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OTHER TIMES, OTHER MANNERS: HOW DO DIFFERENT GENERATIONS USE SOCIAL MEDIA?

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Synopsis:

In our study we investigate the differences in social media usage between generations. Furthermore, we determine whether there are gender-dependent inter-generational differences in user behavior. The outcomes of our investigation might be a valuable guide for businesses focusing on online marketing, social shopping, or e-commerce in general, and desiring to reach the right target groups.

**Other Times, Other Manners:
How Do Different Generations Use Social Media?**

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Since the beginning of the new digital and information age, quickly evolving technology significantly changed our way of life and our means of communication. The Web, and in the meantime smartphones and other mobile devices, became an inevitable part of our everyday life. The younger generations already do not remember the times without mobile Web and online communication. Some of the most booming Web offerings nowadays are the so-called social media. In our study we investigate the differences in social media usage between generations. Furthermore, we determine whether there are gender-dependent inter-generational differences in user behavior.

Keywords: Social Media, Millennials, Inter-generational comparison, Net Generation, Web

1. Introduction

Around 1970 the developed world entered into the new age of information and digitalization. The quickly evolving Information and Communication Technology (ICT) significantly changed our way of life, leisure and, especially, our means of communication and information (Humbert, 2007). Since around 2000, one of the new trends characteristic for this new age are the so-called social media. Social media, or social software, are internet-based applications founded on the Web 2.0 allowing the creation and exchange of user generated content, as well as providing the possibility of creating micro-content focusing on social connections between people (Alexander, 2008; Kilian, Hennigs, & Langner, 2012; Leung, 2013; Shuen, 2008). It differs from traditional mass media focused on the one-to-many distribution of content from professionals to passive audience. Social software is based on many-to-many networks of active users sharing content among them, which fundamentally changes media user behavior (Kilian, Hennigs, & Langner, 2012).

Despite the name “social networks” or “social media” much of the user activity on social network services (SNSs) appears to be “self-focused” (Gentile et al., 2012). Furthermore, the younger generations of online media users exhibit narcissistic features that are either strengthened with (or first evolved due to) the new media like SNSs (Bergman et al., 2011; Kwon & Wen, 2010; Twenge et al., 2008a; Twenge et al., 2008b), or the online providers recognize the needs of the youngest users and offer services more and more self-centered. Also, generations growing up with the now ubiquitous communication technologies rely to a great extent on their mobile devices and the Web in order to cultivate their social contacts, as well as for educational or professional purposes (Salajan, Schönwetter, & Cleghorn, 2010). This dependence, and in some cases even problematic social media use (Cabral, 2011), differs from the older generation’s attitude towards digitalization, whose members partially integrated the new media in the later or more advanced stages of their lives.

Different generations, who are diversely labeled by researchers and marketing people, have different motivation for and manner of using the online media. New digital tools are slowly replacing the known, traditional means of communication. For example, key motivation for Generation Y (adolescent in the 1990s and 2000s) to use social media is the need for interaction with others. Apparently, users between 17 and 34 years old are more likely to prefer social media

for interaction with friends and family than older age groups (Bolton et al., 2013; Palfrey & Gasser, 2008). Hence, considering the younger generations, social networks replace (or complement) the communication by letter, phone, or even email. Their use of text messaging is up while their email usage is down (Williams et al., 2012).

In our study, we conduct a broad analysis of social media usage, taking into account the influence of different life stages on user behavior. Furthermore, we take a look at intra-generational gender-dependent differences in social media use. All in all, we examine the motivation, frequency, and amount of social media used. Finally, based on our findings, we define whether there are distinct subgroups within the Generation Y, or if there is already a new generational cohort (Generation Z), too distinct to fall within the definition of this generation. We defined following working hypotheses that we tested through our study:

H1: The generations X, Y and Z differ in their social media use concerning the amount of social media adopted, the frequency of use, and the motivation.

H2: There are intra-generational differences in social media use dependent on specific stage of life within the generations Y and Z.

H3: There are gender-dependent differences in the social media use distinct for each generation.

2. Defining Generations

2.1 Changing User Behavior

In the last decades not only the technology has changed, but also the attitude and motivation of its users. The consumers transformed from passive bystanders (when the traditional media was controlled by the advertiser in a B2C-monologue) to hunters (consumer controls the interactivity), and further to active participants in the media process (consumers create, consume, and share messages) (Hanna, Rohm, & Crittenden, 2011; Williams et al., 2012). Li and Bernoff (2008) investigated the “ecosystem” of social media and recognized five different types of behaviors among the active participants. There are Creators focused on publishing, maintaining, and uploading, Critics (commenting and rating), Collectors (saving and sharing), Joiners (connecting, uniting), and Spectators (reading) (Hanna, Rohm, & Crittenden, 2011).

