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FWF

Der Wissenschaftsfonds.



SN[S]³

Social Networking Sites
in the Surveillance Society

Research Design & Data Analysis, Presentation, and Interpretation: Part One

Thomas Allmer

Keywords: Research Design, Usage of Social Networking Sites, Greatest Advantages and Concerns of Social Networking Sites, Communication, Surveillance, Extrinsic and Intrinsic Values of Privacy, Privacy Value Index, Control and Access Theories of Privacy, Privacy Theory Index

Short biography of the author: Thomas studied Media and Communication at the University of Salzburg and the Victoria University of Melbourne. Currently, he is a PhD candidate at the University of Salzburg (Austria) and research associate in the project “Social Networking Sites in the Surveillance Society”, funded by the Austrian Science Fund (FWF). He is a member of the Unified Theory of Information Research Group (Austria) and participate in the working group “Living in the Surveillance Age” of the EU COST Action “Living in Surveillance Societies” (LiSS). In addition, he is a member of the editorial team and reviewer of tripleC: Cognition, Communication, Co-operation. Recent publication: *Towards a Critical Theory of Surveillance in Informational Capitalism* (Peter Lang, 2012).

A research design is the basic plan for an empirical study, connects research questions to data, and should provide answers to four questions, namely (Punch 2005, 63):

- “Following what strategy?”
- Within what framework?
- From whom?
- How?”

Based on these assumptions, the following figure can be outlined:

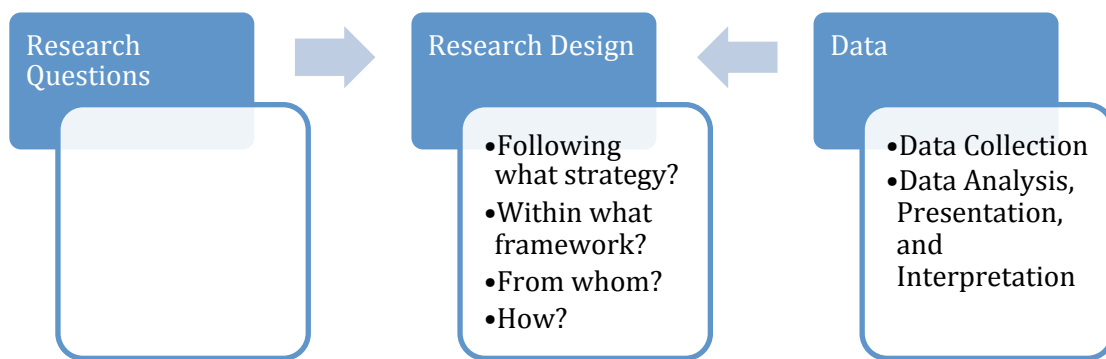


Figure 1: A research design connects research questions to data (Punch 2005, 63)

In order to answer the questions of the research design, we will introduce the context of the empirical study, list the research questions and identify the hypotheses (Following what strategy?), try to conceptualize and operationalize the empirical study (Within what framework?), we will describe the research methods (How?), the population and the sampling (From whom?) (Babbie 2010, 112-119), and we will finally provide the data analysis, presentation, and interpretation. The following main points of this research report can be listed:

1. Context of the empirical study
2. Research questions
3. Hypotheses
4. Survey questions (conceptualization and operationalization)
5. Research methods
6. Population and sampling

7-10. Data analysis, presentation, and interpretation

The following sections are structured according to this distinction.

1. Context of the Empirical Study

Surveillance has notably increased in the last decades of modern society. Surveillance studies scholars like Lyon (1994) or Norris and Armstrong (1999) stress that we live in a surveillance society. Although there are a lot of other features in contemporary society such as information, neoliberalism, globalization, etc., surveillance in general and Internet surveillance in particular are crucial phenomena. In addition, there is much public talk about privacy. The following collected news clips indicate this development:

“Not Me Dot Com: Want an Internet that doesn't know your pant size? A guide to regain your privacy” (The Wall Street Journal, June 18, 2011)

“Facebook tool shows location. Millions of Facebook users have been warned to check their privacy settings after the social network launched a tool to let friends reveal your location.” (The Sun, September 17, 2010)

“Twitter gives users more privacy controls: Twitter Inc, the micro-blogging service, added tools that give users more control over how data is shared with third-party applications.” (The Times of India, May 19, 2011)

These examples point out how important the topic of privacy has become for the media and for our daily lives. The media often alert that privacy seems to be under attack and vanishing especially caused by the emergence of new information and communication technologies such as the Internet or the mobile phone. Web 2.0 activities such as creating profiles and sharing ideas, announcing personal messages, uploading or watching videos, and writing personal entries, enable the collection, analysis, and sale of personal data by commercial web platforms. The fact that one can find web 2.0 platforms such as Facebook (rank 2), YouTube (rank 3), Twitter (rank 10), and LinkedIn (rank 16) among the most frequently accessed websites worldwide, indicates the enormous popularity of these sites (Top 500 web sites, alexa.com, accessed on December 19, 2011). In Austria, websites that allow social networking, such as Facebook (rank 2), XING (rank 23), or LinkedIn (rank 38) are among the most popular web sites (Top 100 sites in Austria, alexa.com, accessed on March 23, 2011). With single exceptions (e.g. Albrechtslund 2008; Fuchs 2009; Fuchs et al. 2012), there are no studies that combine surveillance and privacy in the context of web 2.0. The overall aim of this research project is to study electronic surveillance on social networking sites that are used by Austrian students.

Social networking sites users are primarily young and educated people. So for example, 44% of the users of Myspace are aged 18-34, 42% of the users of Facebook are aged 18-34, 53% of Facebook users have attended college or graduate school (all data: quantcast.com, accessed on December 19, 2011). Therefore we can assume that young people are early adopters of new technologies. It is therefore important to study their usage behaviour because they might anticipate future trends. Due to their education standards, students tend to be very sensitive towards new issues that confront society. Given that students are early adopters and sensitive citizens, we find it important to study their usage of SNS in the context of the issue of surveillance.

The project focuses on the combination of three research topics, namely surveillance, privacy, and web 2.0/social networking sites. Therefore, it must be situated in the context of the state of art in these three fields:

Since Foucault has published his book *Surveiller et punir* in French in 1975 and in English in 1977, the amount of literature on surveillance has increased enormously and represents a diffuse and complex field of research: Giddens (1995, 169) defines surveillance as “symbolic material that can be stored by an agency or collectivity” and as “the supervision of the activities of subordinates”. For Gandy (1993, 15), surveillance is a “complex technology that involves the collection, processing, and sharing of information about individuals and groups that is generated through their daily lives as citizens, employees, and consumers and is used to co-ordinate and control their access to the goods and services that define life in the modern capitalist economy”. Further authors such as Rule (1973; 2007), Marx (1988; 2002), Lyon (1994; 2001), Baudrillard (2006; 2007), Deleuze (1988; 1992), Poster (1990), Webster and Robins (1993), and Fiske (1998; 1999) have developed important contributions to surveillance studies. Nevertheless, there is no common ground about how surveillance should be defined. Some use a neutral and general notion of surveillance, whereas others consider surveillance to be negative and being connected to coercion, repression, discipline, power, and domination.

Although surveillance and privacy are overlapping areas to a certain extent, an own privacy study field has been developed: Some understand privacy as a specific social structure, a moral or legal right, which is used to enable someone’s ability to limit or restrict others from access to persons or information (restricted access definition of privacy). For instance, this approach is represented by Warren and Brandeis (1890), Gavison (1980), Allen (1988), Bok (1983), Parent (1983a; 1983b), Prosser (1960), Schoeman (1984; 1992), and Scanlon (1975). Others focus on the individual and understand privacy as control over information about oneself (limited control definition of privacy); for example, representatives are Westin (1967), Shils (1966), Fried (1968; 1990), Gerstein (1970; 1978), Froomkin (2000), Miller (1971), Rachels (1975), Murphy (1964), Posner (1978; 1981), Gerety (1977), and DeCew (1986). Integrative approaches of studying privacy try to combine different notions into one concept; for instance, they are represented by Reiman (1976), Moor (1997), and Tavani (2007; 2008). Nevertheless, many authors have advanced critique of the concept

of privacy as being a modern concept of liberal democracy (Gouldner 1976; Lyon 1994; Gilliom 2001; Etzioni 1999; Ogura 2006; Fuchs 2010a).

Many authors argue that the Internet has been transformed from a system that is mainly oriented towards informational elements into a system that is more oriented on enabling communication and co-operation (Alby 2007; Beer and Burrows 2007; boyd and Ellison 2007; Burg 2003; 2004; Fuchs 2010b; Kolbitsch and Maurer 2006; O'Reilly 2005; Saveri, Rheingold and Vian 2005; Shirky 2008). The notions of "web 2.0", "social software", "social media", and "social network(ing) sites" (SNS) have emerged in this context. Most approaches see the active involvement of users in the production of content as the main characteristic of web 2.0. Regardless whether someone agrees that these transformations of the Internet have taken place, it is clear that web 2.0 activities such as creating profiles and sharing ideas on Facebook, announcing personal messages on Twitter, uploading or watching videos on YouTube, and writing personal entries on Blogger, enable the vast collection, analysis, and sale of personal data by commercial web platforms.

2. Research Questions

The following general research question is addressed in this study:

Which major advantages and disadvantages of social networking platforms do Austrian students see?

The specific research questions are:

1. What is the role of surveillance for users in the context of social networking sites?
2. What are the disadvantages and advantages that are seen by users in relation by decreased privacy?
3. Concerning the disadvantages, do they see more individual disadvantages or disadvantages for society?
4. Is privacy considered as rather an intrinsic or rather as extrinsic value?
5. Are disadvantages in relation to privacy described as rather intrinsic or extrinsic?
6. Are privacy reduction and surveillance seen as legitimate if in return there is free access to platforms and to certain Internet services?

3. Hypotheses

Based on these research questions, we have identified the following hypotheses that have been tested.

Hypothesis 5: Maintaining existing relationships over spatio-temporal distances and creating new social relationships is considered as the main advantage of SNS.

SNS such as Myspace, Facebook, Friendster, and LinkedIn are Internet-based communication platforms that allow people for instance creating profiles and sharing ideas, announcing personal messages, uploading or watching videos, and writing personal entries. Social networking sites primarily enable the maintenance of existing social relationships and the establishment of new relationships over spatio-temporal distances (Fuchs 2010a; Beer and Burrows 2007).

Several empirical studies found out that for young people maintaining existing contacts and/or creating new social contacts is considered as the main advantage of SNS: For example, Acquisti and Gross (2006, 37) conducted an online survey (N=294) at a US academic institution in order to study privacy concerns as well as usage, knowledge, and attitudes towards Facebook (FB). According to Acquisti and Gross (2006, 47), "members claim that the FB is very useful to them for learning about and finding classmates (4.93 mean on a 7-point Likert scale) and for making it more convenient for people to get in touch with them (4.92), but deny any usefulness for other activities". boyd (2007) collected ethnographic data of young Myspace users with the help of participant observation and content analysis of profiles and conducted qualitative interviews with US-based teenagers (N=unknown) in order to investigate how youth experience social life online. boyd (2007, 126) concludes: "When I ask teenagers why they joined Myspace, the answer is simple: *'Cuz that's where my friends are.'*" She furthermore states that "the popularity of Myspace is deeply rooted in how the site supports sociality amongst pre-existing friend groups. Teens join Myspace to maintain connections with their friends" (boyd 2007, 126). In the Greater London area, Livingstone (2008) conducted qualitative interviews with 16 teenagers, who use social networking sites. Similar to Acquisti and Gross and boyd, Livingstone (2008, 406) found out that teenagers see the maintenance of old and the establishment of new friendships as a central opportunity of social networking sites. As part of a larger empirical survey study, Fuchs (2010b) asked students in Salzburg, Austria, about the main advantages of social networking sites (N=557). The majority of the respondents mentioned maintaining existing contacts and establishing new social contacts as main advantages of social networking sites (Fuchs 2010b, 29). These empirical studies share the common notion that young people list social relationship management as central benefit of SNS.

Based on these theoretical foundations and empirical findings, we assume that in our study maintaining existing relationships and creating new social relationships is considered as the main advantage of SNS.

Most studies that cover the issue of privacy and SNS are focusing on individual privacy concerns and individual privacy-related behaviour on SNS. The issue of surveillance is more a macro-topic that requires that usage behaviour is framed by societal context variables such as state surveillance, economic surveillance, and modernity. The analysis of surveillance and SNS therefore is in need of a research approach that takes into account political contexts (Beer 2008). Surveillance has thus far, with single exceptions, been rather ignored as a topic in SNS studies (Fuchs et al. 2012; Andrejevic 2010.). The existing studies show that there is much more focus on the priva-

cy topic than on surveillance. Advertising mechanisms and the connection between surveillance and privacy attitudes on the one hand and SNS advertising settings on the other hand have thus far hardly been studied. This is a task for the proposed project that is still missing in the state of the art.

Hypothesis 6: The surveillance threat is considered as the major disadvantage of SNS.

There is much public talk about privacy and surveillance threats in the context of web 2.0. The following collected news clips indicate this development:

- “EU Seeks Tougher Online Code In Bid to Safeguard Private Data. The European Union proposed new privacy rights for citizens sharing personal data with websites such as Facebook and Google.” (The Wall Street Journal, November 5, 2010)
- “Facebook tool shows location. Millions of Facebook users have been warned to check their privacy settings after the social network launched a tool to let friends reveal your location.” (The Sun, September 17, 2010)
- “Google accepts privacy leaks. Google Inc. admitted for the first time its Street View cars around the world accidentally collected more personal data than previously disclosed – including complete emails and passwords – potentially breathing new life into probes in various countries.” (The Times of India, October 23, 2010)

These examples point out how important the topics of privacy and surveillance has become for the media and for our daily lives. The media often alert that privacy seems to be under attack and vanishing especially caused by the emergence of new information and communication technologies such as social networking sites. The principle of web 2.0 platforms is the massive provision and storage of personal(ly) (identifiable) data that are systematically evaluated, marketed, and used for targeted advertising (Fuchs 2012; Andrejevic 2010; Fernback and Papacharissi 2007; Sandoval 2012; Scholz 2008). Web 2.0 applications and social software sites threaten users' privacy and surveil the users by collecting personal data about behaviour, preferences, and interests with the help of systematic and automated computer processes (Fuchs 2012, Andrejevic 2010).

Some empirical studies analysed that for young people privacy and surveillance threats are considered as the major disadvantages of SNS: Livingstone (2008, 406) discovered that teenagers are concerned about privacy threats on SNS (N=16): “When asked whether they would like to change anything about social networking, the operation of privacy settings and provision of private messaging on the sites are teenagers' top priorities, along with elimination of spam and chain messages – both intrusions of their privacy”. Dwyer, Hiltz, and Passerini (2007) and Dwyer et al. (2010) conducted quantitative online surveys with 115 Myspace and 107 Facebook users in the US and with 388 studiVZ (a German based social networking site) users in the

German-speaking world in order to study the influence of trust and privacy concerns on the use of social networking sites for social interaction. Similar to Livingstone's findings, one result of the surveys was that users of social networking sites are on average highly aware of privacy threats and familiar with privacy settings (Dwyer et al. 2010, 2975). Fuchs (2010b) also asked students about the main disadvantages of SNS (N=542). The majority said that "surveillance as a result of data abuse, data forwarding, or a lack of data protection is a major threat of such platforms" (Fuchs 2010b, 29). These empirical studies share the common ground that for young people risks of surveillance and reduced privacy are considered as the general drawbacks of social networking sites.

