

February – 2017

Why Do Academics Use Academic Social Networking Sites?

Hagit Meishar-Tal¹ and Efrat Pieterse²

¹Holon Institute of Technology (HIT), ²Western Galilee College

Abstract

Academic social-networking sites (ASNS) such as Academia.edu and ResearchGate are becoming very popular among academics. These sites allow uploading academic articles, abstracts, and links to published articles; track demand for published articles, and engage in professional interaction. This study investigates the nature of the use and the perceived utility of the sites for academics. The study employs the *Uses and Gratifications* theory to analyze the use of ASNS. A questionnaire was sent to all faculty members at three academic institutions. The findings indicate that researchers use ASNS mainly for consumption of information, slightly less for sharing of information, and very scantily for interaction with others. As for the gratifications that motivate users to visit ASNS, four main ones were found: self-promotion and ego-bolstering, acquisition of professional knowledge, belonging to a peer community, and interaction with peers.

Keywords: academic social-networking sites, users' motivation, Academia.edu, ResearchGate, uses and gratifications

Introduction

In the past few years, the Internet has seen the advent of academic social-networking sites (ASNS) such as Academia.edu and ResearchGate. These sites allow users to upload academic articles, abstracts, and links to published articles; track demand for their published articles; and engage in professional interaction, discussions, and exchanges of questions and answers with other users. The sites, used by millions (Van Noorden, 2014), constitute a major addition to scientific media.

This study investigates the nature of the use and the perceived utility of the sites for academics whose professional careers are based on the performance and publication of studies. In a world that offers numerous and diverse online publishing opportunities (sites of formal journals, personal sites and blogs, and general social networks such as Facebook and LinkedIn), the question is what comparative advantage academic networking sites offer and why faculty members use them. Do these sites fit the definition of “social network”? And which of their affordances serve their users?

Literature Review

Academics' Use of Academic Networks

Social networks such as Facebook and Twitter YouTube, and Instagram are social arenas that attract millions of users worldwide (statistica.com). Their main purpose is to create and sustain social connections (Boyd & Ellison, 2007). The definitive components of an online social network are four: a place to establish a personal profile, a list of connections with other users, the ability to monitor the activities of those who appear on the list, and the ability to establish new connections (Boyd & Ellison, 2007; Hogan & Wellman, 2014).

Although largely devoted to social purposes, social networks also facilitate professional communication. Facebook groups, for example, serve mainly as an alternative to the discussion groups and mailing lists that were in vogue in the late twentieth century (King, Leos, & Norstrand, 2015; Meishar-Tal, Kurtz, & Pieterse, 2012).

In recent years, professional networks that offer information sharing and communication tools for professional purposes have arisen alongside the general social networks. The best known of them is LinkedIn which provides a platform on which people and businesses communicate for purposes of working relations, employee search, and career management (Skeels & Grudin, 2009). Among the additional Academic Social Networking Sites (ASNS) that have evolved in recent years, two-Academia.edu and ResearchGate - offer themselves as professional and social networks of researchers, combining characteristics of social networks with the publication of studies, all adjusted to the needs and comportment of academic researchers (Ovadia, 2014). They accommodate customary social-network elements such as the construction of a personal profile and interactivity with peers along with specific tools for academic requisites, such as uploading and tagging of articles and tracking of citations (Jordan, 2015).

Description of the networks

The two networks examined here, ResearchGate and Academia.edu, have similar characteristics. They are specific to researchers affiliated with academic institutes and specialize in academic activities such as sharing studies, articles, and information. They also provide tools that allow users to track their publications, see how often they are viewed and cited, and facilitate information exchange. Both allow users to post public queries to the community and organize researchers by their institutional affiliation.

ResearchGate established in 2008 in Berlin by Ijad Madisch, Horst Fickenscher, and Sören Hofmayer. Its purpose is to connect geographically distant researchers and allow them to communicate continuously on the basis of the open-world concept and the elimination of distance as an important factor in working relations. A secondary goal is to create access to studies even before they are completed for purposes of peer review and exchange of ideas (Ovadia, 2014). According to statistics on its site (<https://www.researchgate.net/about>), ResearchGate had more than eight million

users in 2015. It organizes itself mainly around research topics. ResearchGate maintains its own index (the “ResearchGate Score”) based on the user’s contribution to content, profile details, and participation in interaction on the site, such as asking questions and offering answers.

Academia.edu established in 2008 in San Francisco by Richard Price as part of the Open Science movement, defines its goal as encouraging and stimulating the publication of studies (Shema, 2012). In January 2016, it reported having 31,000,000 registered account-holders (<https://www.academia.edu/about>). *Academia.edu* includes an analytics dashboard by which users may see the influence and diffusion of their studies in real time (Price, 2012). *Academia.edu* has an alert service that sends account holders an e-mail whenever a researcher whom they are following publishes a new study, allows readers to tag articles, and alerts anyone who is following a certain topic. In this way the alert system is raising awareness to an article by potential citators. A study by an *Academia.edu* sponsored team (Niyazov et al., 2015) found that citations of published articles for which alerts were sent increased by 41%.

Despite the large difference between the networks in the number of declared users, the Alexa rank, produced by *Alexa.com* (www.alexa.com), a company that provides commercial web traffic data analytics, finds ResearchGate slightly more popular than *Academia.edu*.