During research on social media it is important to consider the uses and gratifications approach, suggesting that the users actively choose the media that best fulfill their needs, and their choices are further based on past media experiences (Blumer & Katz, 1974). There are several factors influencing the choice of social media, like functional, situational and personal ones (Groebel, 1997; Kilian, Hennigs, & Langner, 2012). McQuail (2010) distinguishes four main motives for using media and communication technologies, namely information, personal identity, entertainment, and integration/social interaction (Kilian, Hennigs, & Langner, 2012). It is possible that these motivational factors are to some extent shared by the members of a distinct generation group. Hence, the motivation is an important aspect in our investigation to differentiate the generations.

2.2 From Silent to Net Generation

In our research we examine different generations and describe them as generational cohorts. The generational cohorts occur around shared experiences or events “interpreted through a common

lens based on life stage,” rather than being based on social class and geography, hence, each generation shares a common perspective (Bolton et al., 2013; Mannheim, 1952; Sessa et al., 2007; Simirenko, 1966). There are many definitions of generational cohorts as well as estimations on the years their members were born in. According to Tapscott (1998), the generations should be categorized as the Baby Boomers, Baby Busters, and Echo Boomers (also called Net Generation or the Y Generation). Baby Boomers are people born between 1946 and 1964. Following that period of time, the birth rates fell dramatically in the next decade. This generation, born between 1965 and 1976, was called the Baby Bust (Generation X or Gen Xers). The Echo Boomers (labeled by other authors as Millennials or Generation Y) were born between 1977 and 1997 and can be best described as the “first generation bathed in bits” (Leung, 2013; Tapscott, 1998). Freestone and Mitchell (2004) describe the cohorts as Matures (1929-1945), Baby Boomers (1946-1964), Generation X (1965-1976), and Generation Y (1977-1993). McIntosh et al. (2007) pursued a little different categorization: Silent Generation (pre WWII), Baby Boom generation (1946-1962), Generation X (1963-1977), and Generation Y (1978-1986).

As we can see, some of the timespans correspond, whereas other are more fuzzy concepts—especially the deliberations on Generation Y. This is why, in our study, we will try to shed light on the very Generation Y and its (possible) successors. The Generation Y is also called the Digital Natives (Prensky, 2001), Net Generation (Oblinger & Oblinger, 2015; Tapscott, 1998), Echo Boomers, Net Kids (Tapscott, 1998), Gen Y (McIntosh et al., 2007), or Millennials (Howe & Strauss, 2000). The years of birth of this generation proposed in the literature vary between 1977 (Leung, 2013; Tapscott, 1998), 1978 (Martin, C. a., 2005; McIntosh et al., 2007), 1980 (Weiler, 2005), and after 1981 (Bolton et al., 2013; Brodahl & Carpenter, 2011; Williams et al., 2012). The upper limit of the years of birth is also not definite—from 1986 (McIntosh et al., 2007) and 1988 (Martin, C. a., 2005), through 1993 (Freestone & Mitchell, 2004), 1994 (Weiler, 2005), 1997 (Leung, 2013; Tapscott, 1998), up to 2000 (Williams et al., 2012).

For the Net Generation, the technology is “as transparent as the air, diversity is given, and social responsibility is a business imperative” (Martin, C. a., 2005, p. 39). They are described as the most visually sophisticated of any generation (Williams et al., 2012, p. 127). For the Generation Y it is characteristic the early and frequent exposure to technology, which may have advantages as well as disadvantages in terms of cognitive, emotional and social outcomes, for example, when they rely heavily on technology for entertainment, to interact with others or even to regulate their emotions (Bolton et al., 2013).

They were born “right around the time of a qualitative leap in the nature of communications technologies which brought about the mass-consumer level usage of email, the Internet and the WWW” (Salajan, Schönwetter, & Cleghorn, 2010, p. 1393). Therefore, they feel comfortable with computers and they are more likely to be online consumers and users of social media rather than their parents or grandparents. They are conversant with a “communications revolution transforming business, education, health care, social relations, entertainment, government, and every other institution” (Leung, 2013, p. 998; Lenhart et al., 2007). Kilian, Hennigs and Langner (2012) contradicted the notion of Millennials being a homogenous group, as they identified three different groups/clusters with-in this cohort: (i) the Restrained Millennials showing lowest ratings for social media use in both active and passive behavior; (ii) the Entertainment-Seeking

Millennials showing the highest mean ratings with regard to the passive use of social networks and file-sharing communities, and (iii) the Highly Connected Millennials, who are more likely than the representatives of the other groups to actively use social media in order to build social networks (Kilian, Hennigs, & Langner, 2012, p. 117f).