In view of the facts that social software sites threaten users' privacy, that there is much public talk about privacy and surveillance in the context of web 2.0, that students tend to be very sensitive towards new issues that confront society (based on their education standards), and that several empirical studies analysed that for young people risks of surveillance are seen as a general problem, we hypothesize that in our empirical study the surveillance threat is considered as the major disadvantage of SNS.

Hypothesis 7: Privacy is rather considered as extrinsic than as intrinsic value and as based on the control theory.

Several privacy studies scholars distinguish between privacy as instrumental/functionalist (extrinsic) and intrinsic value (Schoeman 1984, 5-6; Tavani 2008, 132-133, 156-157; Moor 1997, 28).

If privacy is considered as extrinsic value, then this includes the following assumptions:

- Privacy is an instrumental/functionalist value for providing means in order to achieve some end(s).
- Privacy as derivative concept that is derived from more fundamental concepts such as security, liberty, and property.
- Privacy serves/leads to other values.
- The value of privacy as means.

For example, if a student provides publicly visible information about his political attitudes and interests on web 2.0 platforms such as Facebook and if it comes into conflict with the aims and scopes of the company he is applying for, then the student risks that the employer might be reluctant to hire him. In order to avoid such direct and immediate political discrimination, the student will probably use privacy settings and conceal such information. Privacy can in this case be considered as instrumental and extrinsic value, because it serves as a means in order to be employed and guarantee financial security as end. Privacy offers protection against that harm.

If privacy is seen as intrinsic value, then this involves the following assumptions:

- Privacy is a unitary value for its own sake.
- Privacy as basic concept standing on its own.
- Privacy is valuable in itself.
- Attaining privacy as important political goal.

For example, if an individual is interested in obtaining privacy online, because s/he understands privacy as a necessary condition for protecting private life, one's right to one's own person, inviolate personality, human dignity, intimacy, or for the maintenance and establishment of different forms of social relationships, privacy can be considered as intrinsic notion, where the unitary value of privacy serves as end for its own sake (Schoeman 1984, 6). In this instance, a person understands online privacy as fundamental concept that stands on its own.

A list of the values privacy has been associated with can be provided: autonomy, counterculture, creativity, democracy, eccentricity, dignity, freedom, freedom of thought, friendship, human relationships, imagination, independence, individuality, intimacy, psychological well-being, reputation, self-development, emotional release, individual integrity, love, personality, pluralism, self-determination, respect, tolerance, self-evaluation, trust (Fuchs 2011, 225).

According to Tavani (2008, 157), "it is difficult to interpret and defend privacy as something that has intrinsic value, it would seem that, by default, privacy must be viewed as an instrumental [extrinsic; TA] value". In addition, "almost everyone would agree that privacy has instrumental [extrinsic; TA] value. This is its most common justification" (Moor 1997, 28). We thus suppose that in our study privacy is considered rather as extrinsic than as intrinsic value.

The control theory of privacy focuses on the individual and understands privacy as control over information about oneself (Tavani 2008). Control definitions of privacy make one or more of the following assumptions (Allmer 2011, 85):

- Privacy is a personal interest (interest-based conception of privacy).
- Privacy includes freedom from external interference in one's personal choices, decisions, and plans (non-interference).
- The degree of personal choice indicates how much privacy an individual has.
- Restrictions of privacy are losses.
- Privacy should be defined in a descriptive way.
- Full privacy is given as long the individual is able to choose him-/herself which personal information is disclosed.

The control theory of privacy suggests that the more the individual has control over his/her information, the more privacy s/he enjoys. The control theory primarily understands privacy as self-determination and focuses on individual behaviour.

In comparison, the access theory of privacy understands privacy as a specific social structure, a moral or legal right, which is used to enable someone's ability to limit or restrict others from access to persons or information (Tavani 2008). Restricted access definitions of privacy make one or more of the following assumptions (Allmer 2011, 85-86):

- Privacy is a (moral and/or legal) right (rights-based conception of privacy).
- Privacy includes the freedom from unwarranted intrusion (non-intrusion).
- Privacy should be protected; for example, by law or certain "zones".
- Restrictions of privacy are violations.
- Privacy should be defined in a normative way.
- Full privacy can only be reached if there is no contact to other social actors.

To a certain extent, the access theory of privacy suggests that the more access to people or information is limited or restricted by a social structure such as the law, the more privacy people have.

Finally, the restricted access/limited control theory (RALC) tries to combine the control and access theory into one concept. RALC-definitions do not only understand privacy as a right that is worth protecting, they also treat individual control as an important aspect (Tavani 2007; 2008; Allmer 2011, 86).

Privacy is a modern concept of liberal democracy and is used in order to justify liberty from public intervention (Lyon 1994, 185). In the liberal understanding of privacy, the sovereign individual should have freedom to seek his/her own interests without interference and those interests are primarily interpreted as property interests and private ownership rights (Fuchs 2010a, 174; Lyon 1994, 186-188). Therefore, the concept of privacy fits neatly into the concept of private property (Fuchs 2010a, 174; Lyon 1994, 186; Ogura 2006, 278). The debate of privacy advances the idea of possessive and self-protective individualism (Gouldner 1976, 103; Lyon 2001, 21). Possessive individualism means that the individual is proprietor of his/her own person, capabilities, potentialities, and capacities (Macpherson 1990, 3). In the understanding of possessive individualism, the nature of the human being is that everyone is the owner of himself/herself and that the individual is not part of a larger social whole. The human essence is considered as being the proprietorship of himself/herself and the overall aim of society in liberal democracy is considered as being the protection of private property (Macpherson 1990, 3). In addition, individuals are seen as being related as proprietors and therefore society is considered as consisting of relations of proprietors. The idea of possessive individualism can be summarized with the following propositions:

- "(i) What makes a man human is freedom from dependence on the wills of others.

- (ii) Freedom from dependence on others means freedom from any relations with others except those relations which the individual enters voluntarily with a view to his own interest.
- (iii) The individual is essentially the proprietor of his own person and capacities, for which he owes nothing to society. ...
- (iv) Although the individual cannot alienate the whole of his property in his own person, he may alienate his capacity to labour.
- (v) Human society consists of a series of market relations. ...
- (vi) Since freedom from the wills of others is what makes a man human, each individual's freedom can rightfully be limited only by such obligations and rules as are necessary to secure the same freedom for others.
- (vii) Political society is a human contrivance for the protection of the individual's property in his person and goods, and (therefore) for the maintenance of orderly relations of exchange between individuals regarded as proprietors of themselves." (Macpherson 1990, 263-264)

This means that in modern society the idea of a self-protective individualism is advanced and liberty is justified from public intervention, where everyone is the owner of himself/herself. We therefore assume that privacy is rather considered as based on a theory that understands privacy as self-determination and focuses on individual behaviour, than on a theory that is based on political limitations and restrictions by law.

Livingstone's (2008, 404) empirical findings confirm this theoretical assumption (N=16): "The question of what you show to others and what you keep private was often the liveliest part of the interviews, suggesting an intense interest in privacy. Teenagers described thoughtful decisions about what, how and to whom they reveal personal information, drawing their own boundaries about what information to post and what to keep off the site, making deliberate choices that match their mode of communication (and its particular affordances) to particular communicative content. This suggests a definition of privacy not tied to the disclosure of certain types of information, rather a definition centred on having control over who knows what about you".

In summary, we thus hypothesize that privacy is rather considered as based on the control theory.

4. Survey Questions

In order to test if maintaining existing relationships over spatio-temporal distances and creating new social relationships is considered as the main advantage of SNS (Hypothesis 5), we asked students what in their opinion the greatest advantages of social networking sites such as Facebook and Myspace are (open question):

(6) Was sind für dich die größten Vorteile von Social Networking Plattformen wie Facebook, Myspace, LinkedIn, etc? [What are the greatest advantages of social networking platforms such as Facebook, Myspace, LinkedIn, etc. for you?]

For analysing whether the surveillance threat is considered as the major disadvantage of SNS (Hypothesis 6), we asked what the greatest concerns of social networking sites such as Facebook and Myspace are (open question):

(7) Was sind deine größten Besorgnisse über Social Networking Plattformen wie Facebook, Myspace, LinkedIn, etc? [What are your greatest concerns of social networking platforms such as Facebook, Myspace, LinkedIn, etc?]

If privacy is rather considered as extrinsic than as intrinsic value (Hypothesis 7) was measured with the help of an index that was calculated based on the answers given to three single choice questions that tested such consideration (interpretation in parenthesis):

(56) Sollte deine Handynummer auf Facebook für alle Menschen sichtbar sein oder nicht? Was ist der wichtigste Grund, der dafür bzw. dagegen spricht? [Should your mobile phone number be visible to all people on Facebook, or not? What is the most important reason for or against it?]

1. Ja, Facebook ist wie ein Telefonbuch. Ich bin froh, wenn Menschen, die mich suchen auch finden können, um mich zu kontaktieren. [Yes, Facebook is like a telephone book. I am pleased if people who are looking for me also can find me in order to contact me.] (no value)

2. Ja, ich bin froh, wenn ich unterschiedliche Informationen über die Welt, wie zum Beispiel Werbung, bekomme (z.B. per SMS). [Yes, I am pleased if I get different information about the world such as advertising (e.g. via SMS).] (no value)

3. Nein, ich habe Angst, dass meine Telefonnummer für Werbung missbraucht wird. [No, I am afraid that my phone number will be misused for advertising.] (extrinsic value)

4. Nein, ich habe Angst, dass ich belästigt oder bedroht werde. [No, I am afraid that I will be harassed or threatened.] (extrinsic value)

7. Nein, das würde meine Privatsphäre verletzen und Privatsphäre ist etwas ganz wichtiges für mich. [No, that would violate my privacy and privacy is something very important for me.] (intrinsic value)

0. Andere Meinung: [Other opinion:]

(57) Ist es für dich ein Problem, wenn Fotos von dir, auf denen du betrunken bist und bei deren Betrachtung dies auch deutlich zu merken ist, auf Facebook öffentlich sichtbar sind? Was ist der wichtigste Grund, der dafür bzw. dagegen

spricht? [Do you mind if photos on which you are obviously drunk are publicly visible on Facebook. What is the most important reason for or against it?]

3. Ja. Wenn solche Fotos von mir in der Öffentlichkeit auftauchen, dann ist das peinlich und ich schäme mich dafür. [Yes. If such photos are published it is embarrassing and I feel ashamed.] (extrinsic value)

4. Ja. Ich habe Angst, dass mein Arbeitgeber oder ein zukünftiger Arbeitgeber diese Fotos sieht und ich dann Probleme in der Arbeit bekomme oder einen Job bei einem Bewerbungsgespräch nicht bekomme. [Yes. I am afraid that my employer or my future employer sees these photos and that I then get problems at work or will not get the job at an employment interview.] (extrinsic value)

5. Ja. Das ist etwas Privates und Privatsphäre ist etwas ganz wichtiges für mich. [Yes. That is something private and privacy is something very important for me.] (intrinsic value)

6. Nein. Ich habe kein Problem damit, auch Spaß muss sein im Leben und jeder ist mal betrunken, das ist völlig normal, man braucht so einen Umstand nicht zu verheimlichen. [No. I do not mind, there is no harm in a joke and everyone is drunk once in a time. This is completely normal. One does not need to conceal such a circumstance.] (no value)

7. Nein. Ich habe keine Angst mich so zu zeigen, wie ich bin. Selbst bei einem Bewerbungsgespräch kann das von Vorteil sein, da die Menschen sehen, dass man ein umgänglicher Mensch ist, der Spaß am Leben hat. [No. I am not afraid to show myself as I am. Even in an interview it can be a benefit, because people see that you are a sociable person who has fun in his/her life.] (no value)

0. Andere Antwort: [Other opinion:]

(58) Würdest du jemals Bilder von dir, auf denen du nackt zu sehen bist, auf einem Social Networking Site Profil öffentlich machen? Was ist der wichtigste Grund, der dafür bzw. dagegen spricht? [Would you ever publish pictures, where you are shown naked, on a social networking site profile? What is the most important reason for or against it?]

1. Ja, warum nicht. Ich geniere mich nicht nackt vor anderen Menschen, auch nicht im Internet. [Yes, why not. I am not embarrassed being naked in front of other people, also not on the Internet.] (no value)

2. Nein. Das wäre ein Eingriff in meine Intimsphäre. Intimität ist einer der wichtigsten Werte und muss geschützt werden. [No. That would be a violation of my privacy. Intimacy is one of the most important values and has to be protected.] (extrinsic value)

3. Nein. Das ist zu privat und alle privaten Daten sollten privat bleiben und nicht öffentlich gemacht werden. [No. That is too private and all private data should be kept private and not be made public.] (intrinsic value)

0. Andere Antwort: [Other opinion:]

The following table summarizes the questions on which the privacy value index is based:

Values of Privacy				
	Extrinsic Value	Intrinsic Value	No Value	Other Opinion
Should your mobile phone number be visible to all people on Facebook, or not? What is the most important reason for or against it?				
Do you mind if photos on which you are obviously drunk are publicly visible on Facebook. What is the most important reason for or against it?				
Would you ever publish pictures, where you are shown naked, on a social networking site profile? What is the most important reason for or against it?				

Table 1: Questions on which the privacy value index is based

The index can be calculated with the following formula:

- 3 x extrinsic/intrinsic/no value: Privacy is considered as extrinsic/intrinsic/no important value.
- 2 x extrinsic/intrinsic/no value: Privacy is rather considered as extrinsic/intrinsic/no important value.
- 1 x extrinsic/intrinsic/no value/other opinion: No valid assessment possible.

