Professional Networking: Exploring Differences Between Offline and Online Networking

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Abstract

Professional networking has mostly been researched in offline contexts. With professional social networking sites (SNS), such as LinkedIn or the German platform XING, professional networking can be extended to online contexts. Therefore, this study examines if people differ in the intensity of offline and online networking and if influence factors differentially predict offline and online networking. An exploratory online survey of working people (N = 326, M$_{age}$ = 37 years, 56% women) revealed that mean values among the four different networking types did not differ significantly. However, people can be divided into four clusters of networkers (the minimal, the heavy, the mainly offline, and the mainly online networkers). When looking at influence factors, there is a positive association of people's knowing about the benefits of networking and their networking intensity for all types of networking offline and online. Beyond that, the negative affective influence of anxiety towards unknown people on networking shows an interaction effect with networking type as it is stronger for offline networking than it is for online networking. The results indicate that professional social networking sites might help people with their networking pursuits by reducing negative emotions associated with networking, thereby contributing to a social compensation effect.

Keywords: Professional networking; professional online networking; professional social networking sites; social compensation hypothesis; offline and online comparison

Introduction

Professional networking, defined as an "individual's attempt to develop and maintain relationships with others who have the potential to assist them in their work or career" (Forret & Dougherty, 2001, p. 284), is an important tool for career success. Multiple studies have revealed a positive relationship between professional offline networking and career outcomes (e.g., Forret & Dougherty, 2004; Wolff & Moser, 2009, 2010). However, although there are hundreds of articles and books on how to network for business purposes (e.g., Byham, 2009; Casciaro et al., 2016; Cross & Thomas, 2011; Misner & Hilliard, 2017), starting a conversation with unknown people at crowded business events might feel uncomfortable and intimidating, and not only for shy and anxious people. Professional social networking sites (SNS), such as LinkedIn or the German platform XING, could be useful tools to help people network.

Professional SNS allow "users to create a profile based on their professional affiliation and connect to professional contacts within and outside their professional networks" (Papacharissi, 2009, p. 200). Using online professional SNS might make it easier to network for several reasons. First, sending or accepting contact requests usually requires only one click. Second, messages can be carefully edited before sending them. Finally, professional SNS support their users' networking pursuits by recommending business contacts to connect with. Thus, it would be easy to connect with experts from all sorts of fields and from all over the world, especially for shy people. However,

people who network more offline have also been found to be more likely to use professional SNS (Utz & Breuer, 2019). The question, whether mainly people who already have many offline friends (social enhancement hypothesis) or people who have fewer offline friends (social compensation hypothesis) profit from using online platforms has already been discussed in other contexts (Peter et al., 2005) and will be examined in the professional domain in the current paper.

The goal of this paper is to explore professional SNS use. To do so, we first compare the intensity of engaging in offline networking with the intensity of engaging in online networking. We also explore whether different types of networkers can be identified (e.g., people who mainly network online; people who network both offline and online). In a second step, we exploratively examine whether personality, motivational, and affective factors are differentially associated with offline and online networking. To identify relevant factors, we build on literature on professional networking offline and on using SNS in private contexts, thereby bringing these hitherto unrelated fields together.

Literature Review

Wolff and Moser (2006) define networking as a set of behaviors aimed at building and maintaining interpersonal relationships that possess the (potential) benefit to facilitate work-related activities by providing access to resources and jointly maximizing advantages of the individuals involved. They distinguish between intra-organizational networking with colleagues and extra-organizational networking with people from other organizations. Intra-organizational networking often occurs face-to-face and the items for extra-organizational networking often refer to face-to-face interactions (e.g., "I use business trips for …", "I meet with acquaintances from other organizations …"). Research on professional networking implicitly focused on offline networking. Moreover, they differentiate between building, maintaining, and using contacts.

Due to its independence of time and space, online networking is especially suited for networking with external contacts. People can send out contact requests to others (proactive networking) or simply accept received contact requests (reactive networking). Interestingly, although the benefit of networking lies in making and subsequently using new contacts, with their design and contact recommendations professional SNS foster connecting with people one already knows or shares at least mutual connections (Papacharissi, 2009). Thus, the statement by Ellison and Boyd (2013) that SNS are more accurately termed social network sites than social networking sites might also hold in the professional context. Hence, although it would be easier to make new contacts online, it is not clear whether people engage differentially in various networking forms or whether specific types of networkers can be distinguished (e.g., a preference for either offline or online networking, or engaging in both forms to the same extent). Our first research question is therefore: RQ1: Is there a difference between offline and online professional networking in terms of intensity?

Despite the differences between offline and online networking, research has identified similar benefits. Work on professional networking found positive effects on subjective and objective career outcomes, not only in cross-sectional, but also in retro- and prospective studies (e.g., Blickle et al., 2012; Bozionelos, 2008; Forret & Dougherty, 2004; S. Kim, 2013; Ng & Feldman, 2014; Spurk et al., 2019; Thompson, 2005; Van Hoye et al., 2009; Wolff & Moser, 2009, 2010). Recent work has found that professional online networking leads to informational benefits, job search assistance, work-related assistance, and career sponsorship (e.g., Baruffaldi et al., 2017; Davis et al., 2020; Nikitkov & Sainty, 2014; Utz, 2016; Utz & Breuer, 2016, 2019). Thus, it seems that professional online networking results in the same type of benefits as offline networking does.

It is less clear, however, whether the antecedents for offline and online networking are also the same. Similar variables have been discussed, but their relationships with offline and online networking have not been compared systematically. Moreover, the social compensation hypothesis and the social enhancement hypothesis come to different conclusions. The social compensation hypothesis states that people who have problems in forming relationships offline, especially anxious and shy people, can use the internet to compensate for their offline reticence and form relationships online. Since restraining (affective) influences do not apply as much online as they do offline, those people benefit from the online environment in a poor-get-richer-sense (McKenna & Bargh, 1999). The social enhancement hypothesis, on the other hand, states that people who do already have strong relationships offline will also have strong relationships online; people who struggle to have strong relationships

offline, will also struggle online. That is why this hypothesis is also called the rich-get-richer-hypothesis (Kraut et al., 2002). Our second research question therefore is: RQ2: Are offline and online professional networking associated with different variables?