Contribution of Academic Networks

ASNS have the potential of revolutionizing the patterns of information publication and sharing in the academic world. By offering platforms for interrelations among scholars around the world, they may influence the structure and dynamic of the research community. Official academic publishing is based on acceptance of articles by refereed academic journals - either in print or in online academic databases that are accessible mainly to those who are active in an academic establishment - for which a fee is usually charged. The time that passes between research and the publication of its findings in such a journal is lengthy and may exceed one year. Academic social networks challenge this model and circumvent the hurdles that impede exposure to the public. What is more, they do so easily and at no charge. They encourage authors to upload full-text articles that appeared in academic journals, lectures presented at conferences, and even drafts, and make them accessible to the public (Wilkinson, Harries, Thelwall, & Price, 2003). They also allow readers to respond to an article or ask the author about it (Thelwall & Kousha, 2014), thereby encouraging interaction between readers and researchers.

The literature relates to five main affordances of academic social networks for researchers:

- 1. Management of an online persona:** The first and most important component of a digital social network is the personal profile, which includes particulars such as name, photo, and other identifying information that the user elects to upload. In ASNS, the platform provides, in addition to these details, a place where the researcher may present his or her professional experience, ideas, and capabilities, including the number of citations and downloads of his or her articles, thereby cultivating an online identity and promoting his or her professional reputation (Barbour & Marshall, 2012).

2. Diffusion of studies: The platform provides a place where account holders can upload articles to the cybersphere. It also sends direct e-mail alerts to interested users whenever a new article in a field that they define as of interest to them is published. Two mechanisms exist for this purpose. One is active: members of the network choose to follow authors of their acquaintance or those whose research topics are of interest to them. The other is passive: the network itself proposes (via the site and the user's e-mail address) new articles for the user to follow, either by authors associated with the user's area of interest or those who belong to a circle of direct contacts such as a shared institution or department. In this manner, knowledge about a new article rapidly reaches the community that takes an interest in its topic and, accordingly, may be read (Espinoza Vasquez & Caicedo Bastidas, 2015).

3. Collaboration: As the academic research field has become networked and collaborative in recent decades, it has been argued that one-person research has virtually disappeared (Veletsianos & Kimmons, 2013). The ability of digital technology to bridge distances encourages cross-disciplinary and cross-border collaborations. Some scholars argue that academic social networks replicate, and in certain cases even improve, the experience of social activity at a conference by helping to create and expand researchers' professional networks (Curry, Kiddle, & Simmonds, 2009; Kelly, 2013). The two networks discussed in this study provide tools (e-mail and internal messaging systems) for direct communication and presentation of details for the establishment of personal relations among researchers.

4. Information management: Veletsianos (2013) suggests that ASNS serve as a source for the collection and organization of personal academic information including ideas, drafts, and anything else that a researcher on the network gleans from articles, references, and citations. Due to this characteristic, an academic social-network site may be seen as a collaborative information-management system (Bullinger, Hallerstede, Renken, Soeldner, & Möslein, 2010). Some scholars do not accept this statement; indeed, while both networks, Academia.edu and ResearchGate, provide tools for publication and for the tracking and organization of publications; they are not designed for the management of citations.

5. Measurement of impact: Academic impact is measured in terms of the number of citations of an article and the quality of the journals in which the article appears. Online academic networks offer additional metrics, such as number of persons who read or download an article (Gruzd, Staves, & Wilk, 2011; Ovadia, 2013).

Employing the Uses and Gratifications Theory to Analyze the Use of Web Sites and Social Networks

The uses and gratifications theory, an outgrowth of leisure-culture and mass-media studies, posits that media consumers are autonomous and active agents who base their consumption media decisions on a range of personal considerations and cognitive, affective, and social needs. The theory offers a contrast to the critical perspective, which sees media consumers as passive agents who are prone to media manipulations and influences (Katz, Blumler, & Gurevitch, 1974; Rubin, 2002; Ruggiero, 2000).

The uses and gratifications theory was developed in the 1970s, mainly surrounding research on the use of television, radio, and the press (Bantz, 1982; Bryant & Zillmann, 1984; Dobos, 1992; Eastman, 1979). It identifies five major types of needs to which media respond:

1. Cognitive needs, including consumption of information and knowledge.
2. Affective needs, including excitation, enjoyment, and pleasure.
3. Social needs, including creating a sense of group belonging, influencing and contributing to others, etc.
4. Individual needs, including the response to personal needs, self-promotion, personal gain, and enhancement of personal confidence.
5. Escapist needs, i.e., using the technology to flee from reality and create an alternative virtual and imagined reality.

The uses and gratifications theory assumes that each of these gratifications is measurable and can reveal the leading motivation and its relation to other variables, such as amount and nature of use, and may uncover disparities between expectations and actual gratifications in order to understand states of dissatisfaction with the technology.

The theory has absorbed abundant criticism over the years, mainly because users' gratifications are identified largely on the basis of self-reportage and because the theory does not easily distinguish between needs/motives and gratifications. Thus, many scholars use it to identify gratifications only (Ruggiero, 2000). In recent years, however, with the development of social networks and the need to understand the motives for using the Internet generally and social networks particularly, the theory has regained its centrality in identifying the uses and gratifications of those who use these systems. Since Internet use is an active process that entails intention on the user's part, the theory is an appropriate framework for analyzing the motives of people who visit Web sites for use and gratification (LaRose & Eastin, 2004; Ruggiero, 2000; Rubin, 2002).

The studies that invoke the uses and gratifications theory at length investigate consumers' behavior on commercial sites. For example, Ko, Cho, and Roberts (2013) use the theory to investigate shoppers' motives for buying online as a basis for mapping the motivations in favor of or against using these sites. These authors find that consumers whose motives are strongly informational tend to prefer sites that allow them to interact with the information, whereas those motivated by communication prefer to use the person-person interactions that such sites offer.