If privacy is rather considered as based on the control theory than on the access theory (Hypothesis 7) was measured with the help of an index that was calculated based on the answers given to three multiple choice questions that tested such consideration (interpretation in parenthesis):

(59) Social Networking Plattformen wie etwa Facebook oder Myspace zeichnen das Nutzungsverhalten ihrer User für Werbezwecke auf. Wie denkst du darüber? (Mehrfachnennung möglich) [Social networking platforms such as Facebook or Myspace record the usage behaviour of their users for purposes of advertising. How do you think about this circumstance? (multiple responses possible)]

1. Das stellt für mich kein Problem dar. [I do not mind.] (no theory)
2. Ich finde das schlecht und möchte selbst bestimmen können, welche Daten von mir aufgezeichnet werden. [I find that bad and I would prefer to decide for myself, which data are recorded about me.] (control theory)
3. Ich finde das schlecht und denke, dass auf einer politischen Ebene Regeln gefunden werden sollten (z. B. Internationale Datenschutzregulierungen), die bestimmte Datensammlungen rechtlich unterbinden. [I find that bad and think that regulations should be established on a political level (e.g. international data protection regulations) in order to legally hinder the collection of certain data.] (access theory)
4. Andere Meinung: [Other opinion:]

(60) In Österreich müssen Anbieter von Telekommunikationsdiensten (z.B. Internet Service Provider) elektronische Kommunikationsvorgänge ihrer Kunden auf Verlangen an die Polizei weitergeben. Siehst du darin ein Problem und wenn ja, wie könnte dem entgegengesteuert werden? (Mehrfachnennung möglich) [In Austria, telecommunication service providers (e.g. Internet service providers) have to pass on electronic communication activities of their customers to the police if the latter demands so. Do you mind about it? If yes, how could this circumstance be counteracted? (multiple responses possible)]

1. Nein, das stellt für mich kein Problem dar. [No, I do not mind.] (no theory)
2. Ja, ich sehe das problematisch und würde gerne selbst bestimmen können, welche Kommunikationsvorgänge von mir weitergegeben werden. [Yes, I find that problematic and I would prefer to decide for myself, which communication activities of me can be passed on to the police.] (control theory)
3. Ja, ich sehe das problematisch und denke, dass auf einer politischen, rechtlichen oder gesellschaftlichen Ebene Regeln gefunden werden sollten, die private Informationen schützen und niemand anderem zugänglich sind. [Yes, I find that problematic and I think that regulations should be established on a political, legal, or societal level in order to protect private information so that they are not accessible to someone else.] (access theory)
4. Andere Meinung: [Other opinion:]

(61) Angenommen, du wirst auf Facebook von einer fremden Person wiederholt belästigt und du fühlst dich von diesem Menschen beobachtet (Stalking). Siehst du darin ein Problem und wenn ja, wie könnte eine derartige Situation gelöst werden? (Mehrfachnennung möglich) [Suppose you are repeatedly harassed by a stranger on Facebook and you feel surveilled by this person (stalking). Do you mind about it? If yes, how could such a situation be handled? (multiple responses possible)]

1. Nein, das stellt für mich kein Problem dar. (No, I do not mind.) (no theory)
2. Ja, das stellt für mich ein Problem dar. Ich würde dieses Problem auf einer individuellen Ebene lösen, indem ich dieser Person den Zugang zu meinem Facebook Profil verwehre. [Yes, I mind. I would solve this problem on an individual level by denying this person access to my Facebook profile.] (control theory)
3. Ja, das stellt für mich ein Problem dar. Ich würde mir wünschen, dass auf einer politischen, rechtlichen oder gesellschaftlichen Ebene Regeln gefunden werden könnten, die private Daten vor jedem Zugriff durch Andere schützen. [Yes, I mind. I wish that regulations could be established on a political, legal, or societal level in order to protect the access to private data.] (access theory)
4. Andere Meinung: [Other opinion:]

The following table summarizes the questions on which the privacy theory index is based:

Theories of Privacy					
	Control Theory	Access Theory	RALC Theory	No Theory	Other Opinion
Social networking platforms such as Facebook or Myspace record the usage behaviour of their users for purposes of advertising. How do you think about this circumstance?					
In Austria, telecommunication service providers (e.g. Internet service providers) have to pass on electronic communication activities of their customers to the police if the latter demands so. Do you mind about it? If yes, how could this circumstance be counteracted?					
Suppose you are repeatedly harassed by a stranger on Facebook and you feel surveilled by this person (stalking). Do you mind about it? If yes, how could such a situation be handled?					

Table 2: Questions on which the privacy theory index is based

The index can be calculated with the following formula:

- (59): control theory + access theory: RALC theory; (60): control theory + access theory: RALC theory; (61): control theory + access theory: RALC theory.

- 3 x control/access/RALC/no theory: Privacy is considered as based on the control/access/RALC/no theory.
- 2 x control/access/RALC/no theory: Privacy is rather considered as based on the control/access/RALC/no theory.
- 1 x control/access/RALC/no theory/other opinion: No valid assessment possible.
- (59): control theory and/or access theory + no theory: No valid assessment possible; (60): control theory and/or access theory + no theory: No valid assessment possible; (61): control theory and/or access theory + no theory: No valid assessment possible.

5. Research Methods

We conducted an online survey (Batinic, Reips, and Bosnjak 2002; Johns, Chen, and Hall 2004; Couper 2000; Schmidt 1997; Sills and Song 2002; Zhang 2000; Hewson, Laurent, and Vogel 1996) that was focusing on Austrian students. We identified how important students consider the topic of surveillance in relation to SNS by analysing their answers to our questions with the help of PASW Statistics 18 (formerly SPSS Statistics) for the quantitative data (Field 2009) and SPSS Text Analytics for Surveys 4 for the open questions. Our questions focused on the most frequently used SNS in Austria, namely Facebook (Top 100 sites in Austria, alexa.com, accessed on March 23, 2011).

We constructed a questionnaire that consisted of single and multiple choice, open-ended, interval-scaled, matrix, and contingency questions. The survey was conducted in German, but the questionnaire was translated for the analysis into English (see Annex A). Depending on the contingency level, students had to answer at least three questions, but no more than 78 questions. Filling out the whole questionnaire lasted about 20 minutes. The participants were asked if they agree to allow that their data being used for purposes of research, as well as that the results of the survey – in compliance with the protection of anonymity – may be published. The questionnaire was thematically grouped into different subsections. Some questions required special instructions to facilitate proper answering. For questions about personal settings on Facebook, we asked the participants if they could log in to their Facebook profile (if any) for checking their settings. In order to help the respondents to find the right settings quickly, we furthermore implemented Facebook screen shots including short instructions into the survey.

We conducted the survey as part of the project “Social Networking Sites in the Surveillance Society” that is funded by the Austrian Science Fund (FWF). We strived to achieve two main objectives in the survey: On the one hand, we tried to figure out which major advantages and disadvantages of social networking platforms Austrians students see and if privacy is rather considered as extrinsic value and based on the control theory (part one). On the other hand, we made an effort to find out if

knowledge and attitudes towards surveillance and privacy of Austrian students and their information behaviour on social networking platforms are connected (part two). Although the survey was undertaken as one combined questionnaire, my colleague, Verena Kreiling, focused in her work on the analysis of part two and I elaborated the first part.

We asked open-ended questions about what students perceive as the major advantages and disadvantages of social networking sites. By asking students about benefits and concerns of SNS, we used open-ended instead of closed-ended questions, because “the researcher’s structuring of responses may overlook some important responses” and a “checklist of issues might omit certain issues that respondents would have said were important” (Babbie 2010, 256-257). This allowed us to conduct a quantifying qualitative analysis of the answers given. For reasons of impartiality, we put the open-ended questions about advantages and disadvantages of social networking sites at the very beginning of the survey. If privacy is rather considered as extrinsic value and as based on the control theory was measured with the help of indices that were calculated based on the answers given to single and multiple choice questions that tested such considerations. In the last part of the questionnaire, we collected data on socio-demographic factors (gender, age, number of studied semesters, level of study, and field of study), socio-economic status (monthly income, highest education achievement of parents, and main occupation of parents), and the respondents’ usage of social networking sites. All in all, we tried to make the questionnaire interesting and exciting, but kept the items short and clear and made an effort to avoid double-barreled questions, negative items, and biased terms (Babbie 2010, 255-262).

In order to evaluate the competency of the poll, to estimate the length of or time to take the survey, and to determine the quality of the surveyor, we also performed a pretest of the survey (Babbie 2010, 267; Gräf 2002, 63-67; Presser and Blair 1994; Beatty and Willis 2007). We had two different levels of pretesting. On the first level, we randomly asked five students if they are willing to fill out the questionnaire on our computers in Salzburg, Austria (N=5). After completion, we interviewed the students with the following questions in mind:

1. Do the respondents understand the survey’s objective?
2. Do the respondents feel comfortable answering the questions?
3. Is the wording of the survey clear?
4. Are the answer choices compatible with the respondents’ experience in the matter?
5. Do any of the items require the respondent to think too long or hard before responding? Which ones?
6. Which items produce irritation, embarrassment, or confusion?
7. Do any of the questions generate response bias? Which ones?
8. Do the answers collected reflect what you want in regards to the purpose of the survey?

9. Is there enough diversity in the answers received?
10. Is the survey too long?
11. According to your test audience, have any other important issues been overlooked?

Based on the results of level one of the pretest, the research team revised some questions. Here are the main points of the revision:

- Some categories were not completely exhaustive or mutually exclusive.
- The questionnaire included a single answer to a question that actually had multiple parts (double-barreled question).
- Some items were created too long and complicated.
- Obviously, the introductory instruction to one part of the questionnaire was not clear enough.
- One question turned out as unclear and ambiguous.
- We tried to structure the survey more in detail by dividing the questionnaire into more subsections.

On a second level, we could encourage ten students (male and female, different universities and faculties, undergraduate, graduate, and doctoral students) for pre-testing by emailing and providing the poll URL (N=10). We asked those participants the same questions as mentioned above. Again, the research team revised some sections of the questionnaire in the end. In the following, the main points of the revision are listed:

- We provided more space for answering the open questions.
- In some cases, the German umlauts ä/Ä, ö/Ö, ü/Ü were not displayed correctly.
- At one multiple choice question, the pretesters could not mark two or more answers.
- By answering the question how many semesters someone has already studied, it was not clear if the respondent should count the current semester.
- A technical problem emerged when answering the last two questions.

After we had fixed all problems, the survey started. The questionnaire was implemented as an electronic survey with the help of the online survey tool SurveyMonkey (Gordon 2002; Babbie 2010, 286). The research was carried out from June 20 to November 23, 2011. The survey was available for five months to the students. The poll could be reached by clicking the following SSL-cryptographic link: https://www.surveymonkey.com/s/social_networking_sites (the survey is not available any more). The questionnaire operated in all commonly used web browsers such

as Internet Explorer, Mozilla Firefox, Google Chrome, Safari, and Opera. No further special technical requirements such as Java were necessary to open the online poll. In order to convey the progress of the task, a dynamic progress bar was integrated into the survey and was shown at the top of each site. By clicking the next button after having answered all questions on one particular site, the next site appeared. No more than eight questions were shown at once. In order to avoid double responses from one person, the poll could only be filled out once from each computer. It was possible to interrupt the survey and to continue at a later time.

A typical critique on web surveys is that a sampling error could arise insofar that those without Internet or Web access are underrepresented in the survey sample and that the Internet is not appropriate for empirical research due to the fact that the group of nonadopters may remain significantly too large to the new technology (Babbie 2010, 284). "The primary drawback of using the Web to collect survey data is the presence of sample bias. The population of individuals with access to the Web is small as compared to those with mail addresses and telephones." (Tuten, Urban, and Bosnjak 2002, 17)

In our survey, the respondents were students at Austrian universities. It is a common habit of Austrian students' education that they immediately attend university after having finished high school and that most students are therefore young people aged under 30 years (Austrian Federal Ministry for Science and Research 2011). According to the Federal Institute Statistics Austria (2011), 95,2% of people aged 16-24 years and 91,8% of people aged 25-34 had had Internet access within the last three months before the point in time they were interviewed. Due to the fact that students are early adopters of new technologies and that the Internet has become an integral part for research and teaching at universities (for example, many Austrian universities such as the University of Salzburg and the University of Vienna have implemented e-learning platforms in recent years), we can assume that the Internet usage rate of students at Austrian universities is even higher as the Federal Institute Statistics Austria (2011) claims for young people in general. We therefore think conducting an online survey with a group where such a technology is frequently used, popular, and well widespread is an appropriate way for empirical research. A dynamic and interactive online survey offers enormous opportunities for self-administered surveys using a wide variety of multimedia material (sound, images, video, etc.), delivers the inclusion of different design features (for example: customization of wording, real-time editing), may increase respondent motivation, may reduce the effect of social desirability on sensitive data (such as privacy topics), and provides large-scale data collection (which used to be to a large extent restricted to powerful political and economic actors such as governments and large corporations) and helps thereby democratizing the survey-taking process (Couper 2000, 476-477; Schmidt 1997, 274-275; Brenner 2002, 93; Babbie 2010, 283-285; Johnston and Christopher 1995).

6. Population and Sampling

Our potential respondents were male and female students at all Austrian universities (see table 3).

Students at Austrian Universities					
University	Female Students	Male Students	Total	Female Students in %	Male Students in %
Universität Wien [University of Vienna]	56310	31714	88024	64.0%	36.0%
Universität Graz [University of Graz]	17067	10456	27523	62.0%	38.0%
Universität Innsbruck [University of Innsbruck]	14305	12611	26916	53.1%	46.9%
Medizinische Universität Wien [Medical University of Vienna]	3345	3516	6861	48.8%	51.2%
Medizinische Universität Graz [Medical University of Graz]	2069	1642	3711	55.8%	44.2%
Medizinische Universität Innsbruck [Innsbruck Medical University]	1324	1364	2688	49.3%	50.7%
Universität Salzburg [University of Salzburg]	9208	5694	14902	61.8%	38.2%
Technische Universität Wien [Vienna University of Technology]	6851	18987	25838	26.5%	73.5%
Technische Universität Graz [Graz University of Technology]	2614	9500	12114	21.6%	78.4%
Montanuniversität Leoben [Montan University of Leoben]	703	2259	2962	23.7%	76.3%

Universität für Bodenkultur Wien [University of Natural Resources and Life Sciences, Vienna]	4795	5320	10115	47.4%	52.6%
Veterinärmedizinische Universität Wien [University of Veterinary Medicine Vienna]	1669	390	2059	81.1%	18.9%
Wirtschaftsuniversität Wien [Vienna University of Economics and Business]	11564	12501	24065	48.1%	51.9%
Universität Linz [University of Linz]	8022	8917	16939	47.4%	52.6%
Universität Klagenfurt [University of Klagenfurt]	5523	3185	8708	63.4%	36.6%
Universität für angewandte Kunst Wien [University of Applied Arts Vienna]	905	645	1550	58.4%	41.6%
Universität für Musik und darstellende Kunst Wien [University of Music and Performing Arts, Vienna]	1430	1151	2581	55.4%	44.6%
Universität Mozarteum Salzburg [Mozarteum University of Salzburg]	930	517	1447	64.3%	35.7%
Universität für Musik und darstellende Kunst Graz [University of Music and Performing Arts, Graz]	738	828	1566	47.1%	52.9%
Universität für künstlerische und industrielle Gestaltung Linz [University of Arts and	675	414	1089	62.0%	38.0%

Industrial Design Linz]					
Akademie der bildenden Künste Wien [Academy of Fine Arts Vienna]	800	500	1300	61.5%	38.5%
Total (adjusted)	145402	126767	272169	53.4%	46.6%

Table 3: Students at Austrian universities in the winter term 2011/2012 (Austrian Federal Ministry for Science and Research 2012)

According to the Austrian Federal Ministry for Science and Research (2012), there are in total 272169 students (53.4% women, 46.6% men) at 21 public Austrian universities¹. We included national and international people who have been matriculated in one of Austria's universities. We focused on part-time and full-time as well as short-term and long-term undergraduate, graduate, and doctoral students of all age groups and in all fields of studies.