To identify relevant antecedents, we review prior work on correlates of professional networking and SNS use. Work on SNS use has focused on non-professional platforms such as Facebook, but it might be relevant because professional SNS share affordances with other SNS and similarity in goals and motives of users have previously been assumed and identified (Brandenberg et al., 2019; Carmack & Heiss, 2018; Gerard, 2012; W. Kim & Malek, 2017).

Personality Traits

Research on the associations of personality traits and a relatively new construct (be it professional networking or SNS use) often starts with a broad approach, looking at relationships with the Big Five. Extraversion was found to be positively associated with networking across several studies. This makes also sense theoretically from the perspective of the social enhancement hypothesis: people who are already more outgoing, also make friends online more easily. The results were more inconsistent for agreeableness, openness to new experiences, neuroticism, and conscientiousness (see the meta-analysis of Bendella & Wolff, 2020; Forret & Dougherty, 2001; Van Hoye et al., 2009; Wanberg et al., 2000; Wolff & S. Kim, 2012).

When it comes to the Big Five and SNS use, extraversion and openness to new experiences turned out as most consistent predictors (Amichai-Hamburger & Vinitzky, 2010; Gosling et al., 2011; Muscanell & Guadagno, 2012; Ross et al., 2009; Ryan & Xenos, 2011; Utz et al., 2012; Wilson et al., 2010). There is first evidence that extraversion, openness, and emotional stability are also related to using professional SNS (Buettner, 2016; Davis et al., 2020). The relationship of SNS use with self-esteem has also been studied. Findings were, however, inconsistent across different operationalizations of SNS use (Brandenberg et al., 2019; Kalpidou et al., 2011; Mehdizadeh, 2010; Utz et al., 2012; Wilson et al., 2010). Self-esteem, however, has been found to correlate positively with professional offline networking (Forret & Dougherty, 2001). Interestingly, there is one paper reporting a negative association of self-esteem and XING usage (Brandenberg et al., 2019), indicating that professional SNS use and professional networking should not be equated. In the context of professional offline networking, relatively narrow personality traits that are closely related to networking have been studied. As could be expected, positive relationships have been reported with a proactive personality (Lambert et al., 2006; Thompson, 2005; Vandenberghe & Ok, 2013).

In the context of private SNS use, a higher need to belong was found to be associated with a higher willingness to join SNS (Gangadharbatla, 2008), the use of SNS, and the number of friends (Krasnova et al., 2008; Utz et al., 2012). The last personality trait frequently examined with private SNS use is narcissism. Since SNS make it easy to present oneself in an idealized way to a large audience, it has been assumed that especially narcissists are attracted by SNS (Buffardi & Campbell, 2008) and that spending time on SNS increases narcissism (Gentile et al., 2012). Narcissism has been found to be positively related to several indicators of SNS use (Buffardi & Campbell, 2008; Mehdizadeh, 2010) but it has also been shown to be unrelated to the number of friends (Utz et al., 2012).

Motivational and Strategic Factors

In addition to global personality traits, motivational and strategic factors have been studied. In the domain of professional networking, Porter and Woo (2015, p. 1495) conclude that "work performance, career development, and job search" are the main motivations. Another work-related motivation is (protean) career orientation, meaning a career that is driven by the needs of the individual rather than the organization (Hall, 1976, 2001). A longitudinal study by Waters et al. (2014) showed that protean career orientation was related to networking as a job search method. Moreover, protean career orientation was positively associated with proactive career behaviors including networking (Herrmann et al., 2015), and career self-management behaviors also including networking (De Vos & Soens, 2008). Notice that these are all explicit motivations. Wolff et al. (2018) in contrast, examined the influence of implicit motivations (i.e. need for power, need for achievement, and need for affiliation) on the six types of professional networking described above. While need for achievement was positively associated with all six types of networking, need for affiliation was only positively associated with building contacts

both internally and externally. Need for power was positively associated with using contacts within one's own organization but not with any of the other forms of professional networking.

In the context of private SNS use, the motive of strategic impression management has been studied. Research focusing on the question of whether users present themselves in an idealized or an authentic way revealed mixed results. Studies relying on self-report often found that participants claimed to use idealized presentations of themselves (Brivio & Ibarra, 2009; Manago et al., 2008; Rosenberg & Egbert, 2011). However, studies comparing self-reports with impressions formed by strangers often concluded that the judgments were rather accurate, indicating that people present their real and authentic selves (Back et al., 2010; Gosling et al., 2007; Kluemper et al., 2012; Kluemper & Rosen, 2009). There is also one study by Sievers et al. (2015) who applied the latter method to the professional SNS XING, demonstrating that people present themselves rather authentically on XING. The degree of idealized self-presentation is also limited on SNS because besides self-generated information, there is also other-generated information (e.g., posts by friends on someone's timeline) and system-generated information (e.g., the display of friend connections) which is more difficult to manipulate (Walther et al., 2009). System-generated information such as the display of connections could strategically be used to showcase one's network of important people. In other words, the name dropping that happens in offline contexts is now permanently accessible and visible for everyone who has a profile on the same SNS.