The uses and gratifications theory also helps to understand the behavior of those who visit user-generated content sites such as YouTube, Wikipedia, and social networks. Research on users' behavior in these environments divides the use of the sites into three types: consumption of information, participation in social interaction, and creation of information (Shao, 2009). Research reveals a connection between the nature of the use of a site and the motives for its use. According to Shao

(2009), users who generate and share information are motivated by the need to express themselves, whereas those who use the sites' interactive functions are prompted by social needs and motives. Users who consume information, in contrast, are information-motivated.

According to Stafford, Stafford, and Schkade (2004), the singular characteristic of the gratifications and users that typify recourse to the Internet, as opposed to the use of television and other traditional media, is the centrality and the interactive characteristics of the social gratification. While the main identified gratifications that users of traditional media obtain are based mainly on the content and information that they acquire and the information consumption process, the Internet environment produces meaningful social gratification due to the interactive capabilities of the technology and its ability to let users communicate with each other. Studies on the uses and gratifications of participants in social networks reinforce this point; they repeatedly stress the centrality of the gratification created by communicating with friends, establishing relations with existing friends, and finding old or new friends (Dunne, Lawlor, & Rowley, 2010; Joinson, 2008; Park, Kee, & Valenzuela, 2009; Raacke & Bonds-Raacke, 2008; Urista, Dong, & Day, 2009).

Seidman (2013) notes the centrality of the social calculus as a motive for the use of social networks. The social element, he says, relates more to the need for a sense of belonging than to the need for interaction. Other research, among students who use Facebook groups, in contrast, indicate that one of the gratifications derived from the use of FB is self-promotion and the acquisition of social status (Park et al., 2009; Ellison, Vitak, Gray, & Lampe, 2014).

Additional studies that look into the gratifications that people seek when they use social networks specify the need for ego-bolstering as a principal one. In a study among girls age 12–14 who use the Internet, the need to create an ideal image for themselves was found to be an important motive for gratification (Dunne et al., 2010),

Another gratification that typifies the use of social networks is “killing time” and escapism. Many users seem to visit social networks because they are bored and not necessarily because they need to know something or wish to indulge in some form of social activity (Kaye, 1998; Quan-Haase & Young, 2010).

A research focused on academics' uses and gratification from social networks (Dermentzi, Papagiannidis, Osorio Toro, & Yannopoulou, 2016) found that academics consider using SNS as way to maintain old contacts rather than just connecting with other academics that they do not know. Another interesting finding of this research is that self-promotion has insignificant effect on attitude towards SNS. The researchers suggested that self-promotion may be considered as undesirable among academics.

In the wake of studies that attempt to explain the potential of academic Web sites and create a profile of their use, the present study will examine the connection between the way academics use ASNS, their motives for doing so, and the gratification that they get from this activity. Given the scanty attention that empirical research has devoted to ASNS to date, this study may enhance our understanding of the allure of these sites and academics' motives for using them. We emphasize two

questions in particular: Which motive, the social or the personal, is stronger in using ASNS, and to what extent do users refer to ASNS in ways that are familiar and known in reference to social networks?

Research Questions

The research was designed to investigate the reasons academics use ASNS.

The following operational questions were stated:

1. What are the characteristics of academics' use of ASNS and are they related to the frequency of visits in these sites?
2. What main gratifications do academics obtain by using ASNS? Are they related to the frequency of visits in these sites?
3. Is there a relation between the extent of ASNS use by academic faculty and the gratification obtained from ASNS?
4. Is there a difference among academics in the uses and gratifications that they obtain by using these sites against the backdrop of personal indicators (i.e., gender, age, academic status, academic discipline, and institutional affiliation)?

Research Method and Tools

This is a quantitative study, based on a survey among faculty members at three different academic institutions in Israel - two colleges and one university. For the purposes of the study, a dedicated questionnaire was constructed, composed of three main sections:

Users' demographic characteristics. Age, gender, academic status, institutional affiliation, academic discipline, and extent of activity on social networks.

Characteristics of the use of academic networks. This section was constructed on the basis of thorough familiarity with the sites and their affordances. It includes reference to the extent of use of the sites' various functions (uploading articles, contacting authors, downloading others' articles, etc.) and details on frequency of use, longevity of use, number of respondent's followers, and number of network members whom the respondent follows.

Motivations for use. This part was constructed atop the uses and gratifications theory and what is known about it in the context of social networks. Respondents were asked to rank their agreement with 24 statements on a 5-point Likert scale. The statements, composed specially for this study, reflect various gratifications that a site might fulfill in the five dimensions (cognitive, affective, personal, social, and escapist) that the gratifications and uses theory, tailored to the academic-network environment, specifies.

The main variables of the study are shown in Figure 1.