Cook, Heath, and Thompson (2000) conducted a meta-analysis of response rates in web-based surveys by analysing 68 surveys mainly published in "Public Opinion Quarterly", "Journal of Marketing Research", and "American Sociological Review". They found out that salience of an empirical study to the sampled population has a strong positive correlation with response rate (Cook, Heath, and Thompson 2000, 832). In order to reach students at Austrian universities, we therefore asked vice-chancellor's offices, offices of public relations at universities, and student unions to send out electronically our invitation to participate to their students. We asked those agencies via email, telephone, and personal meetings between June 20 to 24, 2011. As an incentive, we had offered university-specified data analyses in print to the university administrations after the poll was completed. We sent out two reminders to all vice-chancellor's offices, offices of public relations at universities, and student unions for promoting the survey.

Our invitation consisted of a short introduction, that the survey is conducted by the Unified Theory of Information Research Group, the URL of the survey, how long it does take to fill out the questionnaire, that all data are treated confidentially and anonymously, that we give away Amazon vouchers among those who complete the survey, and that we publish research reports about the survey after having finished analysing the data. In addition, our postal address, a link to our website, and an email address of our research group were listed. By following the link of the website of the Unified Theory of Information Research Group, one could get further information about the people who are conducting the survey. We provided the following email

¹ The universities of applied sciences ("Fachhochschulen", 39276 students in 2011 [Austrian Federal Ministry for Science and Research 2012]) and the private universities (6301 students in 2010 [Austrian Federal Ministry for Science and Research 2012]) were not included in our survey.

address for further assistance and help for filling out the questionnaire: survey@uti.at. We responded to emails within one working day.

Göritz (2006) conducted a meta-analysis of 58 empirical online studies (N in total=219883) concerning effectiveness of incentives in Web studies. She found out that “incentives motivate people to start a Web survey” and that “once people have accessed a survey for whatever reasons, they are more likely to finish if an incentive is offered” (Göritz 2006, 58). As an incentive for participation, we therefore gave away Amazon vouchers in total of 1000 Euros (1x500€, 2x100€, 30x10€) among those who completed the survey. A pilot study on SNS usage by students in Salzburg that was conducted by Fuchs (2009) has shown that a combined method of advertising a survey is very successful: 679 students in Salzburg completed the survey that was conducted in October and November 2008 (there was a total of approximately 15 000 students in Salzburg). Especially raffling Amazon vouchers among those who fully completed the survey, proved successful in order to attract a large number of survey participants. This method was therefore repeated in our project.

Those who wanted to take part in the raffle or wished to have been updated about upcoming research papers could fill in their email address at the end of the questionnaire. It was also possible to complete the survey without giving away any email address. The email addresses were collected separately. After we had closed the poll, we randomly chose 33 people from the email list for the Amazon vouchers (1x500€, 2x100€, 30x10€). We informed those people via email. In the following, the data analysis, presentation, and interpretation will be provided.

7. General Characteristics of the Respondents

5213 respondents participated in the survey. 1655 datasets were deleted from the dataset, because the respondents had not completed the survey, had not agreed to allow that their data will be used for purposes of research, as well as that the results of the survey may be published, had not used social networking sites (and the study focuses on the usage of social networking sites), or had not studied at one of Austria's universities (and the study focuses on students in Austria). The remaining N=3558 datasets were analyzed (these are 1.31% of the Austrian student population). We collected data on socio-demographic factors (gender, age, number of studied semesters, level of study, and field of study), socio-economic status (monthly income, highest education achievement of parents, and main occupation of parents), and the respondents' usage of social networking sites. These general characteristics of our survey participants will be presented. Figure 2 shows the gender distribution of the data:

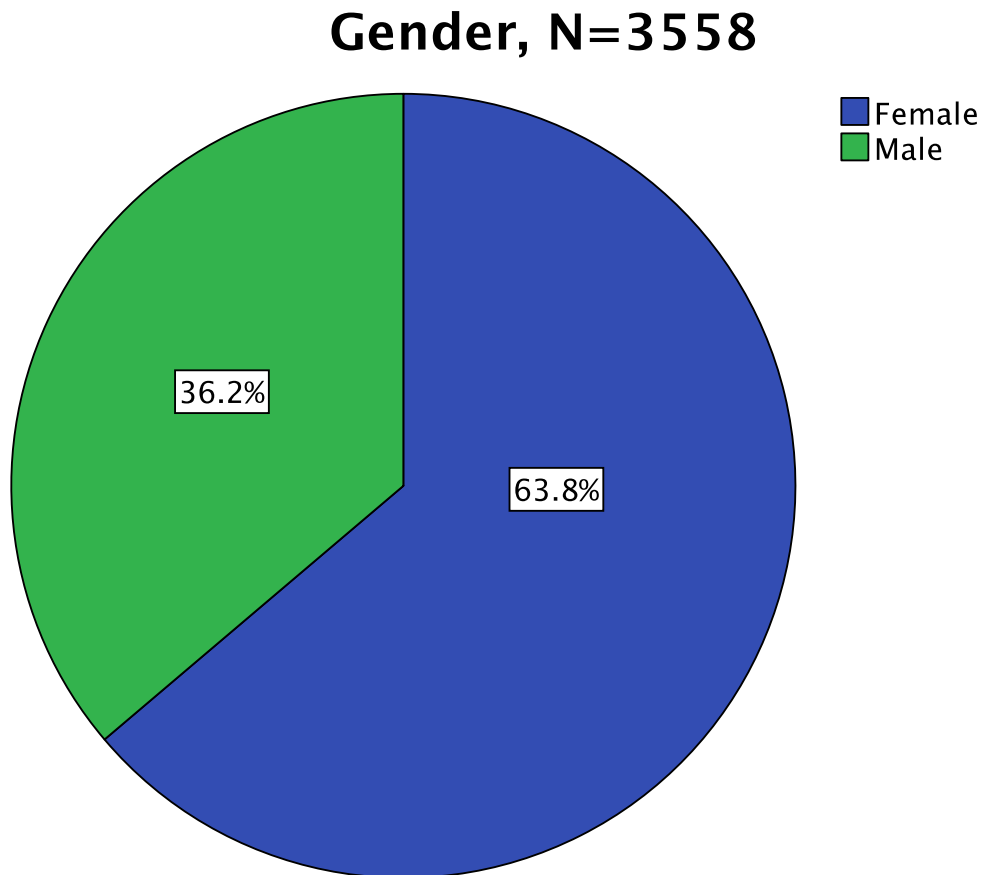


Figure 2: Gender distribution of the data

There were 63.8% female and 36.2% male respondents. This reflects very well the overall gender distribution of students in Austria, although women were slightly overrepresented in the survey. According to the Austrian Federal Ministry for Science and Research (2012), there were 53,4% female and 46,6% male students at Austrian universities in the winter term 2011/2012.

The mean age of our respondents is 24.3 years and the mean number of studied semesters is 6.6 (including summer term 2011). The next figure demonstrates the level of study of our survey participants:

Level of Study, N=3558

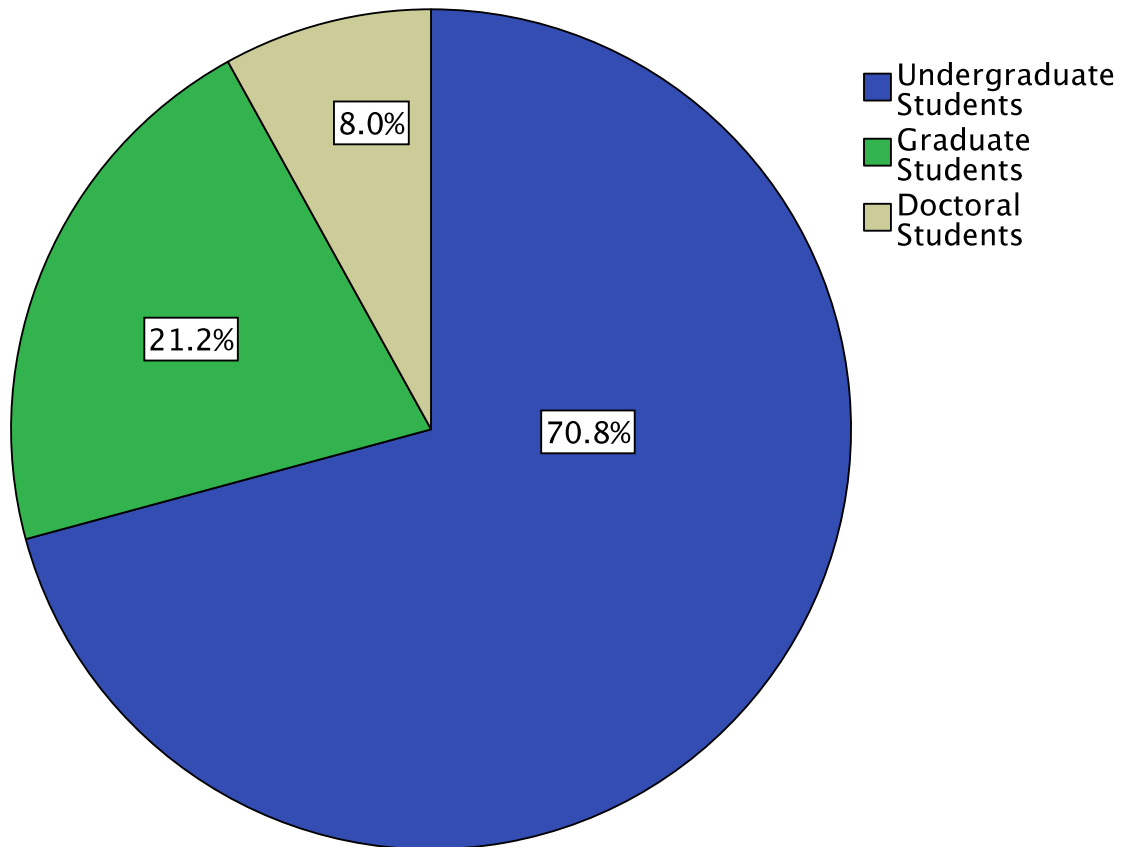


Figure 3: Respondents' level of study

More than two thirds of the respondents (70.8%) are undergraduate students and 8% of the students are doctoral students. Note that bachelor and diploma-students (so-called Magister-studies, a discontinuing type of study at Austrian universities) are counted as undergraduate students, master students as graduate students, and PhD students as doctoral students.

Figure 4 provides the share of different fields of study in the sample and at Austrian universities:

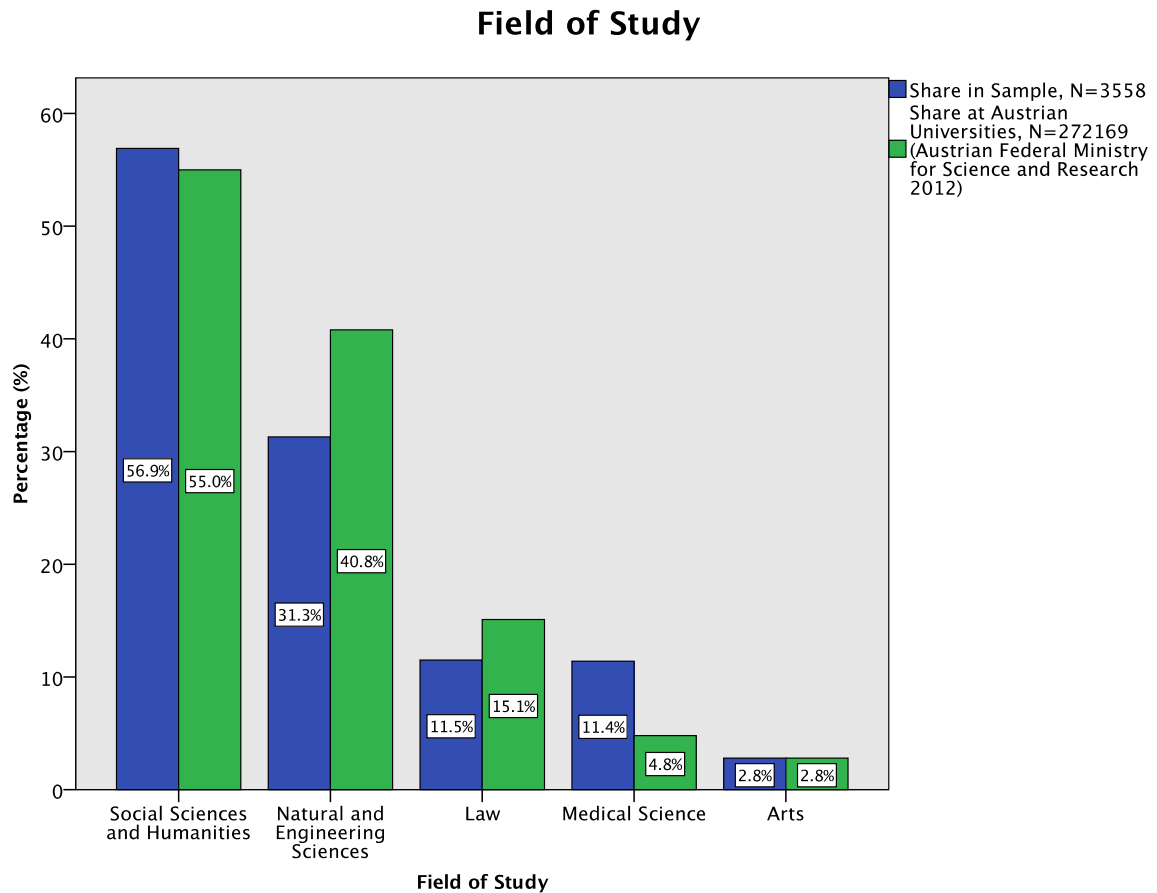


Figure 4: Share in sample and at Austrian universities of fields of study

More than half of the respondents (56.9%) study social sciences and humanities and nearly a third (31.3%) are students of natural and engineering sciences. According to the Austrian Federal Ministry for Science and Research (2012), there were 55.0% students of social sciences and humanities, 40.8% students of natural and engineering sciences, 15.1% students of law, 4.8% students of medical science, and 2.8% students of arts at Austrian universities in the winter term 2011/2012. By comparing the share in our study with the share at Austrian universities, one can see that our dataset reflects very well the distribution of fields of study in Austria. Please note: There are 113.9% at the sample and 118.5% at Austrian universities in total, because multiple responses were possible for people enrolled in more than one field of study. Social sciences and humanities include social sciences, economics, humanities and cultural studies, and theology. Natural and engineering sciences consist of natural sciences, technical sciences, engineering, agricultural sciences and forestry, veterinary medicine, and sport science.²

² The UNESCO Institute for Statistics has developed the International Standard Classification of Education (ISCED) and suggests nine groups of fields of education: education, humanities and arts, social sciences, business and law, science, engineering, manufacturing and construction, agriculture, health and welfare, and services (UNESCO Institute for Statistics 2012). Although this classification seems

The following table shows the monthly income of our respondents:

Monthly Income (in Euro), N=3558

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0 - 400	783	22.0	22.0	22.0
401 - 600	940	26.4	26.5	48.5
601 - 800	720	20.2	20.3	68.8
801 - 1000	384	10.8	10.8	79.6
1001 - 1200	244	6.9	6.9	86.4
1201 - 1400	154	4.3	4.3	90.8
1401 - 1600	105	3.0	3.0	93.7
1601 - 1800	61	1.7	1.7	95.4
1801 - 2000	51	1.4	1.4	96.9
2000 -	111	3.1	3.1	100.0
Total	3553	99.9	100.0	
Missing System	5	.1		
Total	3558	100.0		

Table 4: Monthly income of respondents

3558 students were asked what their average monthly income is (including receiving subsidies by parents, the state, or grants, etc.). Table 4 demonstrates that the income of more than two thirds of the students (68.8%) is less than or of 800 Euro per month. Due to the fact that the minimum level of monthly income deemed adequate in Austria is 994 Euro (Statistical Office of the European Union 2012), one can argue that more than two thirds of our respondents live below the poverty line. This indicates the low economic status of the participants and Austrian students in general.