Affective Influence Factors

The last group of variables associated with networking previously investigated are affective factors. In the context of professional networking, Wanberg et al. (2000) discovered that feeling comfortable with networking predicted networking above and beyond the Big Five. In addition, Casciaro et al. (2014) examined the feeling of dirtiness. According to the authors, networking for business purposes and personal gain might contradict one's sense of ethics. Individuals may think that they only "use" those other people and as a result felt "dirty". They found evidence that participants indeed felt dirty when they had to recall a planned networking scenario compared to an unintentional networking scenario. This can influence people's networking behavior as they might try to avoid that negative feeling by not engaging in professional networking. In a similar vein, Walter et al. (2015) report that MBA students asked to reconnect with two people they had not spoken to in at least three years and asked them for help with a work project were rather reluctant, felt anxious, and as a result mainly chose contacts whom they knew well in the past, rather than contacts they attributed the most value to.

The influence of anxiety, shyness, or sociability/extraversion has also often been studied in the context of private SNS use. Here, the main interest was whether people who have problems in forming relationships offline, especially anxious and shy people, can use the internet or SNS to compensate for their offline reticence and form relationships online (McKenna & Bargh, 1999). Since restraining (affective) influences do not apply as much online as they do offline, those people can compensate these deficits online. In line with this assumption, Rice and Markey (2009) found that people reported less anxiety in a computer-mediated condition than in a face-to-face condition. People with higher levels of anxiety have been found to report higher levels of comfort (meaning more disinhibition and more self-disclosure) online than offline (Weidman et al., 2012). Social anxiety has also been found to be positively correlated to time spent on Facebook (Shaw et al., 2015). Zywica and Danowski (2008), in contrast, found evidence for both the social compensation and the social enhancement hypotheses; for highly sociable people and people with a high self-esteem, the social enhancement hypothesis was supported, whereas for less sociable people with lower self-esteem the social compensation hypothesis was supported.

Summary and Present Research

To sum up, there is a rich set of potential influence factors on professional online networking when bringing together research on professional offline and private online networking. Personality traits have been examined intensively in both fields. Extraversion turned out as important predictor in both fields, whereas the results for other personality traits were less consistent. Motivational and strategic factors were also studied in both fields. However, work on professional networking looked more at career-specific motivations, whereas the work on private SNS focused more on impression management in general. Affective influences have been investigated in both domains. However, the focus of the research differed. In the field of professional offline networking, researchers focused on whether affective influences were associated with networking, whereas in the field of

private online networking researchers focused on whether (negative) affective influences could be overcome in online settings. Considering that anxiety and the feeling of dirtiness prevented people from networking offline, the most interesting hypothesis concerning differences between professional offline and online networking is the social compensation hypothesis. In online settings those negative affective influences might not apply as strongly as they do offline.

In the present study, we examine whether the various influence factors are differentially related to offline and online networking. To do so, we build on the identified factors. As we combine influences that come from two unrelated research domains, that have mostly been investigated independently, or have never been investigated before, the study is exploratory[1]. More specifically, we examined the role of career orientation, friendship orientation, impression management, networking comfort, the feeling of dirtiness, and the feeling of anxiety. The feeling of anxiety was split into anxiety towards unknown people and anxiety towards high-status people, as professional networking often involves contacting individuals someone has not met before and/or might be on higher hierarchy levels. Additionally, we modified two factors slightly. Extraversion turned out as significant predictor of both, professional offline networking and private online networking. Instead of extraversion, we assessed the feeling of sociability, a closely related construct. We opted for the feeling of sociability because it is a major element of *social* networking sites. According to Ellison and Boyd (2013, p. 160.), "the implicit role of communication and information sharing has become the driving motivator for participation." Moreover, connecting with other people offline by talking, hanging out, and getting along is a social activity. Hence, the feeling of sociability could influence people's professional networking.

When it comes to narcissism, often a distinction between grandiosity and entitlement is made (Brown et al., 2009). We focus on entitlement because some people might think that they are entitled to have important and influential contacts in their business network that can help them with their own professional advancement. They might think that they are entitled to "use" various individuals for their personal gain. As a result, the influence of entitlement could have an influence on people's professional networking. We also added a cognitive factor, namely whether people know that networking can be beneficial for their professional lives. Many self-help books try to advise people how to business network and inform about the benefits of business networking. There is thus an implicit assumption that knowing about the benefits of networking is positively related to networking behavior that has not been studied so far.

Control Factors

Finally, there are some situational factors that might influence how much a person engages in various types of networking behavior. Professional networking can be especially essential for knowledge workers (Hube, 2005) whose daily work is characterized by non-routine but variable and complex tasks. Thus, people's proportion of knowledge work needs to be accounted for. Previous achievements might also have an influence. In business contexts, achievements can easily be identified by the hierarchy level someone holds. Michael and Yukl (1993) discovered a positive association of hierarchy level with professional networking. Thus, as the hierarchy level of managers rises, networking frequency increases. Forret and Dougherty (2001) replicated these findings in a sample also including non-managers. Hence, hierarchy level needs to be controlled for as well.

Method

Procedure and Sample

In December 2017, an online survey was distributed via Prolific, an English-speaking platform for paid participants. Consequently, participants were mainly British and American. The sample (N = 326) consisted of people with a mean age of 37 years (SD = 10.75, Mdn = 36, ranging from 21 to 75 years). Gender was slightly unbalanced with 42 percent male and 56 percent female participants (2 percent did not reveal their gender). Participants either worked within an organization (283 participants) or were self-employed (34 participants). Also, nine participants were currently unemployed. Mean tenure for employees was six years (SD = 6.06, Mdn = 4); mean tenure for self-employed participants was 7.2 years (SD = 6.04, Mdn = 6). Most of the people had an account on the professional SNS LinkedIn (89 percent). Only eight percent did not have an account on any professional SNS. Nearly 50 percent held a bachelor's degree, 22 percent a master's degree, and five percent were Doctors of Philosophy.