Another interesting finding is that the Millennials generation is apparently more narcissistic than the previous ones, which occurred alongside increased usage of social network services (Bergman et al., 2011; Kwon & Wen, 2010; Twenge et al., 2008a; Twenge et al., 2008b). The question arises, whether there is a connection between these two aspects (Bergman et al., 2011, p. 706). SNS appear to provide narcissistic individuals with the opportunity to display vanity, self-promote, gain approval and attention as well as to manipulate their public-image (Bergman et al., 2011, p. 709). Still, according to Bergman et al. (2011), the usage of SNS by the Millennials is not solely about attention seeking or maintaining self-esteem. It is rather a medium supporting communication with peers and family. The new generation simply prefers to connect and communicate via SNS instead of letter, telephone or email, hence, “this may not be a sign of pathology, but a product of the times” (Bergman et al., 2011, p. 709). Narcissists strongly desire social contact, which is their source for admiration, attention, and approval, even though they lack empathy and have only few close relationships (Bergman et al., 2011, p. 706; Morf & Rhodewalt, 2001). The motivation for using the social media, i.e. either communication with peers or outlet for narcissistic needs, may therefore be an important aspect to mark the inter- and intra-generational differences.

2.3 Generation X, Y and ...?

Even though the media have existed from the birth of Generation Y (assuming it to be since the year 1981), they were widely adopted over two decades later (after 2003) (Bolton et al., 2013; Boyd & Ellison, 2008). Hence, there are possibly significant differences between members of the generation born in the 1970s, 1980s or even early 1990s, and these born in the late 1990s and 2000s. Assuming the members of Generation Y were born already in 1970s and 1980s, their children, born in the late 1990s and 2000s, were raised in a totally different environment—not only considering the ubiquitous technology, but also the frequent use of technology at home by their parents (being more familiar with digital gadgets as compared to Generation X).

Therefore, voices in the literature suggest the emergence of a subgroup within the Millennials, namely the Generation C born after 1990 (Booz & Company, 2010; Williams et al., 2012, p. 128). The members of Generation C are fond of content creating and mashing (mash up, i.e., combining content material from several sources in order to create a new content), they have a tendency to form active communities rather than remain passive, they desire to be in control of their own lives, they are content with complexity, desire to work in more creative industries and to be less restricted by rigid social structures (Booz & Company, 2010; Williams et al., 2012).

The most research on generational disparities is focusing on distinct subgroups (like high school students, college students etc.) that diverge in age and lifecycle stage, which in turn may lead to distinguished social media use as well. People born after 1994 are not always considered as a part of Generation Y, because teenagers use social media unlike the adults (Bolton et al., 2013; p.

257). The changes in user behavior occur more slowly than technological developments, since the usage patterns are partially habitual and sticky. Hence, the upbringing and education (i.e. socialization) have a profound influence on the future behavior (i.e. media use) as well (Kilian, Hennigs, & Langner, 2012, p. 114). It is possible, that the Millennials are not a homogenous group, and consists of subgroups with different social media user behavior (Kilian, Hennigs, & Langner, 2012, p. 115).

There is also evidence of intra-generational differences regarding social media users, based on environmental factors (including economic, cultural, technological, and political or legal factors) as well as individual factors, i.e. stable factors (socio-economic status, age, and lifecycle stage) and dynamic or endogenous ones (goals, emotions, social norms) (Bolton et al., 2013, p. 245). Even though our primary aim is to investigate the possible divergences of social media usage between generations, especially the Generation Y and its potential successor—Generation Z or Generation C, we did not fully refrain from including some socio-demographical factors that may also influence the outcomes.

3. Methods

3.1 Survey

For our study we created an online questionnaire, which was distributed through several online channels as well as “offline” through word-of-mouth advertising. There were two language versions of this questionnaire—English and German. Despite the overall inter-generational discrepancies, the nature and intensity of social media usage can be also shaped by cultural context, like the collective or individualistic one (Bolton et al., 2013; Hofstede, 2001). However, due to globalization the use of social media by the Generation Y may become more homogenous despite the different cultural roots (Bolton et al., 2013). Therefore, we did not set any geographical or socio-economic restrictions regarding our test subjects.