The next figure presents the educational achievement of the respondents' parents:

appropriate in order to facilitate comparisons of education statistics across countries, we have applied a more simplified classification with five broad groups in our study in order to present the data in a manageable form (Babbie 2010, 433).

Highest Educational Achievement of Parents, N=3558

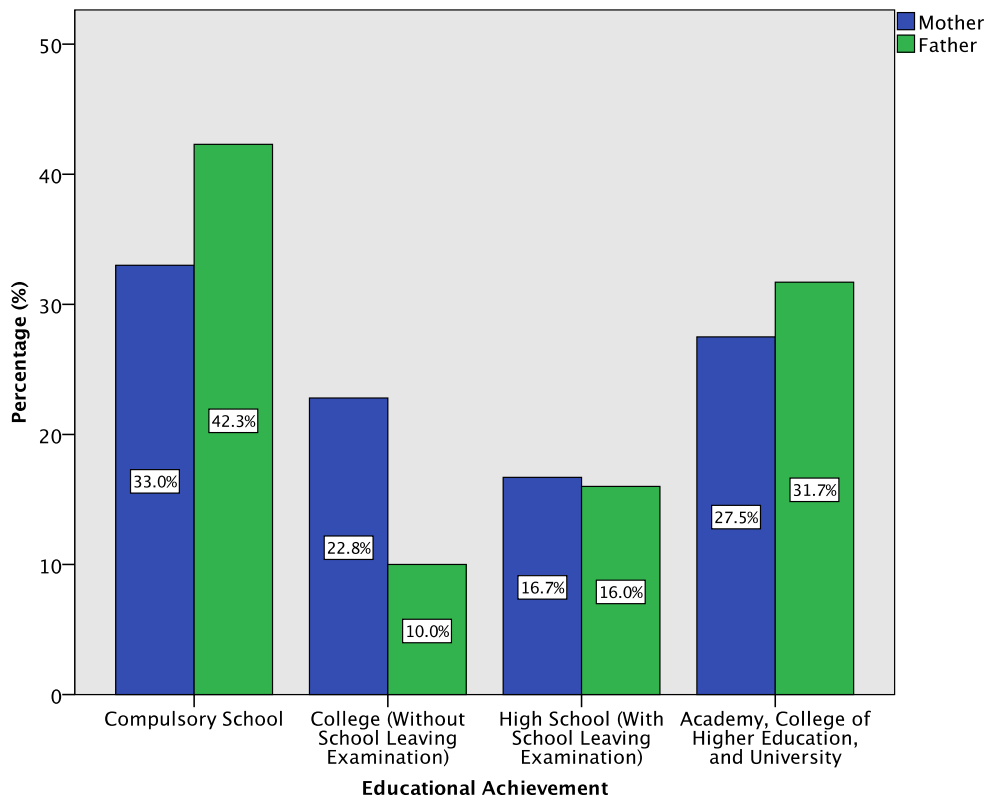


Figure 5: Highest educational achievement of respondents' parents

On the one hand, the majority of the respondents' parents (mother: 55.8%, father: 52.3%) have only achieved compulsory school or college. On the other hand, almost a third of the respondents' parents (mother 27.5%, father: 31.7%) have completed an academic education. Please note: In order to present the data in a manageable form (Babbie 2010, 433), some answer options of the questionnaire appear as a combined category in the bar chart.

Figure 6 deals with the occupation of the respondents' parents:

Main Occupation of Parents, N=3558

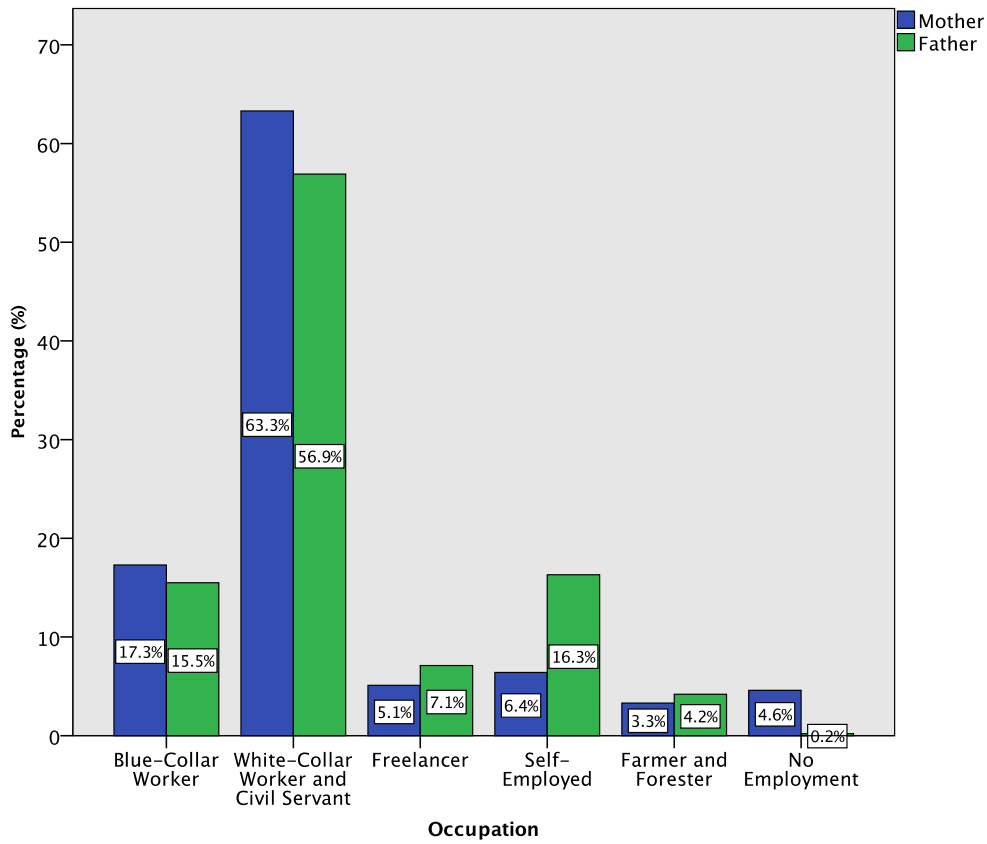


Figure 6: Main occupation of respondents' parents

The majority of the respondents' parents (mother 63.3%, father 56.9%) are white-collar workers or civil servants. Furthermore, only 0.2% of the students' fathers are unemployed. Please note: In order to present the data in a manageable form (Babbie 2010, 433), some answer options of the questionnaire appear as a combined category in the bar chart.

The following figure shows the respondents' usage of social networking sites:

Usage of Social Networking Sites, N=3558

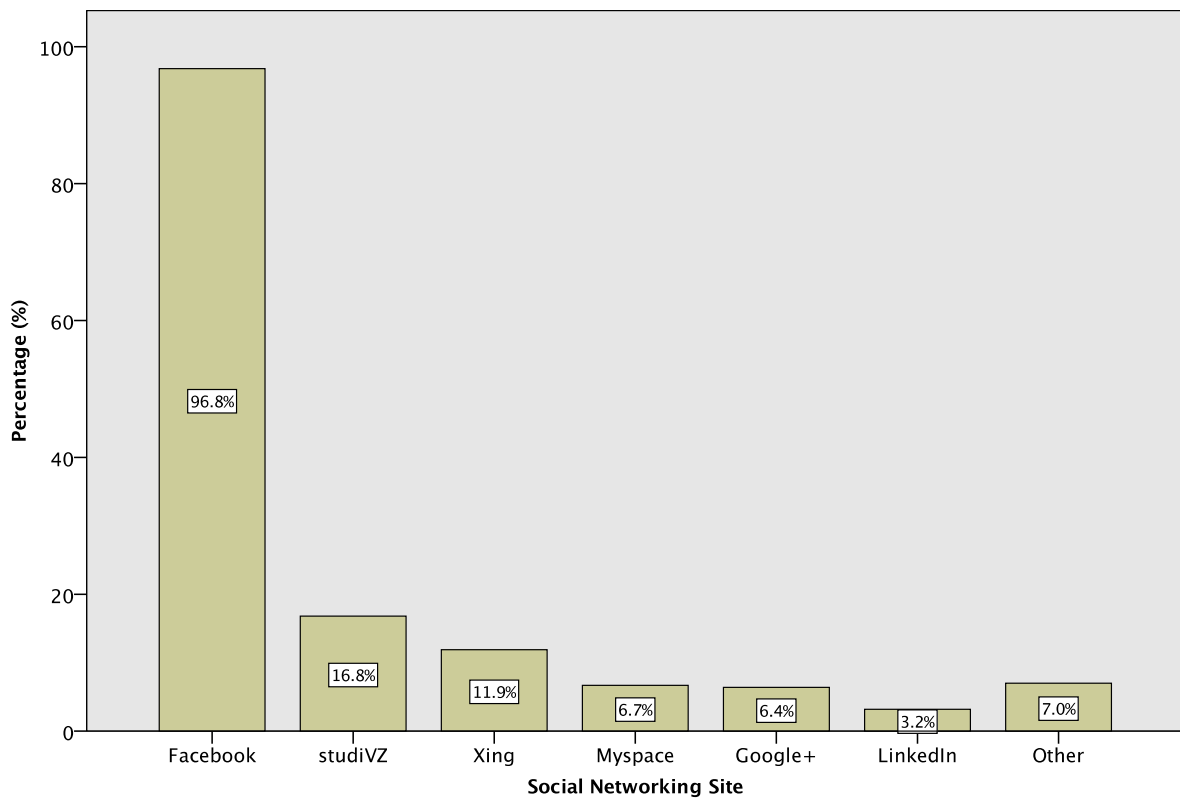


Figure 7: Respondents' usage of social networking sites

3558 students were asked which social networking sites they use. The vast majority of the respondents (96.8%) use Facebook. This reflects very well the popularity of this site in Austria. Facebook is the second most popular web site in Austria (Top 100 sites in Austria, alexa.com, accessed on March 6, 2012). Only 6.4% of the respondents use Google+. Google+ was opened to everyone without the need for an invitation on September 2011. Our research was carried out from June to November 2011. It therefore can be assumed that the usage rate of Google+ by Austrian students is much higher now as it was during our survey period. Also worth mentioning is the fact that 7% of the survey participants indicated that they use other social networking sites; mentioned examples are Diaspora (0.3%), Orkut, Szene 1 (an Austrian social networking site), and Lokalisten (a German social networking site). Please note: There are more than 100% in total, because multiple responses were possible. 553 non-social-networking-site-users were deleted from the dataset, because the study focuses on the usage of social networking sites. Google+ was not separately listed in the answer options, but 6.4% of the respondents mentioned it in the answer option "other" and appears therefore in the bar chart separately.

8. Perceived Advantages and Disadvantages of Social Networking Sites

Hypothesis 5: Maintaining existing relationships over spatio-temporal distances and creating new social relationships is considered as the main advantage of SNS.

In order to test if maintaining existing relationships over spatio-temporal distances and creating new social relationships are considered as the main advantages of SNS (Hypothesis 5), we asked the students what in their opinion the greatest advantages of social networking sites such as Facebook and Myspace are (open question). We received N=3531 qualitative answer texts to the question that addressed advantages. We identified 17 categories for the advantages and analyzed the answers to the questions by content analysis (Krippendorff 2004; Berg 2001). On the one hand, the categories were adopted from theoretical and empirical studies about social networking sites (Fuchs 2010b; Acquisti and Gross 2006) and were revised and expanded regarding the provided answers by summarizing, paraphrasing, abstracting, and generalizing groups of answer texts to categories on the other hand; that is, a combination of inductive and deductive methods (Berg 2001, 248-249; Babbie 2010, 339). Our respondents tended to list more than one major advantage. Many answers are therefore mapped with more than one category (Berg 2001, 247-248). The next figure presents the major advantages of social networking sites that our respondents mentioned:

What are the greatest advantages of social networking platforms such as Facebook, Myspace, LinkedIn, etc. for you? N=3531

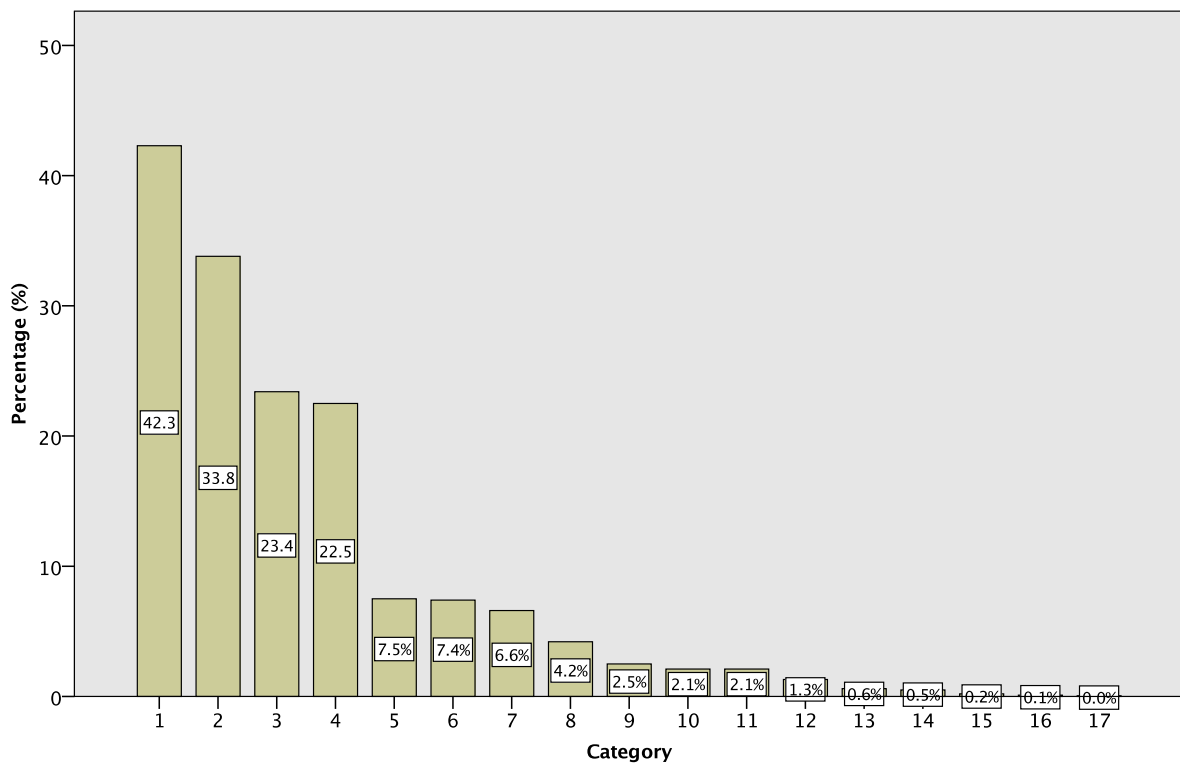


Figure 8: Greatest perceived advantages of social networking platforms

No.	Category
1	Maintaining existing contacts, friendships, family relations, etc.
2	Communication and contacts over spatial distances (national and international)
3	Medium of information and news
4	Finding and renewing old contacts
5	Free communication that saves money
6	Sharing and accessing photos, music, videos
7	Establishing new contacts with unknown people or with people whom one hardly knows and can easier contact online
8	Communication and contacts in general (no further specification)
9	Communication in political groups and interest groups
10	Mobility, access from anywhere
11	Entertainment, fun, pastime, amusement
12	Overview and reminder of birthdays
13	Self-presentation to others (for non-business reasons)
14	I see no advantages
15	Business communication, finding jobs, self-presentation for potential employers
16	Browsing other profiles, "spying" on others
17	Flirting, sex, love