Dependent Variables

We assessed four networking types as dependent variables. Two of these were offline networking types, namely intra- and extra-organizational networking. We focused on the sub-dimensions of building a network and used the three building items from the short scale from Wolff et al. (2015) in their English translation from Wolff et al. (2011). The other two dependent variables were online forms of building a network, more specifically, proactive and reactive online networking. On professional SNS, users find other users either by name search, if the person is already known from somewhere else, or by contact recommendation. *Proactive online networking* focuses on networking by sending out contact requests to other users with the help of contact recommender systems. Furthermore, on professional SNS users can receive contact requests from others. Unlike in offline settings, people can decide whether to accept or reject the request. *Reactive online networking* therefore means networking by accepting contact requests from others. All four networking types focused on the building of new contacts either offline or online. The dependent variables were assessed with 5-point Likert scales: *Intra-organizational offline networking (building)*: 3 items (α = .69; example item: "I use company events to make new contacts") and e*xtra-organizational offline networking (building)*: 3 items (α = .74; example item: "I use business trips or training programs to build new contacts"). *Proactive online networking*: 7 items (α = .89; example item: "I like to act on contact recommendations and send a contact request to the person recommended") and *reactive online networking*: 6 items (α = .85; example item: "I like receiving contact requests as they lead to connections with new people") with self-created measures. These new items reflect how people relate and react to contact recommendations and contact requests. Both scales have been analyzed with exploratory and confirmatory factor analyses to test for reliability, leading to the exclusion of two items for each of the two scales (see appendix).

Independent Variables

All independent variables were assessed with 5-point Likert scales, using previously established scales by other researchers (if available) that have been slightly adapted to the context. Short scales were combined to assess every variable with at least five items; long scales were shortened by excluding very similar items for consistency concerning scale length and to prevent participants from losing attention. The two self-created scales have been analyzed with exploratory and confirmatory factor analyses to test for reliability (see appendix). No items were excluded. We chose the following scales:

Career orientation: 6 items (α = .77; example item: "Even when completing current tasks, I always have my career advancement in mind") with a scale by Hippler and Krüger (2014).

Friendship orientation: 6 items (α = .85; example item: "It is important for me to hang out with friends regularly.") with Randel and Ranft's (2007) three item co-worker friendship orientation scale and three items of Pöhlmann and Brunstein's (1997) affiliation scale.

Knowing about the benefits: 8 items (α = .89; example item: "A network of people can help to get new career opportunities") with a self-created measure.

Impression management: 6 items (α = .73; example item: "I let people know of my accomplishments") with a scale by Bolino and Turnley (1999).

Entitlement: 7 items (α = .87; example item: "I deserve more things in my professional life than my coworkers do") with a scale by Campbell et al. (2004).

Anxiety towards unknown people: 7 items (α = .92; example item: "I have difficulty talking with people I have not met before") and *anxiety towards high-status people*: 6 items (α = .86; example item: "I have difficulty talking with people higher in hierarchy") with scales from Mattick and Clarke (1998).

Feeling of dirtiness: 6 items (α = .84; example item: "When I engage in networking behavior, I feel inauthentic") with a scale by Casciaro et al. (2014).

Feeling of sociability: 6 items (α = .87; example item: "When I engage in networking behavior, I feel outgoing") with a self-created measure in the style of the feeling of dirtiness scale.

Networking comfort: 5 items (α = .76; example item: "I am comfortable asking previous coworkers or acquaintances for their assistance in my current job.") with a scale by Wanberg et al. (2000).

Control Variables

We controlled for two aspects: The first one was the extent to which participants were knowledge workers. Especially for knowledge workers who work in a boundaryless or protean career environment, networking can be important even for daily working tasks. Hence, working in a knowledge worker profession could influence professional networking. Being a knowledge worker was assessed with a scale by Hube (2005): *knowledge worker*: 4 items (α = .64; example item: "I always have to extend, adjust, and revise my knowledge"). The second control variable was participants' hierarchy level. We used hierarchy level as quasi-numeric variable from 1 (no managerial responsibility), 2 (managerial responsibility for 1–5 people), 3 (for 6–10), 4 (for 11–20), 5 (for 21–50) to finally 6 (for more than 50 people), as hierarchy level influenced professional networking in previous studies.

Results

Research Question One

Descriptive statistics and a correlation matrix of all dependent and independent measures can be seen in Table 1. In order to answer the first research question (Is there a difference between offline and online professional networking in terms of intensity?), mean values of the four different networking types were compared. Results of a within-subjects analysis of variance (ANOVA) showed that participants did not differ significantly across the four types of networking ($F(3, 1296) = 1.72$, $p = .161$). Even descriptively the mean values of extra-organizational offline ($M = 3.42$, $SD = 0.99$), proactive online ($M = 3.48$, $SD = 0.84$), and reactive online ($M = 3.49$, $SD = 0.82$) networking were nearly the same. Only intra-organizational offline networking ($M = 3.72$, $SD = 0.80$) had a slightly higher mean value.

Table 1. *Descriptive Statistics and Correlation Matrix of All Dependent and Independent Measures.*

	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
	Networking type															
1	intra-organizational offline	3.72	0.80													
2	extra-organizational offline	3.42	0.99	.50***												
3	proactive online	3.48	0.70	.40***	.22***											
4	reactive online	3.49	0.73	.26***	.13*	.53***										
	Influences															
5	career orientation	3.49	0.81	.29***	.27***	.28***	.19***									
6	friendship orientation	3.63	0.81	.33***	.28***	.33***	.20***	.33***								
7	knowing about the benefits	4.14	0.58	.43***	.34***	.40***	.32***	.35***	.44***							
8	impression management	2.94	0.77	.17**	.11	.20***	.12*	.45***	.27***	.16**						
9	entitlement	2.67	0.85	.12*	.14**	.20***	.11	.33***	.16**	.09	.44***					
10	anxiety unknown people	2.72	1.01	-.44***	-.29***	-.20***	-.07	-.19***	-.31***	-.28***	-.03	-.10				
11	anxiety high-status people	2.42	0.92	-.34***	-.21***	-.12*	-.03	-.15**	-.20***	-.21***	.07	.00	.70***			
12	feeling of dirtiness	1.81	0.75	-.42***	-.28***	-.36***	-.26***	-.22***	-.24***	-.32***	-.02	-.03	.42***	.36***		
13	feeling of sociability	3.77	0.74	.53***	.39***	.49***	.41***	.36***	.46***	.47***	.17**	.18**	-.47***	-.33***	-.62***	
14	networking comfort	3.43	0.80	.27***	.25***	.17**	.16**	.18**	.37***	.27***	.04	.06	-.40***	-.39***	-.35***	.41***

Note. *p < .05; **p < .01; ***p < .001.