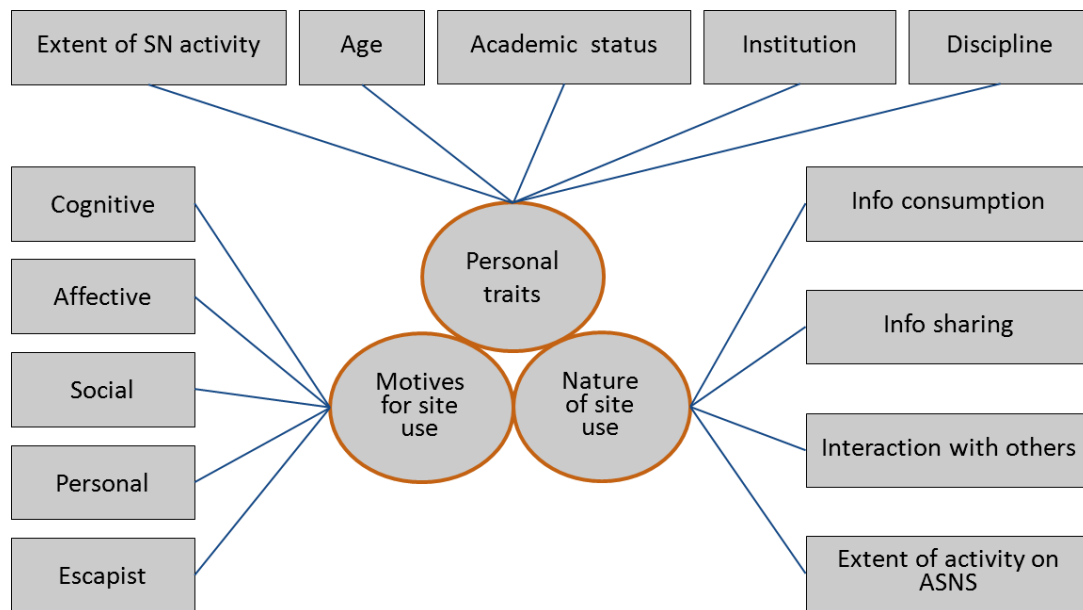


Figure 1. Model of the study.

Participants

The questionnaires were sent to all faculty members (298) at three academic institutions in Israel (Inst1, Inst2, Inst3). Eighty-one faculty members responded (27%). They are affiliated with three institutions: Inst1 (26%), Inst2 (28%), and Inst3 (28%), and of which, 57% were men and 43% were women. They were 50 years old on average ($SD=10.3$), ranging in age from 29 to 72. Their distribution by disciplines appears in Table 1.

Table 1

Distribution of Participants by Disciplines

Discipline	N	Percent of participants
Engineering and exact sciences	22	27.2
Social sciences and education	41	50.6
Natural sciences	6	7.4
Humanities and arts	12	14.8
Total	81	100

The majority of the respondents identify that they are affiliated with disciplines in the social sciences and the humanities; however, the remaining disciplines, engineering and exact sciences, and humanities and the arts and natural sciences, are affiliated with the least.

The rate of participant ownership of an account on social-networking sites and academic-networking sites is shown in Figure 2.

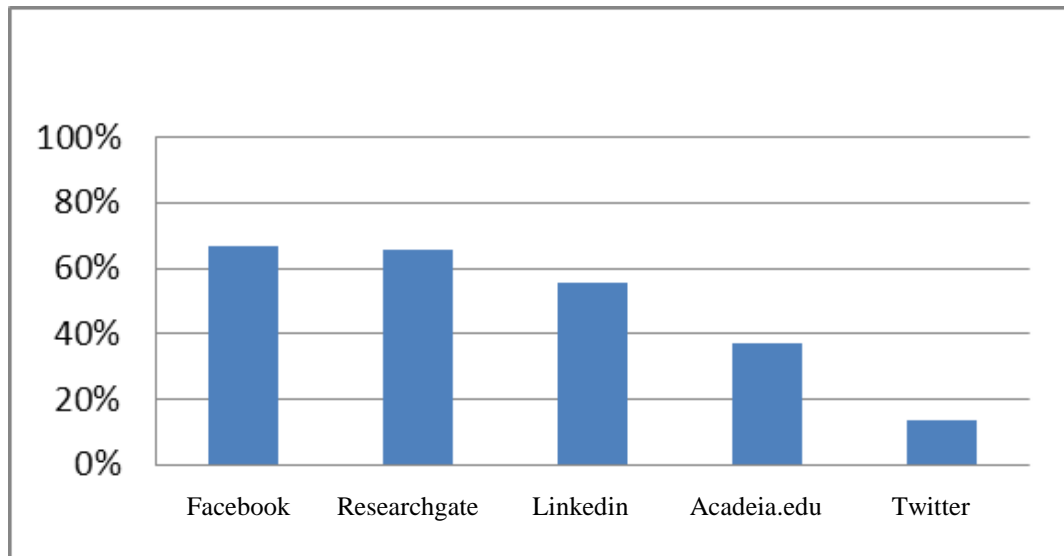


Figure 2. Rate of account ownership on social-networking sites.

Approximately 75% of respondents (N=60) have at least one account with one of the two academic-networks chosen for this study (ResearchGate / Academia.edu); 25% have accounts with both. The preferred academic network among Israeli academics is ResearchGate, with which more than 65% have an account. The percent of those with an account on ResearchGate approximates that of those who have a presence on Facebook – 67%. Only 37% have an account with Academia.edu, 56% have an account with LinkedIn, and only 14% have one with Twitter.

Findings

1. What are the characteristics of academics' use of ASNS and are they related to the frequency of visits in these sites?

Longevity of use. About 42% of those who have accounts with ASNS have had them for more than two years. Approximately 30% subscribed approximately two years ago, 13% joined the networks in the previous year, and 13% did so the previous half-year.

Frequency of visits to ASNS. Approximately 38% of those who have accounts with ASNS visit the sites infrequently, 20% do so once per month, 27% visit approximately once per week, and 15% do so almost every day.

Nature of use. To examine the way academics use ASNS, the participants were shown a list of possible modes of activity on each of the two academic networks. The list was composed of six items aggregated into three variables, two items per variable (information consumption, information sharing and diffusion, and interaction with other users). The participants were asked to rank the extent to which they engage in these activities on a 5-point Likert scale (1=not at all; 5=to a very great extent). Table 2 presents the findings.