Table 5: Identified categories of greatest perceived advantages of social networking platforms

Figure 8 shows that maintaining existing relationships and communication over distances are considered as the greatest advantage of social networking sites. More than 40% of our respondents stress the maintenance of existing contacts, friendships, and family relations as major opportunity of SNS. A third (33.8%) say that social relationships over spatial distances are very important. Almost a quarter (23.4%) see social networking platforms as a medium of information and news and 22.5% mention finding and renewing old contacts as major benefit. 7.5% of the participants state that an important aspect of a social networking site is that it enables free communication that saves money. In addition, 7.4% mention sharing photos and other media with friends and accessing such media as major opportunity and 6.6% of the students say that establishing new contacts is very important. 4.2% list communication and contacts in general with no further specification as greatest advantage. Also interesting is that only 0.04% of our respondents mention flirting, sex, and love as important aspects of social media, which could be caused by social desirability. As a result, the hypothesis that maintaining existing relationships (category 1) and communication over spatio-temporal distances (category 2) is considered as the main advantage of SNS can be verified, but creating new social relationships (category 7) is not indicated as greatest opportunity.

Here are some characteristic examples of answers that were given to the question of what the major advantages of social networking platforms are (one or two examples for each category):

Respondent ID	Answer (German)	Answer (English)	Categories
1560377386	Kontakt mit Freunden	Contact with friends	1
1568235826	Aufrechterhaltung der Kontakte, neue Freunde finden, Echtzeit-Kommunikation, Globale Verbindung aller Menschen, Schnelle Nachrichtenverbreitung	Maintaining contacts, finding new friends, real-time communication, global connection of all people, fast spreading of news	1, 2, 3, 7, 8
1560016493	internationale Kontakte	International contacts	2
1580232644	Man kann auch mit Freunden aus dem Ausland leicht in Kontakt bleiben. Man kann Freunde von früher wieder finden.	You are able to stay in contact with friends from abroad easily. You are able to find old friends again.	1, 2, 4
1568268592	Neuigkeiten erfahren	Getting news	3
1479119303	man wird ständig über neuigkeiten informiert ich nutze es oft um mich mit klassenkameraden über schulisches auszutauschen man kann mit freunden und verwandten die weit entfernt wohnen den kontakt aufrecht erhalten	You get permanently informed about news I often use it to communicate with classmates about school matters You are able to maintain contacts with friends and relatives, who live far away	1, 2, 3
1567786081	Leute von früher finden.	To find people from former times.	4
1572592810	Es ist leichter geworden Kontakt mit Freunden aus aller Welt aufrecht zu erhalten. Kontakte zu knüpfen ist für im normalen Leben schüchterne Leute keine so große Hürde mehr. Man kann Freunde von früher, mit denen man sich aus den Augen verloren hat, wieder ausfindig machen. Kurz gesagt, man kann sein Freunde- bzw. Bekanntnetzwerk schnell vergrößern.	It has become easier to maintain contact with friends from all around the world. It is not any longer a major obstacle for normally shy people to establish contacts. You are able to catch up with friends from former times, whom you have lost contact. In short, you are able to expand your network of friends quickly.	1, 2, 4, 7
1551285273	Kontakt mit Freunden ohne Kosten	Contact with friends at no costs	1, 5
1567739679	gratis Kommunikation mit Freunden, Bekannten, Verwandten, auch wenn diese in anderen Ländern sind neue Leute (auch aus dem Ausland) kennenlernen	Communication for free with friends, relatives, even if they are from other countries Meeting new people (also from abroad)	1, 2, 5, 7

1557035103	Teilen von Fotos, Informationsaustausch	Sharing photos, exchange of information	3, 6
1550759823	Austausch mit menschen, die man nicht mehr so oft sieht. Gleichzeitig das Ansehen von Bildern, Videos usw.	Exchange with people, who you just see rarely. Viewing pictures, videos etc. simultaneously	4, 6
1566170073	Neue Leute kennenzulernen, soziale Kontakte!	Meeting new people, social contacts!	7, 8
1559706248	lernt neue Freunde kennen, findet eventuell alte Freundschaften wieder, kann seine Gedanken mit anderen teilen, eignet sich gut um Veranstaltungen zu planen, organisieren	Meeting new friends, possibly finding old friendships again, you are able to share your thoughts with others, suitable for planning and organizing events	4, 7, 8, 9
1564705747	Kommunikation	Communication	8
1559810724	Einfache Kontaktaufnahme und Newsaustausch	Easy making of contact and exchange of news	3, 8
1567625028	Einfaches Aufrechterhalten des Kontakts mit FreundInnen, die auf einem anderen Kontinent leben Demonstrationen können leichter organisiert werden.	Maintaining contact with friends easily, who are living on another continent To organize demonstrations easily.	1, 2, 9

1580667756	ich kann viele menschen erreichen...meine statusmeldungen sind meistens botschaften und zitate, um leuten eine positive sicht auf die welt zu geben (beispiel: "man sieht nur mit dem herzen gut"). ich hoffe damit ein lächeln auf manche gesichter meiner freunde zu zaubern. auch für manche politische zwecke ist es hilfreich: Unibrennt	I am able to reach a lot of people...my status messages are at the most time good news and quotes in order to give people a positive view of the world (example: "you only see good with your heart"). I hope with it that some of my friends' faces will be in smiles. It is also helpful for political purposes: Unibrennt ³	3, 9
15655455	leichte Erreichbarkeit	Simple accessibility	10
1566262210	Schnelle Information, ständige Erreichbarkeit	Quick information, permanent accessibility	3, 10
1559714377	Unterhaltung, Kontakte knüpfen, Ablenkung	Entertainment, establishing contacts, diversion	7, 11
1549540851	Nehme etwas Teil am Leben von Freunden& Familie in anderen Städten, Ländern, Kontinenten. Kann mit Freunden zuhause chatten, wenn ich mal weg bin. Organisatorisches lässt sich auch ganz praktisch erledigen. Unterhaltung. Klatsch	To take part in life of friends and family, who live in other cities, countries, continents. To be able to chat with friends at home if I am gone. To carry out organizational matters easily. Entertainment. Gossip.	1, 2, 8, 11
1559724915	um Kontakt mit Freunden/Bekannten zu halten Veranstaltungen, Geburtstage im Überblick	To maintain contact with friends Events, overview of birthdays	1, 3, 12
1558332265	Aufrechterhalten von Kontakten, Vernetzung, Erinnerungen an Geburtstage, leichte Planungsmöglichkeiten für gemeinschaftliche Aktivitäten.	Maintaining contacts, networking, reminder of birthdays, an easy possibility of planning collective activities.	1, 8, 9, 12
1556033638	Kommunikation: viele Freunde/Bekannte sind einfach und unkompliziert über eine Plattform zu erreichen Selbstdarstellung	Communication: to reach many friends in a simple and straightforward way by means of a platform Self-presentation	1, 13

³ Unibrennt was an Austrian student protest in 2009 against the commodification of higher education and the undemocratic decision-making structures at universities, where many universities' lecture halls and rooms were occupied. The protest spread to other countries such as Germany and Switzerland. Unibrennt used social media such as Facebook, Twitter, and YouTube for organizing and communicating the protest (see: unibrennt.at, accessed on April 22, 2012).

1565685686	In Verbindung treten und in Verbindung bleiben mit anderen Social Platform Usern, Selbstdarstellung, Nutzung zur späteren Kundenakquise für Grafikdesign, kultureller Austausch, ...	Contacting and staying in touch with other social platform users, Self-presentation, Usage for prospective customer acquisition for graphic design, cultural exchange, ...	1, 7, 9, 13, 15
1560098106	Keine	none	14
1572561434	Sehe ich keine.	I do not see any.	14
1573341562	Arbeitskontakte	Business contacts	15
1565038921	Facebook hat reinen persönlichen Zweck; finden von alten Bekannten, in Kontakt bleiben mit Freunden, Bekannten aus dem Ausland LinkedIn und MySpace haben rein professionellen Nutzen, zum finden und suchen von Jobs und professionelle Kontakte	Facebook is only for personal purposes; meeting old friends, stay in contact with friends from abroad LinkedIn and MySpace do have professional benefits, to find and search jobs and professional contacts	1, 2, 4, 15
1558232492	Spionage	Espionage	16
1559729071	in Kontakt zu bleiben man kann Menschen ausfindig machen und etwas über sie erfahren wenn sie das im Profil nicht gesperrt haben (kurz: stalken)	To keep in touch You are able to locate people and to get informed about them, if they haven't blocked that on their profile (in short: stalking)	1, 16
1565035091	Leichtigkeit mit Freunden Sachen zu teilen. Events Infos. Subscriptions von Produkten, VIPs etc. Mädels aufreißen	Simplicity to share stuff with friends. Information about events. Subscriptions of products, VIP etc. Pulling girls	3, 17

Table 6: Examples for advantages respondents listed

The minimum amount of a received answer text consisted of one word, the maximum amount was 184 words. Please note that the survey was conducted in German, but the questionnaire was translated for the analysis into English.

The next three figures display the results of the greatest perceived advantages of social networking platforms (N=3531) in comparison with gender, level of study, and field of study:

Greatest Advantages of Social Networking Platforms and Gender, N=3531

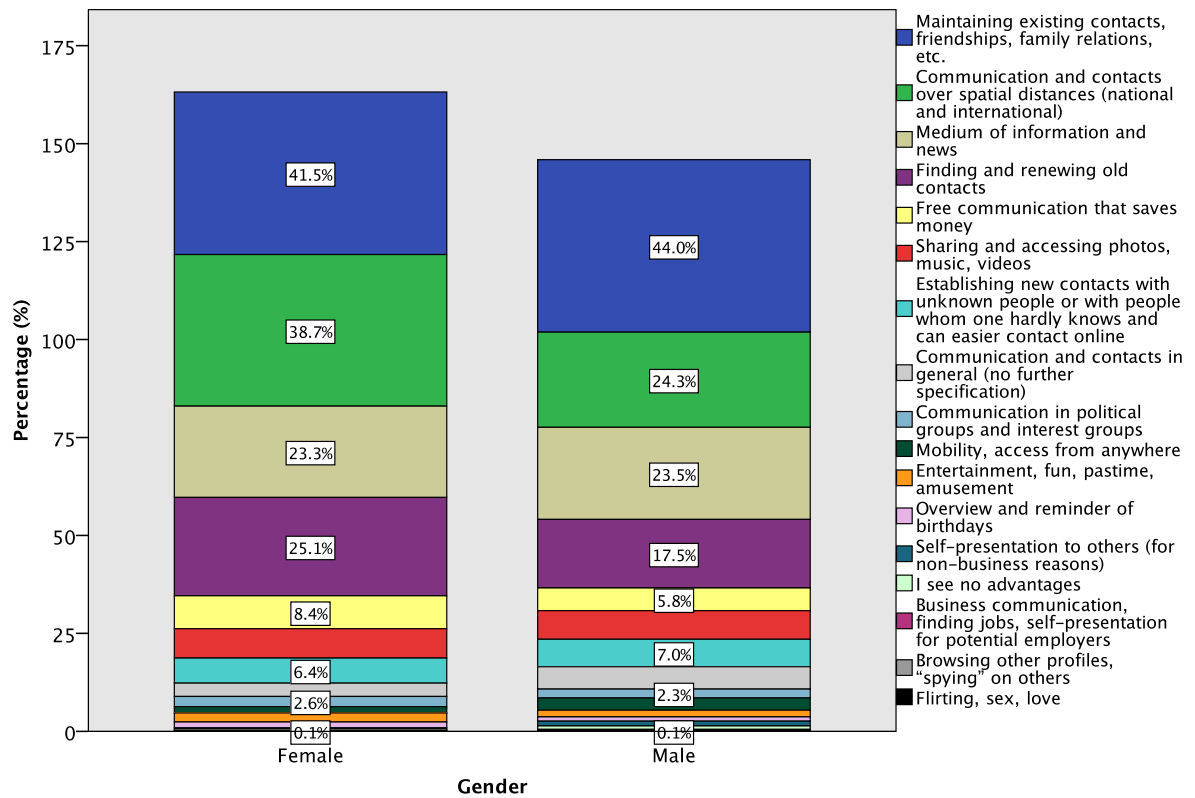


Figure 9: Greatest perceived advantages of social networking platforms and gender

41.5% of the female and 44.0% of the male respondents stress the maintenance of existing contacts, friendships, and family relations as major opportunity of social networking sites. Moreover, 38.7% of women and 24.3% of men indicate that social relationships over spatial distances are the greatest advantage and 23.3% of the female and 23.5% of the male students consider social networking platforms as a medium of information and news. 25.1% of women and 17.5% of men mention finding and renewing old contacts as major benefit.