Table 2A. *Overview of the Four Clusters of Networkers With Mean Values and Standard Deviation for the Four Networking Types*.

Cluster no.	Cluster name	n	M (SD) Internal offline	M (SD) External offline	M (SD) Proactive online	M (SD) Reactive online
1	Minimal networkers	37	2.44 (0.62)	1.98 (0.71)	2.57 (0.76)	2.86 (0.73)
2	Mainly offline networkers	85	3.71 (0.63)	3.71 (0.57)	2.79 (0.76)	2.69 (0.66)
3	Mainly online networkers	85	3.55 (0.63)	2.64 (0.69)	3.73 (0.41)	3.90 (0.47)
4	Heavy networkers	119	4.26 (0.50)	4.20 (0.47)	4.08 (0.46)	3.96 (0.54)

Note. A one-way MANOVA with the four networking types as dependent variables and the cluster variable as independent variable shows a significant difference for all networking types. MANOVA overall: $F(3, 322) = 67.25$, $\eta^2 = .46$, $p < .001$. Individual results for intra-organizational offline: $F(3, 322) = 96.31$, $\eta^2 = .47$, $p < .001$; extra-organizational offline: $F(3, 322) = 200.01$, $\eta^2 = .65$, $p < .001$; proactive online: $F(3, 322) = 116.86$, $\eta^2 = .51$, $p < .001$; reactive online: $F(3, 322) = 107.65$, $\eta^2 = .50$, $p < .001$.

In a second step, we conducted a k-means cluster analysis to identify different types of networkers[2]. We used all four networking types as basis for the analysis. As a scree plot did not show substantial evidence on how many clusters to calculate, we looked at a so-called clustergram visualizing the distance between the means of the clusters depending on the number of clusters (Schonlau, 2002). It showed that with more than four clusters, the mean values of two (sometimes even three) clusters became so close that their individual existence could not be justified. Hence, we decided to calculate four clusters. The k-means cluster analysis revealed the following four clusters: Cluster one ($n = 37$) contained the minimal networkers with low mean values for all four networking types. Cluster two ($n = 85$) contained the mainly offline networkers with higher values for the two offline networking types and lower values for the two online networking types. Cluster three ($n = 85$) contained the mainly online networkers with lower mean values for the two offline networking types and higher mean values for the two online networking types. Finally, cluster four ($n = 119$) contained the heavy networkers with all four networking types having high mean values. The four clusters and the mean values of the ten influence factors per cluster can be seen in Tables 2A and 2B.

Table 2B. *Overview of the Four Clusters With Respect to the Mean Values of the Ten Influence Factors*.

Cluster no.	Cluster name	M (SD) Career orientation	M (SD) Friendship orientation	M (SD) Impression management	M (SD) Entitlement	M (SD) Knowing benefits
1	Minimal networkers	3.11 (0.90)	3.21 (1.01)	2.75 (0.67)	2.47 (0.80)	3.67 (0.79)
2	Mainly offline networkers	3.35 (0.72)	3.46 (0.70)	2.81 (0.69)	2.54 (0.75)	3.98 (0.56)
3	Mainly online networkers	3.37 (0.77)	3.53 (0.81)	2.96 (0.83)	2.66 (0.80)	4.14 (0.46)
4	Heavy networkers	3.80 (0.79)	3.96 (0.70)	3.08 (0.79)	2.84 (0.95)	4.40 (0.46)

Cluster no.	Cluster name	M (SD) Anxiety unknown	M (SD) Anxiety high-status	M (SD) Feeling of dirtiness	M (SD) Feeling of sociability	M (SD) Networking comfort
1	Minimal networkers	3.53 (0.79)	2.99 (0.91)	2.48 (0.79)	2.96 (0.65)	2.94 (0.86)
2	Mainly offline networkers	2.72 (0.91)	2.39 (0.89)	1.95 (0.80)	3.52 (0.66)	3.39 (0.73)
3	Mainly online networkers	2.81 (0.97)	2.44 (0.91)	1.80 (0.72)	3.78 (0.68)	3.38 (0.78)
4	Heavy networkers	2.40 (1.03)	2.26 (0.90)	1.50 (0.54)	4.20 (0.54)	3.64 (0.77)

Note. A one-way MANOVA with the ten influence factors as dependent variables and the cluster variable as independent variable shows a significant difference for all ten influences. MANOVA overall: $F(3, 322) = 4.66$, $\eta^2 = .13$, $p < .001$; Individual results for career orientation: $F(3, 322) = 10.65$, $\eta^2 = .09$, $p < .001$; friendship orientation: $F(3, 322) = 12.70$, $\eta^2 = .11$, $p < .001$; impression management: $F(3, 322) = 2.98$, $\eta^2 = .03$, $p = .032$; entitlement: $F(3, 322) = 3.01$, $\eta^2 = .03$, $p = .030$; knowing the benefits: $F(3, 322) = 21.56$, $\eta^2 = .17$, $p < .001$; anxiety unknown: $F(3, 322) = 13.31$, $\eta^2 = .11$, $p < .001$; anxiety high-status: $F(3, 322) = 6.28$, $\eta^2 = .06$, $p < .001$; feeling of dirtiness: $F(3, 322) = 20.66$, $\eta^2 = .16$, $p < .001$; feeling of sociability: $F(3, 322) = 43.89$, $\eta^2 = .29$, $p < .001$; networking comfort: $F(3, 322) = 8.04$, $\eta^2 = .07$, $p < .001$.

