. The sub-hypotheses show that it was possible to provide meaningful substantiation for the experiences, assumptions, and observations



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discussed in preliminary research. The analysis showed that it was not possible to confirm some of the sub-hypotheses to the desired extent, for example, for SH7a. It must be investigated, as part of the continuing verification of the main hypotheses, if they showed more significant values, based on the obtained sample, if the different lifeworlds were taken into account.

Owing to significant correlation levels and loadings of factor analysis, the results of this study raise additional expectations which require further research and may possibly lead to further results. This includes, among others, SH4 which could provide different results through the investigation of other user groups. There is a strong emphasis in the present paper on young participants. This raises the question if the hypotheses would exist in differentiated lifeworlds or there would be shifts. In light of SH1 and SH7, the results allow expressing the first general recommendations. If there is a correlation between the availability of financial means and the ability to use the Internet, as demonstrated by SH1, Internet access should be granted to people in order to avoid discrimination caused by a lack of finances. Moreover, SH7 shows, with certain significance, that people use the Internet to discuss issues related to politics. This can be important for a country to maintain democracy and provide its people with the opportunity for open discussion. There should be a political demand, proved by statistical data, for a free, government-guaranteed Internet access, and no restrictions should be imposed on it. As concerns the degree to which a state needs to protect itself and its citizens, a generally free access to the Internet, in view of a democratic society, should not be limited.

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