Greatest Advantages of Social Networking Platforms and Level of Study, N=3531

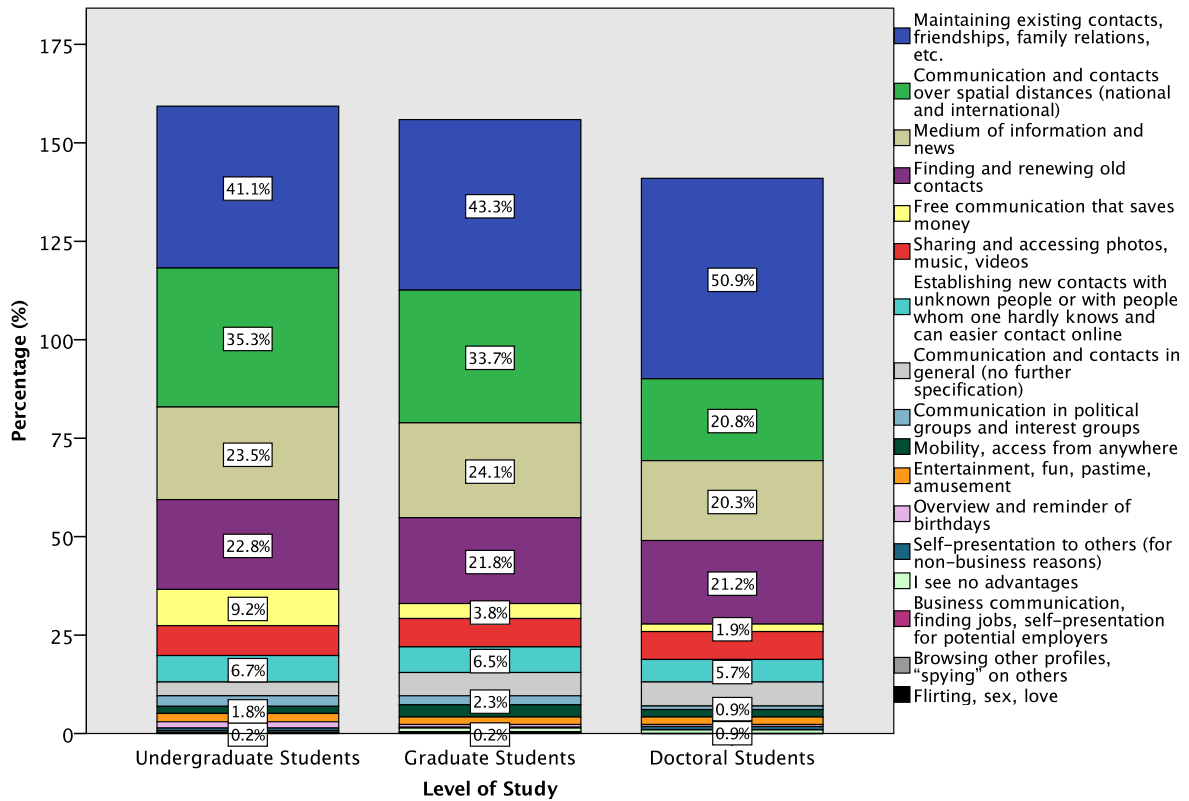


Figure 10: Greatest perceived advantages of social networking platforms and level of study

41.1% of the undergraduate, 43.3% of the graduate, and 50.9% of the doctoral students stress the maintenance of existing contacts, friendships, and family relations as major opportunity of social networking sites. 35.3% of undergraduates, 33.7% of graduates, and 20.8% of postgraduates indicate that social relationships over spatial distances are the greatest advantage. In addition, 23.5% of the undergraduate, 24.1% of the graduate, and 20.3% of the PhD students consider social networking platforms as a medium of information and news.

Greatest Advantages of Social Networking Platforms and Field of Study, N=3531

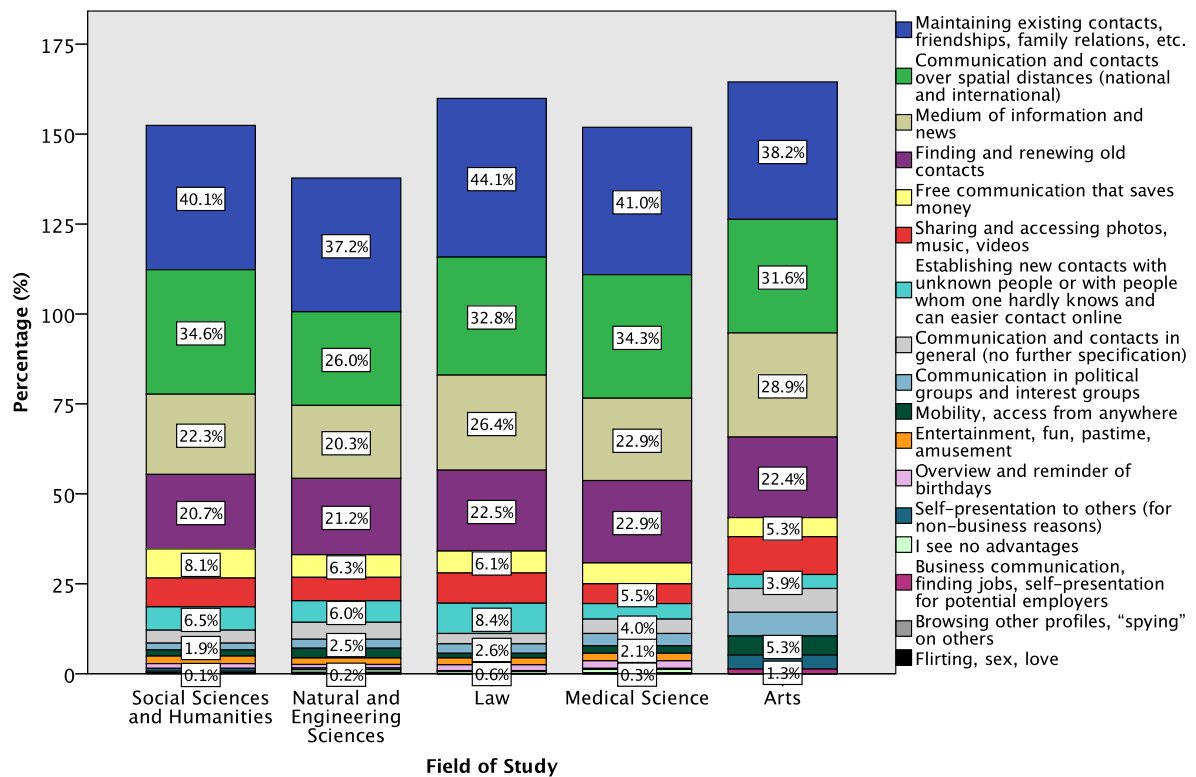


Figure 11: Greatest perceived advantages of social networking platforms and field of study

40.1% of the students of social sciences and humanities, 37.2% of the students of natural and engineering sciences, 44.1% of the students of law, 41.0% of the students of medical science, and 38.2% of the students of arts stress the maintenance of existing contacts, friendships, and family relations as major opportunity of social networking sites. Besides, 34.6% of the students of social sciences and humanities, 26.0% of the students of natural and engineering sciences, 32.8% of the students of law, 34.3% of the students of medical science, and 31.6% of the students of arts indicate that social relationships over spatial distances are the greatest advantage.

Hypothesis 6: The surveillance threat is considered as the major disadvantage of SNS.

For analysing whether the surveillance threat is considered as the major disadvantage of SNS (Hypothesis 6), we asked what the greatest concerns of social networking sites such as Facebook and Myspace are (open question). We received N=3534 qualitative answer texts to the question that addressed disadvantages. We identified 14 categories for the concerns and analyzed the answers to the questions by content analysis (Krippendorff 2004; Berg 2001). The categories were adopted from theoretical and empirical studies about social networking sites (Fuchs 2010b; Livingstone 2008) on the one hand and were revised and expanded regarding the

provided answers by summarizing, paraphrasing, abstracting, and generalizing groups of answer texts to categories on the other hand; that is, a combination of inductive and deductive methods (Berg 2001, 248-249; Babbie 2010, 339). Our respondents tended to list more than one major disadvantage. Many answers are therefore mapped with more than one category (Berg 2001, 247-248). The next figure shows the major concerns of social networking sites that our respondents mentioned:

What are your greatest concerns of social networking platforms such as Facebook, Myspace, LinkedIn, etc? N=3534

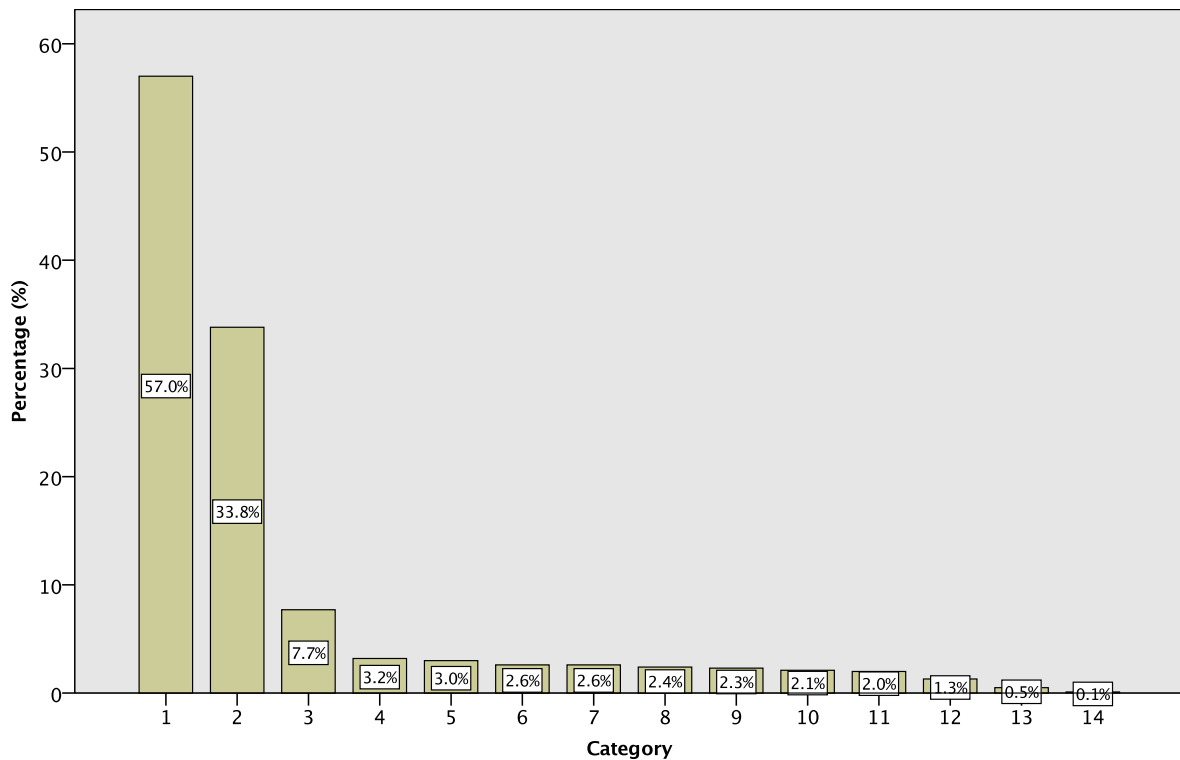


Figure 12: Greatest perceived concerns of social networking platforms

No.	Category
1	Data abuse, data forwarding or lack of data protection that lead to surveillance
2	Private affairs become public and result in a lack of privacy and privacy control
3	Personal profile data (images, etc.) are accessed by employers or potential employers and result in job-related disadvantages (such as losing a job or not getting hired)
4	Internet addiction
5	Data and identity theft
6	Receiving advertising or spam
7	I see no disadvantages
8	Stalking, harassment, becoming a victim of crime
9	Commercial selling of personal data

10	Lack or loss of personal contacts, superficial communication and contacts, impoverishment of social relations
11	Virus, hacking and defacing of profiles, data integrity
12	It is a waste of time
13	Unrealistic, exaggerated self-presentation, competition for best self-presentation
14	Disadvantages at university because professors can access profiles

Table 7: Identified categories of greatest perceived concerns of social networking platforms

Figure 12 shows that surveillance is considered as the greatest concern of social networking sites. Almost 60% of our respondents stress that surveillance as a result of data abuse, data forwarding, or a lack of data protection is the main threat of SNS. A third (33.8%) say it is problematic that personal affairs that should better be kept private and should not be known to others tend to become public. 7.7% state it is a danger that also current and potential employers can access profiles, which could result in job-related disadvantages. In addition, 3.2% mention Internet addiction, and 3.0% of the participants stress data and identity theft as greatest risks of social media. 2.6% express concerns about advertising or spam. Also interesting is that 2.6% of the students do not see disadvantages in the usage of commercial social networking platforms. As a result, the hypothesis that the surveillance threat (category 1) is considered as the major disadvantage of SNS can be verified.

Here are some characteristic examples of answers that were given to the question of what the major disadvantages of social networking platforms are (one or two examples for each category):

Respondent ID	Answer (German)	Answer (English)	Categories
1567657160	Missbrauch der Daten	Data abuse	1
1569094635	Speicherung bzw. Aufzeichnungen aller Handlungen auf Facebook, Das nicht Bestehen der Möglichkeit seine Handlungen komplett zu löschen, Datenmissbrauch (Veröffentlichung) durch Facebook	Storage resp. recording of all actions on Facebook, absence of the possibility to delete stored actions completely, Facebook's data abuse (publication)	1
1564258061	Ende der Privatsphäre	End of privacy	2
1567625679	Die Öffentlichkeit, vor allem die Zugänglichkeit von persönlichen Daten und Informationen	The public, especially accessibility of personal data and information	2
1519050546	Dass Arbeitgeber private Informationen erhalten könnten.	That employers are able to receive private information.	3

1567729690	dass Bilder, Kommentare etc. von Leuten gesehen werden, welche diese nicht sehen sollten. z.B Arbeitgeber. --> Schwierigkeiten bei der Jobsuche	That pictures, comments etc. are seen by people, who should not see them. e.g. employer. --> difficulties in finding a job	2, 3
1559723549	Süchtig zu werden	To become addicted	4
1566733372	Abhängigkeit, das Gefühl, jeden Tag online sein zu müssen, Aspekte wie Datenschutz und Privatsphäre;	Addiction, feeling to have to be online every day, aspects such as data protection and privacy;	1, 2, 4
1557650353	Datendiebstahl, Identitätsdiebstahl	Data theft, identity theft	5
1559750909	Privatsphäre; Identitätsdiebstahl, Risiko der Belästigung und Begegnung mit Online-Verbrechern; veröffentlichten Inhalte können in der ganzen Welt gesehen werden;	Privacy; identity theft, risk of harassment and encounter with online-criminals; published content can be viewed all over the world;	2, 5, 8
1559706802	Unrechtliche Nutzung der Daten, Weitergabe, Personalisierte Werbung, Gesichtserkennungsalgorithmus, Entfremdung des Wortes "Freund", Gruppenzwang und mittlerweile sozialer Druck bei sowas mitzumachen.	Unlawful usage of data, forwarding, personalized advertising, algorithm of face recognition, alienation of the term "friend", meanwhile group pressure and social pressure to join in.	1, 7, 10
1559719051	Das persönliche Informationen, die ich oft auch unbewusst über mich selbst Preis gebe, gegen mich verwendet werden. Außerdem nervt mich personalisierte Werbung.	That personal information, which I often expose unconsciously, is used against me. Besides I am annoyed of personalized advertising.	2, 7
1557047480	Keine	None	6
1550525803	eigentlich keine	Actually none	6
1564999544	cyber stalking	Cyber-stalking	8
1559760035	* Leute die ich nicht kenne sehen mein Profil (z.B.: Kriminelle, Arbeitgeber) * FB verändert sich andauernd --> mann muss die Privatsphäreinstellungen immer anpassen	* Unknown people are able to view my profil (e.g. criminals, employers) * Facebook is always changing --> one has always to adjust the privacy settings	2, 3, 8