In the questionnaire we asked about the use of 13 social media services. We did not include further services to avoid frustration of the interviewees and breaking-off of the survey due to too many questions. We included the popular social network services Facebook, Google+, Twitter and Instagram, as well as the business social network services LinkedIn and Xing. In addition, we asked about further photo and video sharing services like Flickr, Pinterest, Tumblr or YouTube. Finally, we added a service characterized by a high amount of gamification elements—Foursquare, as well as some newcomers to the Web 2.0—the live video-streaming platform YouNow and service for sharing of the so-called “memes” 9gag. We did not include the typical consumer communication services like WhatsApp, Skype, Viber, or LINE, as it would go beyond the scope of this study (and require integration of too many possible services and, hence, questions about them). We included social network customized for business networking, LinkedIn and Xing, as we assume they will be utilized by most interviewees in certain life stage (most probably after the graduation), however, we excluded more specialized services for smaller target groups dependent on their career rather than age (like ResearchGate for researchers etc.).

In our questionnaire, we formulated 3 types of questions. The first one was a polar question about the use of certain services, e.g. Do you use Facebook? Dependent on the answer, two follow-up

questions about the concerned service succeeded—about the frequency with which the service is used (e.g. How often do you use Facebook?) and about the motivation for using the service (e.g. In reference to Facebook, it is important to me that...). The inquiry about the motivation was adjusted to each service and included three sub-questions, for example, in case of Facebook, it is important to me that (i) I have a lot of friends, (ii) I get a lot of “likes”, (iii) my personal data is treated as confidential. The answers for frequency of usage and motivation questions could be marked on a 7-Likert scale, where “1” meant fully disagree (or in case of frequency—“almost never”) and “7” meant fully agree (or “I am always online”). Through these two questions we tried to investigate the different types of users introduced by Kilian, Hennigs and Langner (2012), including restrained users (rarely using few social media services), passive users (often utilizing several services, however, staying in the background), and finally the “highly connected” users that are active on many services (and seeking for high amount of *likes* and *followers*). The motivation for using a social media service, for example, the need for sharing personal photos and receiving many *likes*, may indicate some level of narcissistic behavior that could be also a characteristic aspect for certain generation groups. Technically, the quasi interval/metric characteristics of the Likert scale render it appropriate for hypothesis testing of mean responses and cluster approaches. This procedure is a common practice for a scale, since numerical values are assigned to the response categories and, thus, modeling equidistant intervals (Ary et al., 2009).

At the end of the questionnaire we included an open question—What other services do you use? This way we were able to partially include other services in our survey. The socio-demographic questions regarded gender, year of birth, country, and education (namely: still at school, university student, bachelor’s degree, master’s degree, doctoral degree, or others).

3.2 Statistical analysis

We consider two complementary analytic approaches. First, we use descriptive statistics to examine intergenerational differences in social media use and motivation for selected social media platforms. Therefore, we calculate two-sided t tests for generations X and Y by adapting relevant literature—for Generation X we adapted the birth years approx. between 1960 and 1980 (Wilson, 2010; Tapscott, 1998; Brosdahl & Carpenter, 2011; Freestone & Mitchell, 2004; McIntosh-Elkins, McRitchie, & Scoones, 2007), for Generation Y approx. between 1980 and 1996 (Leung, 2013; Bolton et al., 2013; Wilson, 2010; Tapscott, 1998; Brosdahl & Carpenter, 2011; Freestone & Mitchell, 2004), and for Generation Z, based on our estimation we defined the earliest year of birth to be 1996. Our t tests assessed whether the mean of a certain generation is statistically different from other generations. For instance, our analytic approach examines the differences of the means between Generation X and the pooled observations for Generation Y and Z. We determined the significance of the differences between those three generations in terms of their usage of social media and motivation, followed by a conclusive inter-generational comparison.

Second, we propose a cluster solution to identify intra-generational differences for social media use, since the cluster analysis is an effective tool in scientific or managerial inquiry. For this study, the K-means clustering algorithm is applied. This method is widely used and it seeks for a

nearly optimal partition with a fixed number of clusters. The K-means algorithm has been popular because of its easiness and simplicity for application (Kim & Ahn, 2008). We can implement the cluster analysis for a segmentation of Generation Y and Z. We do not use this approach for Generation X due to its relatively small number of observations. We believe that this might be a promising opportunity for further research. Finally, for each estimated generation group (X, Y, Z) we estimated the average frequency of social media use for each gender, in order to analyze the gender-dependent inter- and intra-generational differences.