Research Question Two

To answer the second research question (Are offline and online professional networking associated with different variables?), we calculated linear mixed model regression analyses to account for the hierarchical structure of the data (four networking types nested within participants). As dependent variable we used the value of the four networking types combined into a single variable. To do so, we restructured the dataset from wide format (one row per participant) into long format (four rows per participant, one for each type of networking) and built a new variable networking category (online versus offline, collapsing across the respective two subscales). A significant interaction between networking category and a predictor indicates a differential impact of this variable for offline and for online networking. All continuous independent variables were mean-centered prior to analysis (Aiken & West, 1991). In the first model, we used the two control variables and the ten influence factors as predictors. In a second step, interaction terms between networking category (offline versus online) and influence factors were added to the model.

Table 3. *Linear Mixed Effect Models*.

Predictors	Model 1		Model 2	
	B	SE	B	SE
Constant	3.54***	0.03	3.53***	0.03
Online networking	-0.06	0.04	-0.04	0.04
Control variables				
Knowledge worker	0.09*	0.04	0.08*	0.04
Hierarchy level	0.08***	0.02	0.08***	0.02
Influence factors				
Career orientation	0.06	0.04	0.08	0.05
Friendship orientation	0.01	0.04	0.02	0.05
Knowing about the benefits	0.25***	0.05	0.26***	0.07
Impression management	0.05	0.04	0.04	0.05
Entitlement	0.02	0.04	0.01	0.04
Anxiety towards unknown people	-0.04	0.04	-0.13**	0.04
Anxiety towards high-status people	-0.00	0.04	-0.03	0.05
Feeling of dirtiness	-0.08	0.05	-0.06	0.06
Feeling of sociability	0.31***	0.06	0.26***	0.07
Networking comfort	0.02	0.04	0.02	0.05
Interaction terms				
Online networking × Career orientation			-0.07	0.07
Online networking × Friendship orientation			-0.02	0.07
Online networking × Knowing about the benefits			-0.01	0.09
Online networking × Impression management			0.02	0.07
Online networking × Entitlement			0.02	0.06
Online networking × Anxiety towards unknown people			0.25***	0.07
Online networking × Anxiety towards high-status people			0.07	0.07
Online networking × Feeling of dirtiness			-0.03	0.08
Online networking × Felling of sociability			0.15	0.09
Online networking × Networking comfort			-0.01	0.07
Random effects				
σ^2	0.46		0.46	
τ_{00} participant	0.06		0.06	
τ_{00} participant.online networking	0.13		0.10	
ICC	.11		.12	
Marginal R^2	.31		.32	
Conditional R^2	.39		.40	

Note. Dependent variable: the values of the four networking types. Independent variables: networking category (offline vs. online), career orientation, friendship orientation, knowing about the benefits, impression management, entitlement, anxiety towards unknown people, anxiety towards high-status people, feeling of dirtiness, feeling of sociability, networking comfort. Control variables: knowledge worker and hierarchy level. All scales assessed with 5-point Likert scales except for hierarchy level (1-6). All scales are mean centered.
*$p < .05$, **$p < .01$, ***$p < .001$.

Despite all the noteworthy positive and negative correlations between the influences and the four networking types (cf. Table 1) as model 1 in Table 3 shows, almost all influences were close to zero. Only the two predictors of knowing about the benefits and the feeling of sociability showed noticeable values. When interaction terms were added (model 2), the results showed that anxiety towards unknown people interacted with the networking category. Again, all other interactions were rather irrelevant as estimate values were rather small. For most influences the effect on networking was the same for offline and online networking. Only for anxiety towards unknown people did the effect differ between offline and online networking. Figure 1 shows that the more participants felt anxious towards unknown people the less they networked. However, this effect was stronger for offline networking than it was for online networking.

Figure 1. *Regression Graph Showing the Interaction Effect of Anxiety Towards Unknown People × Networking Category (Offline vs. Online) on Networking Intensity.*
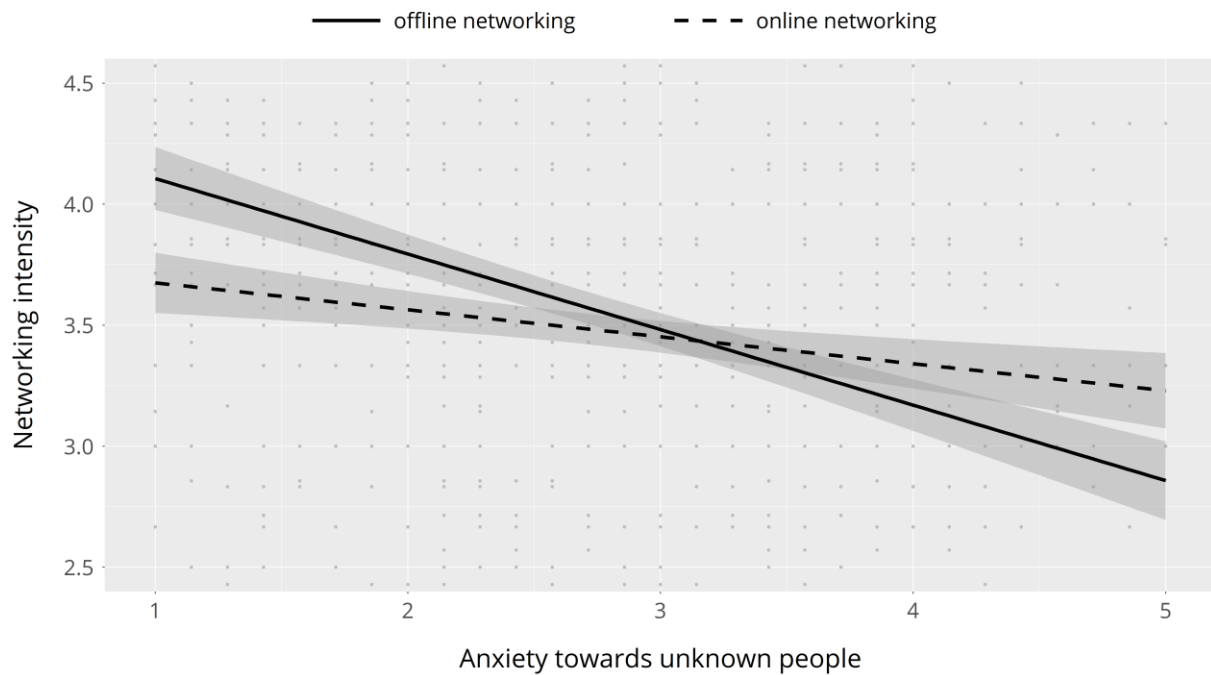
Discussion