Table 2

Uses of ASNS

	M	SD
Information consumption	2.48	1.1
Tracking the reading and citation of my articles	2.49	1.39
Downloading others' articles	2.47	1.43
Information sharing	2.02	1.00
Uploading my published full-text articles	2.37	1.42
Uploading abstracts of articles and/or links to journals in which they were published	1.58	1.13
Interaction	1.82	1.00
Replying to questions addressed to me by others	2.14	1.26
Responding to others' articles	1.48	.94

The table shows that none of the uses obtained high scores, nevertheless the more common form of activity is information consumption (M=2.48, SD=1.11), followed by information sharing (M=2.02, SD=1.00) and interaction (M=1.82, SD=1.00). To refute the null hypothesis, an ANOVA test with repeat measurements was performed, yielding a significant difference among the three groups ($F(2, 57) = .71$ $p < 0.001$). The reason for the difference is that the information consumption use is significantly more common than the information sharing and diffusion and interaction uses.

It may also be seen that within the interaction type of use, answering others' questions, (i.e., a responsive activity), is more accepted than responding to others' articles, an instigated activity.

Relation between Frequency of Use and Nature of Use

A relation was found between frequency of ASNS use and participant's age. Namely, the older an academician is, the more frequently he or she uses the network ($r=.413$, $p< 0.005$). A relation was also found between frequency of use and each of the three types of uses; it is strongest vis-à-vis information consumption (Table 3).

Table 3

Relation between Frequency of Visit to Sites and Characteristics of Use

	Information consumption	Information sharing	Interaction
Frequency	.771**	.570**	.406**

2. What main gratifications do academics obtain by using ASNS?

To answer this question, the participants were presented with 26 possible motives for ASNS use. The motives were derived from the uses and gratifications theory and adjusted to the context of social-network use. The participants were asked to rank the extent of their identification with each motive on a 5-point Likert scale (1 - not all; 5 - to a very great extent). Cronbach's alpha was calculated and .965 reliability was found.

The data were subjected to factor analysis, the results of which appear in Table 4.

Table 4

Factor Analysis - Motives for Use of Academic Networks

	Self-promotion and ego bolstering	Belonging to professional community	Acquisition of professional knowledge	Interaction with professionals	Escapism
Want to satisfy my curiosity about the popularity of my articles	.893	.276	.051	.158	-0.23
Want to know how much my articles are viewed	.877	.236	.218	.158	.040
Feel gratified that my articles are viewed	.857	.248	.162	.298	-0.52

Why Do Academics Use Academic Social Networking Sites?
Meishar-Tal and Pieterse

Want to know how much my articles are cited	.770	.033	.357	.007	.316
Want to enjoy seeing that my articles are of interest to other researchers	.737	.558	.252	.087	.053
Want to increase the readership of my studies	.660	.603	.175	.223	-.026
Want to enhance my professional reputation	.620	.526	.104	.441	.086
Want to share my knowledge with others	.501	.493	.302	.500	.032
Want to be like all my colleagues	.250	.797	.307	.107	.208
Want to show my presence where my colleagues are showing theirs	.313	.751	.180	.118	.173
Want to be part of the research community in my discipline	.087	.648	.567	.209	.139
Want professional recognition in my peer community	.383	.629	.188	.529	.070
Want to share my research with the public at large	.275	.515	.259	.400	.039
Want to be exposed to new research trends	.078	.238	.819	.256	.241
Want to keep track of others' research	.307	.185	.804	.267	.221
Want to know who is writing on topics in my area of interest	.220	.405	.762	.229	.000

Why Do Academics Use Academic Social Networking Sites?
Meishar-Tal and Pieterse

Want to keep abreast of new articles	.346	.104	.759	.408	-.027
Want to create academic collaborations	.130	.171	.272	.853	.134
Want to expand relations with other researchers	.045	.282	.373	.786	.194
Want feedback about my articles	.517	-.012	.257	.719	.146
Want answers to professional questions from researchers in my field	.189	.260	.353	.490	.394
Want relief from daily hassles	.011	.095	.103	.153	.935
This is how I spend leisure time	.06	.144	.128	.130	.926
Cronbach's α	.964	.889	.941	.905	.945

The factor analysis detected five main groups of gratifications.

Self-promotion and ego-bolstering. This group ranked the highest among the factors identified. Belonging to it are motives of self-promotion and reinforcement of personal ego,(i.e., those that center on the individual), and the utilitarian and affective gratifications that he or she obtains by using the network (Table 5).

Table 5

Self-Promotion and Ego-Bolstering

Self-promotion and ego-bolstering	M	SD
Share my knowledge with others	2.76	1.48
Know how often my articles are viewed	2.73	1.41
Increase the readership of my studies	2.68	1.50
Enhance my professional reputation	2.68	1.42
Enjoy seeing that my articles are of interest to other researchers	2.65	1.48

Make it more likely that others will cite my articles	2.57	1.47
Know how often my articles are cited	2.47	1.36
Feel gratified that my research is viewed	2.42	1.47
Satisfy my curiosity about the popularity of my articles	2.42	1.47
M	2.60	1.23

Interestingly, the highest-ranked statement was “want to share my knowledge with others.” This is the only statement that is not purely egotistic; it actually has an altruistic connotation.

Aquisition of professional knowledge. In this group are statements relating to the value of the professional information that members of academic faculty can obtain on the academic networks (Table 6). This group ranked second in importance on average.