4. Results

This study was conducted from 13th of March to 23rd of May 2015. From total 430 participants, 373 completed the study (113 were male, and 260 female). Table 1 shows the inter-generational differences in social media use and sheds light on the motivation for and frequency of using them. By implementing two sided t tests that allow comparing different generations with each other, we find that Generation X is on average less likely to use Facebook compared to the younger generations. The negative value of -0.084 indicates the difference between the means of Generation X and the means of pooled Generation Y and Z towards their response to the use of Facebook. The difference is statistically significant at the 5%-level. Similar results can be observed for Instagram and 9gag. These results are in line with our expectations, since people born before 1980 can be described as digital immigrants, who lag behind with the usage of social media compared to younger generations. Surprisingly, Generation X is statistically more likely to use Twitter than younger generations. We can explain these results with the more practical purpose of this short message service: Users of Twitter aim to share news or opinions about current events with little effort and efficiency. Younger generations might be more likely to use the full scope of more elaborated technical capacities to share information, e.g. via Facebook or YouNow. Also, Twitter is increasingly used for sharing political information, news, or re-search updates, which means that the user mostly follow and/or share with strangers, whereas the younger generations prefer to use social media to stay in touch with friends and peers. Furthermore, results for Generation X's motive for using Twitter indicate that users born before 1980 are particularly interested in gathering followers and being re-tweeted. All results are significant at the 1% or 5%-level.

When considering the results for Generation Y, we can show that individuals born between 1980 and 1995 are more likely to use Facebook. This is in line with our expectations, as Facebook appeared in the mid 2000's and became the first mainstream social media instrument for digital natives (Ellison, Steinfield, & Lampe, 2007). An explanation therefor could be that other generations either deliberately remain aloof to find their own and separate online platforms to communicate (e.g. Generation Z), or are reluctant due to Facebook's complexity or the associated privacy issues (e.g. Generation X, see Prensky (2001)). Additionally, we find that Generation Y is statistically more likely to use Xing. This result is significant at the 5%-level and, respectively, at the 10%-level for the frequency of use. A high number of subjects born between 1980 and 1995 might already be employed or actively seeking work. Given this background, the use of a business-oriented social network site appears comprehensible for digital natives. Further, the main motivation of Generation Y users seems to be both to enlarge the number of business contacts and the number of profile visitors. This motivation is more pronounced, in particular

compared to Generation Y.

Table 1 Inter-generational Comparison

		Gen X (N = 47)	Gen Y (N = 221)	Gen Z (N = 90)
		<i>Mean Diff.</i>	<i>Mean Diff.</i>	<i>Mean Diff.</i>
Facebook	Use	-0.084**	0.118***	-0.106***
	Frequency	-0.794***	0.774***	-0.514**
	Motive: Connection	0.389	-0.349	-0.336
	Motive: Likes	-0.173	0.190	0.426*
Twitter	Use	0.226***	-0.018	-0.165***
	Frequency	1.355***	-0.248	-0.688***
	Motive: Followers	0.967**	-0.343**	-0.315*
	Motive: Likes/retweets	0.845***	-0.237	-0.332*
Instagram	Use	-0.186**	-0.110**	0.325***
	Frequency	-1.167***	-0.614**	1.898***
	Motive: Followers	-0.762**	-0.581***	1.449***
	Motive: Likes	-0.657**	-0.525**	1.334***
Xing	Usage	0.105*	0.101**	-0.229***
	Frequency	0.442**	0.292*	-0.795***
	Motive: Contacts	0.302	0.408**	-0.815***
	Motive: Visitors	0.271	0.395**	-0.710***
Youtube	Use	0,013	0.031	0.051
	Frequency	-0,229	-0.120	0.376
	Motive: Subscribers	-0,176	-0.196	0.319**
	Motive: Comments	-0,021	-0.173	0.287*
YouNow	Use	-0,025	0.174	0.015
	Frequency	-0,095	0.003	0.051
	Motive: Fans	-0,053	0.030	0.071*
	Motive: Likes	-0,053	-0.036	0.071*
9gag	Use	-0,172	0.226***	-0.166***
	Frequency	-0.778***	1.107***	-0.810***
	Motive: New friends	-0.200**	0.306***	-0.240***
	Motive: Upvotes	-0.240**	0.306***	-0.213**

*Symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1%-level.*

When now considering the results for generation Z, we can show the most significant differences for the use of Instagram and Xing. Individuals born after 1995 are statistically more likely to use Instagram, an online mobile photo- and video-sharing platform, than older generations. Generation Z not only perceives the Internet as a natural element in everyday life (similarly to