The aim of our survey study was to compare offline and online networking in terms of intensity and in terms of influence factors. Results show that the mean values of the four networking types did not differ within participants. However, when we built clusters to categorize people into different types of networkers, we found that there were four: the minimal, the mainly offline, the mainly online, and finally the heavy networkers. Moreover, when we looked at the influences on professional networking, we found an effect of knowing about the benefits as well as of the feeling of sociability on professional networking offline and online. Finally, anxiety towards unknown people was the only influence that interacted with the networking category. The negative effect of anxiety towards unknown people was stronger for offline networking than it was for online networking.

Theoretical Implications

The cluster analysis of networkers revealed an interesting picture. The minimal networkers still network slightly more online than offline. They shy away most from external offline networking and are most likely to reactively accept contact requests from others online, which poses only minor obstacles. This shows that even people who do not network intensely differentiate between networking types. The heavy networkers, on the other hand, have high values on all four networking types. Here, reactive online networking is performed the least, implying that the heavy networkers rather prefer to proactively approach others both offline and online instead of reacting to others' requests. Between the two extremes there are two clusters which can be defined as the mainly offline and

the mainly online networkers. However, the mainly online networkers also have a moderate intensity of internal offline networking; these people thus shy mainly away from contacting people from other organizations offline. Often organizational culture facilitates networking with colleagues for internal information exchange and cooperation (Eckenhofer & Ershova, 2011). This preference for internal networking over external networking which is also shown by the minimal networkers has repeatedly been found by Wolff and Moser (2006, 2009, 2010).

The four clusters also differ on their scores on the potential influence factors. The minimal networkers have the lowest level of knowing about the benefits while the heavy networkers have the highest level. The same is true for career orientation, friendship orientation, impression management, entitlement, networking comfort, and the feeling of sociability. On the other hand, anxiety towards unknown people and anxiety towards high-status people as well as the feeling of dirtiness show a trend in the opposite direction. For most influence factors, the mainly offline and the mainly online networkers have very similar values. Yet, they show different patterns when we look at what types of networking they engage in.

One major element of the study was to jointly investigate the differential associations of ten variables potentially associated with offline and online networking. While all the variables showed significant correlations with at least some types of networking (see Table 1) in line with previous studies in which they were tested independently (Casciaro et al., 2014; Forret & Dougherty, 2001; Michael & Yukl, 1993; Walter et al., 2015; Wanberg et al., 2000), interestingly, when tested jointly, the results showed that only two variables were associated with participants' networking: feeling of sociability and knowing about the benefits, a cognitive factor not studied before. The relation between the feeling of sociability and networking might be rather strong as networking and connecting with people is a social process. People might either network more in order to feel sociable and outgoing or feel sociable and outgoing and accordingly network more. Note that sociability is closely related to extraversion. Extraverted individuals usually socialize more and extraversion turned out as most consistent predictor in prior work on both professional offline networking and private SNS use.

This can also be seen in the interaction effect of anxiety towards unknown people and professional networking. In online settings, the relationship between anxiety and networking is still negative but less negative than it is for offline networking. Consequently, the results are in line with the social compensation hypothesis of McKenna and Bargh (1999). According to the social compensation hypothesis people who have difficulty in developing social contacts offline can use the internet to compensate for those limitations and form contacts online. Likewise, online networking on professional SNS can reduce the negative effect of anxiety towards unknown people on networking. Online networks can help people to overcome their affective restraints towards professional networking. Interestingly, only anxiety towards unknown people interacts with type of networking, indicating that online environments specifically help to remove this affective barrier. However, it is not the case that sociable individuals become even more social in online environments.

None of the other factors identified from prior literature remained significant when entering all predictors in the model. However, knowing about the benefits, a cognitive factor that has not received much attention before, significantly predicted networking. This association could be driven by two processes: It might be that people acquire that knowledge from self-help books or trainings and, as a result, network with a greater intensity. Alternatively, they might experience benefits from intense networking and, therefore, know about the benefits. These two processes might mutually enforce each other. Interestingly, the motivational factors career orientation, friendship orientation, or impression management did neither predict online nor offline networking. A reason might be that they are more specific and might only situationally define with whom exactly people connect or what exact networking events people choose to attend, but not the general intensity of connecting with people.

Practical Implications

Based on our results, we would like to give practical implications: On the side of the networkers, career counselors, and self-help books we recommend informing people about the benefits of professional networking. People's knowledge about the benefits of networking was one of the two main predictors of actual professional networking. The group of the minimal networkers who network with the lowest intensity also had the lowest level of knowing about the benefits. De Janasz and Forret (2008, p. 635) previously showed that students frequently do not understand the value of networking and misinterpret networking as "gaining an unfair advantage". Only when

people understand the reciprocally beneficial concept of professional networking can they use their knowledge to intensify their networking behavior.