Table 6

Acquisition of Professional Knowledge

Acquisition of professional knowledge	M	SD
Keep track of others’ research	2.67	1.38
Keep abreast of new articles	2.60	1.52
Know who is writing on topics in my area of interest	2.56	1.41
Be exposed to new research trends	2.30	1.44
M	2.55	1.29

It is evident that the networks are indeed a source of valuable information for members of academic faculty.

Belonging to professional community. This group of motives attribute importance to affiliation with the scientific community generally and the professional community particularly, and to the need to show a presence where one’s colleagues in the discipline show theirs (Table 7).

Table 7

Belonging to Professional Community

Belonging to professional community	M	SD
Receive professional recognition in my peer community	2.57	1.38
Be part of the research community in my discipline	2.51	1.34

Why Do Academics Use Academic Social Networking Sites?
Meishar-Tal and Pieterse

Show my presence where my colleagues are showing theirs	2.41	1.32
Be like all my colleagues	2.30	1.31
Share my research with the public at large	2.17	1.38
M	2.55	1.29

The factor analysis shows that the researchers regard the community of peers in their discipline as a more meaningful affiliation group than they do the public at large. The statement that received the highest ranking in this group was “Receive professional recognition in my peer community”; the motive of “shar[ing] my research with the public at large” ranked lowest.

Interaction with professionals. This group of statements aggregates motives associated with enhancing communication and interaction with other researchers via mutual activities that entail communication with others (Table 8).

Table 8

Interaction with Professionals

Interaction with professionals	M	SD
Expand relations with other researchers	2.52	1.35
Create academic collaborations	2.22	1.36
Get feedback about my articles	1.98	1.31
Get answers to professional questions from researchers in my field	1.69	1.06
M	2.10	1.11

This factor was ranked fourth, with a rather low mean of 2.10. Analysis of the ranking of statements in this group shows that the more the meaning of a statement is merely general and of principle, the greater is the identification with it, and vice versa: the more active and enterprising the intent of the statement is, such as “get answers to professional questions from [other] researchers,” the less identification there is with it.

Escapism. This factor, derived from the uses and gratifications theory, speaks of using ASNS only for enjoyment and to get relief from daily hassles. The research, however, shows that it is wholly unimportant in the context of ASNS; on average, the participants were strongly disinclined to identify with statements that relate to it (Table 9).

Table 9

Escapism Factor

Escapism	M	SD
Get relief from daily hassles	1.23	.67
This is how I spend leisure time	1.30	.67
M	1.26	0.65

To check for the presence of significant differences among the four principal motives (self-promotion, acquisition of professional knowledge, belonging to an information community, and interaction with others), an ANOVA test with repeat measurements was performed among the four complex indicators (the mean of the statements in each factor). The findings show significant differences among the various kinds of gratification and, specifically, that “interaction with professionals” is a significantly less important gratification than “self-promotion and ego-bolstering” and “belonging to a peer community.”

3. Is there a relation between the extent of ASNS use by academic faculty and the gratification obtained from ASNS?

The participants were asked to report on their frequency of visits of the ASNS sites. Table 10 presents the distribution of answers.

Table 10

Frequency of Visits

Frequency of visits	Frequency	Percent
Almost every day	9	15.0
Ones a week	16	26.7
Ones a month	12	20.0
Seldom	23	38.3

We examine a relationship between the frequency of visits in the ASNS sites and the intensity of the perceived gratification. A correlation has been found between the frequency of visits and three of the gratifications: belonging to professional community ($r=.379$ $p<0.01$), acquisition of knowledge ($r=.327$ $p<0.05$), and self-promotion ($r=.290$ $p<0.05$), meaning, the more the participant visits the ASNS sites the more he/she obtains gratifications of the three types from the visits.

4. Is there a difference in the uses and gratifications that academicians obtain by visiting ASNS on the basis of personal characteristics (gender, age, academic status, discipline, and institutional affiliation)?

No significant differences were found among uses of different academic status and different discipline in gratifications. In addition, no significant difference was found in gratifications between male and

female. However, a difference was found in respect of institutional affiliation: It appears that the use of ResearchGate is significantly higher among faculty members at Inst1 than among those at Inst2 and Inst3 ($F(2,70)=4.70$ $p<0.05$). In contrast, no significant difference was found among the institutions in the use of Academia.edu.

Furthermore, a significant difference was found in regard to the intensity of perceived gratification among the academics from the three institutions as shown in Table 11.

Table 11

Differences among Institutes

Gratification	Inst1		Inst2		Inst3		F
	M	SD	M	SD	M	SD	
Self-promotion and ego-bolstering	2.09	1.09	3.24	.98	2.60	1.41	5.01 *
Escapism	1.08	.24	1.59	.98	1.17	.46	3.27 *
Interaction	1.64	.82	2.35	1.19	2.50	1.22	3.77 *

* $P<0.05$

These results suggest that the organizational climate may affect how and for what purpose faculty members use such networks.

Conclusions

This study investigates the uses and gratifications that academic faculty members derive from two academic social-networking sites, Academia.edu and ResearchGate. We invoked the uses and gratifications theory (Katz et al., 1974) as a point of departure and adjusted this genetic theory, developed in the context of mass-media consumption, to the specific context of academic networks and their singularities.

The study was conducted among a relatively small population from three different academic institutions on the basis of a voluntary response to an online questionnaire. We found a difference among these institutions in the extent of use of the various networks and faculty members' perception of the gratifications that the networks give them.

The findings indicate that 65% of Israeli researchers use ASNS. The overall use is not intensive, more than 50% use these sites ones a month or less. They use the sites mainly for consumption of information, slightly less for sharing of information, and very scantily for interaction with others. This finding itself indicates that academic networks do not function as other social networks do. In social networks such as Facebook, interaction with others is the main use (Boyd & Ellison, 2007); in contrast, academic networks are used chiefly for information consumption and are perceived more as a database of sorts than as a place to establish social or professional relations and interact with others.