Generation Y / digital natives), but also the use of digital mobile devices. Therefore, the latest generation can be described as mobile natives and significantly differs from former ones with regard to mobile social networking (Muminova, 2015). Moreover, individuals born after 1995 are on average statistically less likely to use Xing, which is a logical consequence of the fact that most of them are still at school. In sum, we verified the H1, as our statistical analysis has revealed inter-generational differences in social media use and motives between Generations X, Y, Z. Hence, our results serve to better understand the user’s intention to share and acquire content on social networking websites, particularly with regard to age-specific user preferences and behavior.

When adapting the cluster approach for Generation Y, we find three intra-generational groups with regard to different ages interpreted as different stages of life. The results are summarized in Table 2. The first cluster is on average the youngest (born around 1991). It exhibits, on the one hand, the highest frequencies of usage for Facebook, Instagram, 9gag and Youtube. On the other hand, this cluster is less frequently using Twitter. Overall, this group is highly connected and uses various kinds of social media channels regularly. Kilian, Hennigs and Langner (2012) called this type Highly Connected Millennials (see Section 2.3), who are the most active users of social media with the purpose to build social networks. Furthermore, this cluster exhibits similar traits to Generation C, which is born after 1990 and fond of content creating and actively forming communities (Booz & Company, 2010; Williams et al., 2012).

Table 2 Intra-generational differences within Generation Y

	Cluster 1 (N = 119)		Cluster 2 (N = 66)		Cluster 3 (N = 36)	
	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>
Year of birth	1991	2.58	1988	3.36	1986	2.91
Frequency						
Facebook	5.83	1.11	5.48	1.44	4.94	1.97
Twitter	1.01	1.90	0.98	1.92	1.33	2.01
Instagram	1.79	2.55	1.39	2.31	1.61	2.57
Xing	0.29	1.00	0.89	1.58	1.89	2.05
YouNow	0.03	0.26	0.24	1.15	0.00	0.00
9gag	1.66	2.35	1.09	2.13	0.75	1.92
Youtube	4.58	1.75	4.14	2.02	3.81	2.11

The second cluster is the mid-aged group of Generation Y and on average born in 1988. This cluster shows medium frequency-levels of use for all social media channels except for YouNow, which is a live streaming video website. According to Kilian, Hennigs and Langner (2012), we might classify this cluster as the Entertainment-Seeking Millennials. This group is present on social media platforms, however, remains rather passive. Still, they exhibit high usage rates of various kinds of social media. The third cluster exhibits on average the oldest birth dates (born on average in 1986). Moreover, Table 2 shows the smallest frequency of use for Facebook,

Instagram, 9gag and Youtube, and the highest frequency for Twitter. Again, according to Kilian, Hennigs and Langner (2012), this cluster shows similarities with the Restrained Millennials, who tend to exhibit the lowest ratings for social media use. It also appears that this cluster bears a certain resemblance to the findings for Generation X highlighted on Table 1. Hence, our findings might indicate that different ages interpreted as different stages of life affect the social media use, and a higher on-average age for Generation Y clusters incrementally increases the similarities with Generation X. Overall, we can conclude that the cluster solution indicates considerable intra-generational discrepancies in social media use.

It might not only be of interest whether the heterogeneous Generation Y can be clustered, but also whether initial tendencies towards a segmentation of Generation Z can also be observed. When adapting the cluster approach for Generation Z (Table 3), we are able to distinguish between two groups that have similar traits as Generation C (i.e. content creating and forming new communities). The first cluster is on average one year older compared to the second cluster and uses less frequently Facebook, Twitter, 9gag and Youtube. Differences in the use of YouNow and Xing are negligible. However, the first cluster exhibits higher frequency rates of using Instagram. This might be due to the growing trend towards mobile networking. This technological development occurred at the time when Generation Z distinguished themselves from the previous generations considering the Internet use. The higher the frequency of using Instagram, the younger are its users, which indicates the procedural phenomenon to strive for inter-generational differentiation.