Second, we recommend encouraging people to use online networking as a full-fledged additional networking opportunity. Especially for people who have problems with offline networking, online networking can help to compensate for their restraints offline. Previous research has shown that people can benefit from online networking because of informational benefits, job search assistance, work-related assistance, and career sponsorship (e.g., Baruffaldi et al., 2017; Davis et al., 2020; Nikitkov & Sainty, 2014; Utz, 2016; Utz & Breuer, 2016, 2019). Hence, both offline and online networking can have a positive impact on people's professional lives. Yet, the influences between the two networking types are different. This is particularly true for anxiety towards unknown people. Whiting and de Janasz (2004, p. 644) proposed that for students who have problems networking in offline settings "networking can be achieved through means other than face-to-face, such as an e-mail or letter". We highly recommend adding professional SNS to that list.

On the side of organizations, managers, and decision makers we recommend recognizing online networking as an adequate networking tool. Online networking is not to be underestimated by regarding it as inferior to offline networking. People who do not network offline do not necessarily want to avoid networking altogether. There will always be people who do not want or who simply cannot network offline. This might be the case due to anxiety and/or a lack of experience. This might also be the case because people live in areas with no networking events or conferences to attend or maybe because of a lack of resources such as money and time. However, these people can use online networking via professional SNS to compensate for their constraints offline.

Limitations of the Study

There are some limitations we want to address. The first one regards the sample. In order to participate, people were asked to have an account on a professional SNS, resulting in 92 percent of the sample having at least one account. The sample therefore is a rather selective sample of professional SNS users. However, to be able to compare offline and online networking the sample needed to consist of people who engage in both activities. Another limitation is that the study is based on self-report measures and has no experimental design. This means that there might be biases in responses concerning, for example, social desirability, and that the study is not able to determine causality. Consequently, results only show associations between variables. Finally, we want to mention that the self-created scales of networking online proactively and networking online reactively do have room for improvement. We created the scales ourselves as there were no previously established scales available when we planned the study. The items of both scales were based on statements concerning people's relation and reaction to contact recommendations (proactive online networking) and contact requests (reactive online networking). Exploratory and confirmatory factor analyses showed that some items did not fit into the scales and were therefore excluded. Moreover, we know that scales should not be validated with the same sample used to answer our other research questions. Unfortunately, it was not possible to do otherwise in this study.

Future Research

Since there is very little research on professional online networking (Blank & Lutz, 2017), future studies should take a closer look at online networking on professional SNS. Even though some influences can be transferred from offline to online settings, on a situational level the conditions are not the same. This study shows that there are, for example, differences concerning anxiety towards unknown people. All the other influence factors, however, did not show an interaction effect meaning that these influences apply equally to offline and online settings. Hence, there could be future research on how professional SNS could be designed in order to help people who might have constraints offline. Since professional networking can have an immense impact on people's careers and success, investigating new modalities and opportunities of online networking on professional SNS is highly relevant.

Also, networking online opens the possibility to connect with people someone has not yet met and might never be able to meet offline. Professional networking online can therefore support people in the extension of their professional connections in a way that was not otherwise possible. Furthermore, there might be additional influence factors that have not been investigated yet, such as influences concerning human-computer-interaction

(e.g., trust in the recommender system). Since the results of this study completely rely on self-report, in future research it is necessary to investigate influence factors and people's professional networking on a situational level with the use of (mock) networking sites and contact recommendations. Moreover, future studies could include experimental or longitudinal designs to better understand the causal relation between influences and professional networking.

Footnotes

1. The study has been pre-registered as exploratory. Materials can be found at:
https://osf.io/sfc62/?view_only=9dbc1047a99b47b4bd043674a7555698

2. We would like to thank the anonymous reviewer for the recommendation to add a cluster analysis.

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Appendix

Proactive online networking. The crossed-out items have been removed from the scale due to the results of the exploratory and confirmatory factor analyses.

(1) Getting contact recommendations makes networking easier and saves me time.
(2) ~~Networking without contact recommendations is too much of an effort.~~
(3) I like contact recommendations as they inspire me to contact new people.
(4) I do not care about contact recommendations at all. (reverse)
(5) I connected to people through contact recommendations who I would not have connected to otherwise.
(6) Acting on contact recommendations provides me with more confidence to connect with people I know less.
(7) ~~I generally want to know someone at least by interaction before making a connection. (reverse)~~
(8) I like to browse through contact recommendations to see who is getting recommended.
(9) I like to act on contact recommendations and send a contact request to the person recommended.

Reactive online networking. The crossed-out items have been removed from the scale due to the results of the exploratory and confirmatory factor analyses.

(1) To receive contact requests from other people saves me time with my own networking.
(2) ~~Receiving contact requests is easier than sending out own requests.~~
(3) I like receiving contact requests as they lead to connections with new people.
(4) I connected to people that contacted me who I would not have connected to otherwise.
(5) Usually I accept contact requests no matter if I already know the person.
(6) I don't mind to receive contact requests from people I have not met before in person.
(7) ~~I like to browse through contact request to see who wants to be connected with me.~~
(8) I decline contact requests more often than I accept them. (reverse)

Knowing about the benefits of networking.

(1) A network of people of different expertise and background can give access to information that is needed to carry out own tasks.
(2) A business network can give information about innovations in the own work environment.
(3) A network of people can help to get new career opportunities.
(4) A network of people with different expertise and background can be essential to personal career success.
(5) A business network can have skills and knowledge that can help with personal work.
(6) Connecting with people now can help with personal business advancement in the future.
(7) It is important to know who knows what and to get hold of the person in a personal network.
(8) A short conversation with a person of your network can sometimes replace learning something from scratch.

Feeling of sociability: When I engage in networking, I feel …

(1) fine
(2) good
(3) open-minded
(4) comfortable
(5) sociable
(6) outgoing

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