As for the gratifications that motivate users to visit ASNS, four main ones were found: self-promotion and ego-bolstering, acquisition of professional knowledge, belonging to a peer community, and

interaction with peers (Park et al., 2009). Escapism, a factor that typifies the gratifications that social networks deliver (Kaye, 1998; Quan-Haase & Young, 2010), proved to be weak if not irrelevant in regard to academic networks.

The four main gratifications that typify the use of academic networks largely reflect the uses and gratifications theory but require some adjustment. The original theory separates emotional factors from personal ones (Katz et al., 1974); in ASNS, self-promotion (personal) and ego bolstering (affective) are inseparable. The “social” factor, in contrast, is split in two where academic networks are concerned: belonging to a peer community and interaction with peers are identified as separate factors. They are different in that peer-group affiliation does not necessarily require interaction with others and is manifested in unilateral action by the user. Interaction with others, in contrast, entails user initiative and responsiveness.

Contrary to findings of Dermentzi et al. (2016) that argues that self-promotion do not derive the use of SNS by academics, this study points at the centrality of the self-promotion and ego-bolstering motive and stresses the utilitarianism that drives the use of ASNS. The creation of social capital and personal advancement by means of activity on social networks is well known in research on social networks (Ellison et al., 2014; Valenzuela, Park, & Kee, 2009). From this standpoint, the behavior of users of ASNS shows that they recognize the network as a mechanism for the creation of social capital and for an attempt to transform it into professional capital. In a world where academic faculty members are judged by the number of works that they publish and the number of citations that the works receive (Moore, Murphy, & Murray, 2010), an instrument that allows them to influence the extent of their exposure and increase the likelihood of citation delivers much power and utility.

The relatively high score of the "consumption of professional academic information" gratification stresses the importance that academics see in having direct and open access to academic information as argued by Veletsianos and Kimmons (2011).

The separation between the two social gratifications "the sense of belonging" and "interaction with professional peers," and the fact that the sense of "belonging to a community of practice" was ranked higher strengthen Seidman's (2013) notice that social gratification of social networks relates more to the need for a sense of belonging than to the need for interaction.

The fact that interaction in this environment and academics' motivation to engage in it are significantly weaker than the other uses and gratifications could be explained on the ground that the social potential of ASNS has not yet been fully realized by the academics because they are so new.

Limitations of the Study

The study was performed on a relatively small population at three different academic institutions in only one country. It limits our ability to generalize from this study to all users of ASNS. Further studies on this phenomenon on a larger scale should follow to bolster our findings.

The results reveal differences among the institutions in the extent of use of the various networks and even in the gratifications that users from different institutions perceive. Further research may delve more deeply into how and why faculty members use these sites. It may also seek the reasons for these differences in view of additional organizational indicators that were not investigated in this study.

References

- Bantz, C. R. (1982). Exploring uses and gratifications: A comparison of reported uses of television and reported uses of favorite program type. *Communication Research*, 9, 352–379.
- Barbour, K., & Marshall, D. (2012). The academic online: Constructing persona through the World Wide Web. *First Monday*, 0. doi:10.5210/fm.voio.3969
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13, 210–230. doi: 10.1111/j.1083-6101.2007.00393.x
- Bryant, J., & Zillman, D. (1984). Using television to alleviate boredom and stress. *Journal of Broadcasting*, 28, 1–20
- Bullinger, A. C., Hallerstedde, S., Renken, U., Soeldner, J. H., & Möslein, K. (2010, August). Towards research collaboration—a taxonomy of social research network sites. *Proceedings of the Sixteenth Americas Conference on Information Systems* (p. 92), Lima, Peru.
- Curry, R., Kiddle, C., & Simmonds, R. (2009, November). Social networking and scientific gateways. In *Proceedings of the 5th Grid Computing Environments Workshop* (p. 4). ACM. Doi.10.1145/1658260.1658266
- Dermentzi, E., Papagiannidis, S., Osorio Toro, C., & Yannopoulou, N. (2016). Academic engagement: Differences between intention to adopt social networking sites and other online technologies. *Computers in Human Behavior*, 61, 321–332.
- Dobos, J. (1992). Gratification models of satisfaction and choice of communication channels in organizations. *Communication Research*, 19(1), 29-51.
- Dunne, Á., Lawlor, M. A., & Rowley, J. (2010). Young people's use of online social networking sites—a uses and gratifications perspective. *Journal of Research in Interactive Marketing*, 4(1), 46-58.
- Eastman, S. T. (1979). Uses of television viewing and consumer life styles: A multivariate analysis. *Journal of Broadcasting*, 23, 491–500.
- Ellison, N. B., Vitak, J., Gray, R., & Lampe, C. (2014). Cultivating social resources on social network sites: Facebook relationship maintenance behaviors and their role in social capital processes. *Journal of Computer-Mediated Communication*, 19(4), 855-870.