Table 3 Intra-generational differences within generation Z

	Cluster 1 (N = 79)		Cluster 2 (N = 11)	
	<i>Mean</i>	<i>S.D.</i>	<i>Mean</i>	<i>S.D.</i>
Year of birth	1998	2,17	1997	2,68
Frequency				
Facebook	4,71	2,55	6,09	0,83
Twitter	0,48	1,44	1,73	2,61
Instagram	3,43	2,78	2,64	3,11
Xing	0,01	0,11	0,00	0,00
YouNow	0,14	0,81	0,00	0,00
9gag	0,13	0,76	1,36	2,46
Youtube	4,52	2,28	5,64	1,21

Finally, we took a closer look at the gender-dependent differences in social media use. We set the focus of our investigation on the frequency of the usage. We analyzed the gender-dependent

usage frequency for each generation – X, Y and Z (depicted in figures 1-3). Figure 1 shows the average frequency of social media use for generation X. It appears that the male representatives of this generation apply social media like Facebook and Youtube slightly more often than the female ones. Women, in contrary, more frequently use social media like Twitter, Instagram or Pinterest. Even though the differences in average frequency of usage for Twitter and Pinterest are minimal (just as for Facebook and Youtube), the female average frequency of use for Instagram is almost twice as high as the one of the male users.

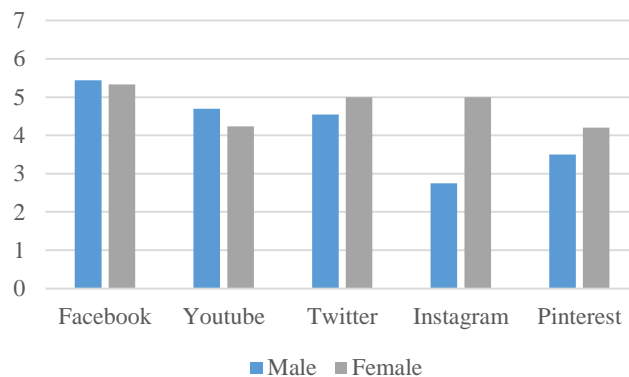


Figure 1 Generation X: Gender-dependent average frequency of social media use.

In figure 2 we can see the gender-dependent differences within the generation Y. Here, the male users apply Facebook, Youtube and Instagram more frequently than the female ones, although the differences are rather small. Women, in contrary, use Twitter and Pinterest more often, whereas the difference in usage of Pinterest is the most distinct one (average frequency of use 2.5 for male, and 3.93 for female). In general, we can observe an overall decrease in use of Twitter (for both, male and female users) as well as a significant increase in use of Instagram (for male users).

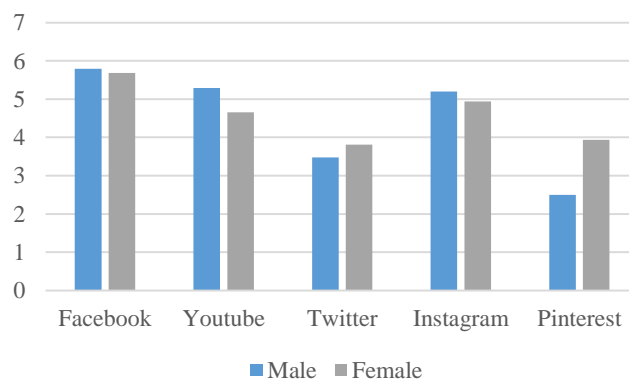


Figure 2 Generation Y: Gender-dependent average frequency of social media use.

The gender-dependent differences in frequency of use within the generation Z are shown in figure 3. In this youngest generation, female users apply the most social media (with the exception of Youtube) more frequent than the male ones. Here, the biggest divergence is given regarding the average frequency of use of Pinterest (for male users with 1, and female with 3.66)

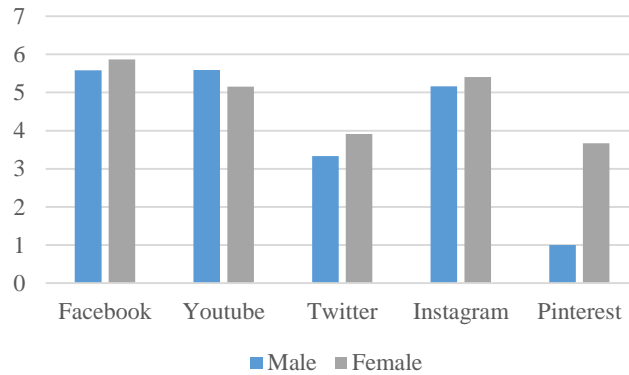


Figure 3 Generation Z: Gender-dependent average frequency of social media use.