- Espinoza Vasquez, F. K., & Caicedo Bastidas, C. E. (March, 2015). Academic social networking sites: A comparative analysis of their services and tools. *iConference 2015 Proceedings*. University of California, Irvine: The Donald Bren School of Information and Computer Sciences, USA
- Gruzd, A., Staves, K., & Wilk, A. (2011). Tenure and promotion in the age of online social media. *Proceedings of the American Society for Information Science and Technology*, 48(1), 1-9.
- Hogan, B., & Wellman, B. (2014). The relational selfportrait: Selfies meet social networks. In Graham, M. & W.H. Dutton, (Eds.), *Society & the Internet: How networks of information and communication are changing our lives* (pp. 53-66). Oxford, UK: Oxford University Press.
- Joinson, A. N. (2008, April). Looking at, looking up or keeping up with people? Motives and use of facebook. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (pp. 1027-1036). ACM, Florence, Italy doi.10.1145/1357054.1357213
- Jordan, K. (2015, June). What do academics ask their online networks?: An analysis of questions posed via Academia. edu. In *Proceedings of the ACM Web Science Conference* (p. 42). ACM. Doi.10.1145/2786451.2786501
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Uses and gratifications research. *Public Opinion Quarterly*, 37(4), 509-524.
- Kaye, B. K. (1998). Uses and gratifications of the World Wide Web: From couch potato to Web potato. *The New Jersey Journal of Communication*, 6(1), 21-40.
- Kelly, B. (2013) Using social media to enhance your research activities. In: *Social Media in Social Research 2013 Conference*. Retrived from http://opus.bath.ac.uk/35624/2/sra_2013.pdf
- King, K. P., Leos, J. A., & Norstrand, L. (2015). The role of online health education communities in wellness and recovery. *Handbook of Research on Advancing Health Education through Technology*, 139.
- Ko, H., Cho, C. H., & Roberts, M. S. (2005). Internet uses and gratifications: A structural equation model of interactive advertising. *Journal of advertising*, 34(2), 57-70.
- LaRose, R., & Eastin, M. S. (2004). A social cognitive theory of Internet uses and gratifications: Toward a new model of media attendance. *Journal of Broadcasting & Electronic Media*, 48(3), 358-377.
- Meishar-Tal, H., Kurtz, G., & Pieterse, E. (2012). Facebook groups as LMS: A case study. *The International Review of Research in Open and Distributed Learning*, 13(4), 33-48.
- Moore, S., Murphy, M., & Murray, R. (2010). Increasing academic output and supporting equality of career opportunity in universities: Can writers' retreats play a role? *The Journal of Faculty Development*, 24(3), 21-30.

- Niyazov Y, Vogel C, Price R, Lund B, Judd D, Akil A..... Shron, M. (2016) Open Access Meets Discoverability: Citations to Articles Posted to Academia.edu. *PLoS ONE* 11(2): e0148257. doi:10.1371/journal.pone.0148257
- Ovadia, S. (2013). When social media meets scholarly publishing. *Behavioral & Social Sciences Librarian*, 32(3), 194-198.
- Ovadia, S. (2014). ResearchGate and Academia. edu: Academic social networks. *Behavioral & Social Sciences Librarian*, 33(3), 165-169.
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior*, 12(6), 729-733.
- Price, R. (2012, August 15). Announcing Academia.edu Analytics [Blog post]. Retrieved from <http://blog.academia.edu/post/29490656413/announcing-academiaedu-analytics>
- Quan-Haase, A., & Young, A. L. (2010). Uses and gratifications of social media: A comparison of Facebook and instant messaging. *Bulletin of Science, Technology & Society*, 30(5), 350-361.
- Raacke, J., & Bonds-Raacke, J. (2008). MySpace and Facebook: Applying the uses and gratifications theory to exploring friend-networking sites. *Cyberpsychology & Behavior*, 11(2), 169-174.
- Rubin, A. M. (2002). *The uses-and-gratifications perspective of media effects*. Lawrence Erlbaum Associates Publishers.
- Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass communication & society*, 3(1), 3-37.
- Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences*, 54(3), 402-407.
- Shao, G. (2009). Understanding the appeal of user-generated media: A uses and gratification perspective. *Internet Research*, 19(1), 7-25.
- Shema, H. (2012, October 31), Interview with Richard Price, Academia.edu CEO [Blog post]. Retrieved from <http://blogs.scientificamerican.com/information-culture/interview-with-richard-price-academia-edu-ceo>
- Skeels, M. M., & Grudin, J. (2009, May). When social networks cross boundaries: A case study of workplace use of facebook and linkedin. In *Proceedings of the ACM 2009 International Conference on Supporting Group Work* (pp. 95-104). ACM. doi>10.1145/1531674.1531689
- Stafford, T. F., Stafford, M. R., & Schkade, L. L. (2004). Determining uses and gratifications for the Internet. *Decision Sciences*, 35(2), 259-288.

- Thelwall, M., & Kousha, K. (2014). Academia. edu: Social network or academic network? *Journal of the Association for Information Science and Technology*, 65(4), 721-731.
- Urista, M. A., Dong, Q., & Day, K. D. (2009). Explaining why young adults use MySpace and Facebook through uses and gratifications theory. *Human Communication*, 12(2), 215-229.
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site? Facebook use and college students' life satisfaction, trust, and participation. *Journal of Computer-Mediated Communication*, 14(4), 875-901.
- Van Noorden, R. (2014). Online collaboration: Scientists and the social network. *Nature*, 512(7513), 126-129.
- Veletsianos, G. (2013). Open practices and identity: Evidence from researchers and educators' social media participation. *British Journal of Educational Technology*, 44(4), 639-651.
- Veletsianos, G., & Kimmons, R. (2011). Networked participatory scholarship: Emergent technological pressures toward open and digital scholarship in online networks. *Computers & Education*, 58(2), 766-774.
- Wilkinson, D., Harries, G., Thelwall, M., & Price, L. (2003). Motivations for academic Web site interlinking: Evidence for the Web as a novel source of information on informal scholarly communication. *Journal of Information Science*, 29(1), 49-56.