In summary, we observe gender-dependent characteristics for the different generations. As for the social medium Pinterest, the average frequency of application was more or less constant for female users of all generations, whereas the frequency of use for male users declines significantly with the younger generations. In contrast, the average frequency of use for Instagram by the male users increases significantly, while the one by women remains rather constant. The average frequency of use for Twitter is declining with the younger generations, but for all generations female users are the ones using Twitter more often. The frequency of Youtube use increases, whereas male users of all generations apply it more often. Finally, the average frequency of use for Facebook is almost leveled regarding male and female users, however, only in generation Z female users utilize Facebook more frequently than men (although the difference is still minimal).

5. Discussion

In this paper, we examined whether differences occur for the motivation for and frequency of social media usage from both inter- and intra-generational perspectives with regard to the heterogeneity of users' life stages. Furthermore, we examined the gender-dependent differences of social media use.

We conducted a broad analysis to compare social media usage for Generations X, Y, and Z. The results indicate that social media users born between 1980 and 1995 and also before 1980 are more likely to use business-oriented networking services, which might be due to the facts that they found employment and are familiar with online networking. Their main motive to increase their contact numbers emphasizes their capability and willingness to use platforms such as Xing. Particularly for Generation X, older users are more likely to use social media for sharing business and political information, news, or research updates with strangers. Generation Y, on the other hand, is more likely to use a traditional networking platform, such as Facebook, in order to communicate and share information with friends. The youngest generation born in 1996 and later try to find their own individual path in social media use when turning their back on Facebook and moving towards more recently appeared social media platforms and channels, in particular the mobile photo-sharing network Instagram.

The differences in the tendencies of social media use from an inter-generational perspective are also observable on a smaller intra-generational scale, indicating evidence for an incremental development of social media use. When clustering Generation X and Y into subgroups, we cannot only see a heterogeneous overall picture, but also a diverse insight into the development of intra-generational changes. Strong similarities between the early Generation Y and Generation X are observable. Further, a slow and incremental shift away from Facebook towards Instagram can be seen for the late Generation Y and Generation Z.

Furthermore, there are inter- and intra-generational gender-dependent differences considering the frequency of social media use. While overall frequency of use of Pinterest or Twitter decreases with the younger generations, the frequency of use of Instagram increases. For the oldest generation the most significant gender-dependent difference was the use of Instagram (preferred by male users) and Pinterest (more often used by female ones). Within the generation Y, the gap between men and women in use of Instagram diminishes, whereas the differences in use of Pinterest become greater. As for generation Z, the use of Instagram is almost leveled for both genders, while the frequency of use of Pinterest is almost four times higher for female users.

Our findings are particularly interesting for businesses that use the popularity of certain social media platforms to support online transactions and user contributions to enhance the purchase of products or services. The determination of the correct target group for age-specific products or services is crucial for the success of a business. Players in the social commerce sector can focus on services mostly used by their (future) consumers. Knowing the frequency and motivation of their social media usage, they can prepare more suitable incentives for their products. This knowledge refers to the important marketing concept of relationship quality, indicating that an increase of relationship strength has a positive long-term impact on the business relation between service/product provider and customers.

After the online survey was completed, it came to our attention that the demographical aspects might indeed significantly influence the outcomes, especially, when the use of social media based on concrete services (like Facebook) is being investigated. A large number of participants indicated their use of further services being only popular in their respective countries or regions. This does not distort the results when the usage of a specific service, like Facebook, is intended. However, when assessing the usage of certain kind of services (e.g. social network services or video-sharing platforms in general), the regional differences and the possibly resulting in *standard-dependent-user-blindness* (Baran & Stock, 2015a; Baran & Stock, 2015b) should be taken into account.

Considering the fact that the social network services market is full of *imitators* (Baran, Fietkiewicz, & Stock, 2015), some regionally prevalent *standards* can be easily clustered into groups of similar services, e.g., *Facebook* and its Russian equivalent *Vkontakte* are objectively very similar, however, due to the standard dependent user blindness they are used alternatively rather than cumulatively.

Hence, the limitation of our study is that given the broad demographical range of our investigation, we did not consider the regional standard services. For further studies of this kind we would advise to cluster services that objectively offer substitutable contents, e.g. *Do you use*

Facebook and/or VKontakte? As for social commerce sector, we would advise not to underestimate “local” social network standards as platforms for exchange and consumer acquisition.

Since our empirical examination pursues the objective to holistically investigate different generations and various social media platform, we believe that a more focused investigation of a certain generation, a social media platform or motivation might be a promising opportunity for further research. Additionally, an examination of the interdependencies between applications of different social network services might also add to previous literature.

In our future studies we will include these lessons learned as well as pursue a more in-depth analysis of online behavior of Generations Y and Z.

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