1566130533	Gläserner Mensch, kommerzielle Nutzung von UserInnendaten	Transparent individual, commercial usage of user data	2, 9
1525388777	...die (zukünftig gewiss) stärker werdende Verwendung aller gesammelten Daten, Nutzerrangaben zur Marktforschung dh. Profitmaximierung. ...ein weiterer Schritt in Richtung "globaler Überwachungsstaat", über welchen tatsächlich bald nicht mehr die Völker/die Politiker herrschen werden, sondern Konzerne und Lobbies ...untransparent, benutzerunfreundliche Privatsphäre-Einstellungen	...(prospective) increasing usage of all collected data, user details for market research; that is profit maximization. ...a further step towards "global police state", which not the people/politicians will rule any longer, but corporations and lobbies ...opaque, non-user-friendly privacy settings	1, 2, 9
1561084176	sehr oberflächliche Konversationen, zu leichtsinniges teilen von Informationen	Very superficial conversations, too careless sharing of information	2, 10
1565288593	Datenschutz, Vereinsamung, falsche Vorstellungen von der Realität, normale Gespräche mit dem Gegenüber - man weiß ja eh schon alles, denn es wird ja von manchen "alles" gepostet	Data protection, loneliness, misconception of reality, normal conversations with a guy - you already know all stuff, because some people post "all"	1, 10
1561247966	Hacker	Hackers	11
1567638641	Das es Hecker gibt, die in meinem Namen, meine Seite "verunstalten"	That there are hackers, who "deface" my site in the name of me	11
1559785387	Zeitverschwendung	Waste of time	12
1567639535	Privatsphäre, Zeitverschwendung (Leute schreiben zu viel rein, was mich nicht interessiert; Spieleanfragen nerven)	Privacy, waste of time (people write too much into it that does not interest me; inquiries of games annoy)	2, 12
1560127276	dass diese Plattformen zur reinen Selbstinszenierung verwendet werden;	That this platforms are used as pure self-presentation;	13
1550551373	datenschutz, „stasi auf freiwilliger basis“, wenn das system kippt sind die leute leicht einzuteilen nach politischen interessen, ect. , falsche selbstdarstellung der nutzer -> oft will man sich profilieren	Data protection, "stasi on a voluntary basis", if the system overturns, it is easy to classify people according political interests, etc. , false description of oneself -> often one wants to show off oneself	1, 13

1565224564	<p>* Die Privatsphäre ist sehr angegriffen, da Freunde oft Fotos hochladen, in denen man verlinkt wird (und sichtbar ist)...</p> <p>* Die Pflege sozialer Netzwerke „im real life“ könnte vernachlässigt werden.</p> <p>* V.a. junge Leute sind sich der Auswirkungen ständiger (eig. privater) Status-Erneuerungen nicht bewusst, bzw. des Umstandes, dass diese auch Professoren und zukünftige Vorgesetzte etc. lesen könnten.</p>	<p>* Privacy is violated, because friends often upload photos, where you are linked (and visible)...</p> <p>* Cultivation of social networks “in real life” could be neglected.</p> <p>* Especially young people are not aware of the consequences of permanent (actually private) status changing, resp. the fact that this could also read professors and prospective superiors etc.</p>	2, 10, 14
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Table 8: Examples for concerns respondents listed

The minimum amount of a received answer text consisted of one word, the maximum amount was 229 words. Please note that the survey was conducted in German, but the questionnaire was translated for the analysis into English.

The next three figures show the results of the greatest perceived concerns of social networking platforms (N=3534) in comparison with gender, level of study, and field of study:

Greatest Concerns of Social Networking Platforms and Gender, N=3534

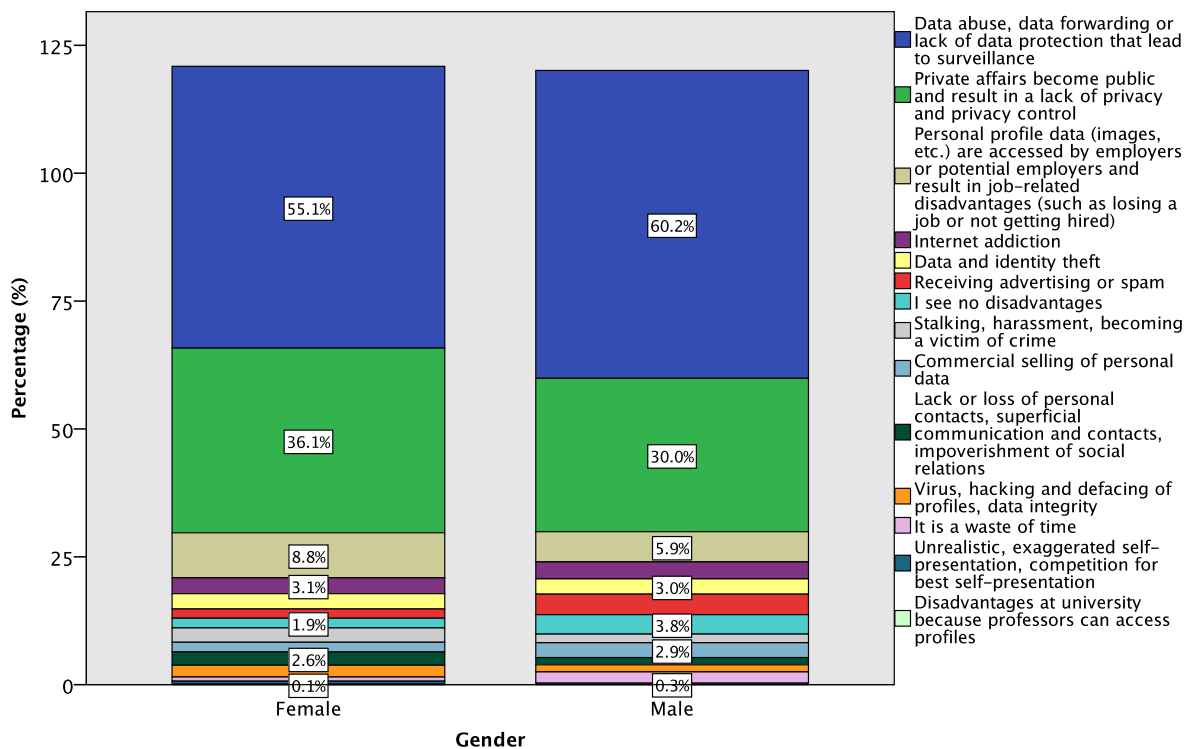


Figure 13: Greatest perceived concerns of social networking platforms and gender

55.1% of the female and 60.2% of the male respondents stress that data abuse, data forwarding, or a lack of data protection is the greatest concern of social networking platforms. Moreover, 36.1% of women and 30.0% of men indicate it is problematic that personal affairs tend to become public and 8.8% of the female and 5.9% of the male students state it is a danger that also current and potential employers can access profiles. 3.3% of women and 3.1% of men mention Internet addiction as main risk of social media.

Greatest Concerns of Social Networking Platforms and Level of Study, N=3534

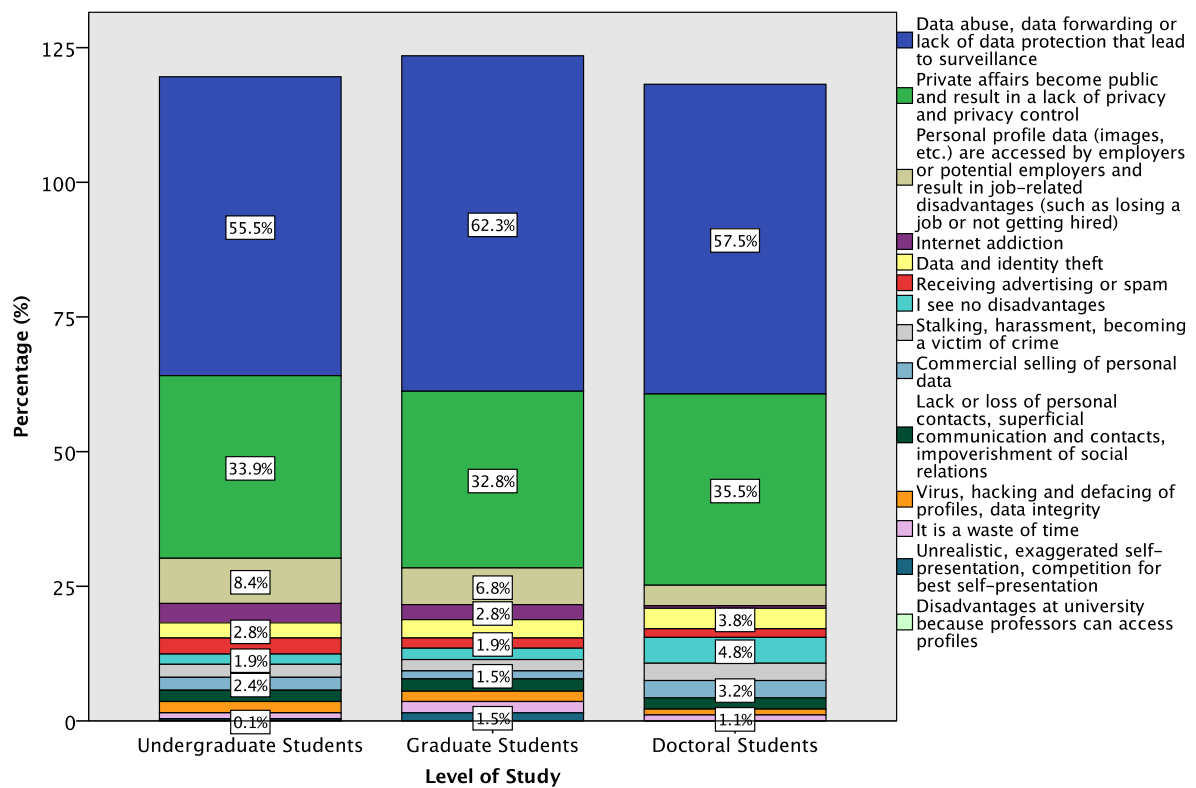


Figure 14: Greatest perceived concerns of social networking platforms and level of study

55.5% of the undergraduate, 62.3% of the graduate, and 57.5% of the doctoral students stress that data abuse, data forwarding, or a lack of data protection is the greatest concern of social networking platforms. 33.9% of undergraduates, 32.8% of graduates, and 35.5% of postgraduates indicate it is problematic that personal affairs tend to become public. In addition, 8.4% of the undergraduate, 6.8% of the graduate, and 3.8% of the PhD students state it is a danger that also current and potential employers can access profiles.

Greatest Concerns of Social Networking Platforms and Field of Study, N=3534

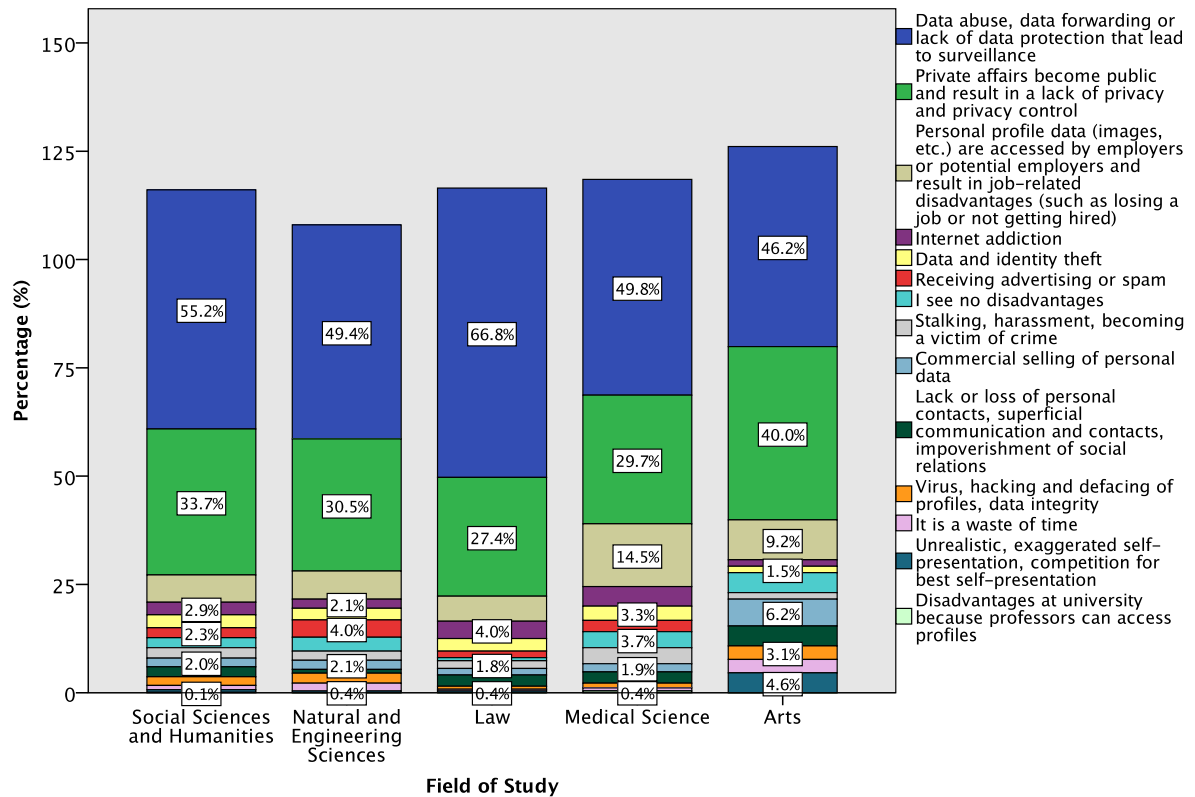


Figure 15: Greatest perceived concerns of social networking platforms and field of study

55.2% of the students of social sciences and humanities, 49.4% of the students of natural and engineering sciences, 66.8% of the students of law, 49.8% of the students of medical science, and 46.2% of the students of arts stress that data abuse, data forwarding, or a lack of data protection is the greatest concern of social networking platforms. Besides, 33.7% of the students of social sciences and humanities, 30.5% of the students of natural and engineering sciences, 27.4% of the students of law, 29.7% of the students of medical science, and 40.0% of the students of arts indicate it is problematic that personal affairs tend to become public. By comparing the greatest concerns with the field of study, one can see that a high amount of the students of law (two thirds) stress data abuse, data forwarding, or a lack of data protection as the greatest drawback. One reason that one can imagine is that jurists tend to learn more about rights, are more frequently confronted with unwarranted intrusions and violations, and are also interested in legal protection. For example, the group “europe-v-facebook” was founded by a group of Austrian students of law in order to fight against Facebook’s policy in terms of personal data abuse and forwarding (Objectives, europe-v-facebook.org, accessed on April 20, 2012). It could therefore be an outcome

that Austrian students of jurisprudence are more concerned about data abuse and data forwarding.

9. Value of Privacy

Hypothesis 7: Privacy is rather considered as extrinsic than as intrinsic value and as based on the control theory.

If privacy is rather considered as extrinsic than as intrinsic value (Hypothesis 7) was measured with the help of an index that was calculated based on the answers given to three single choice questions that tested such consideration (interpretation in parenthesis). The next three tables report the results of these questions (non-Facebook-users were not taken into consideration, because these questions focus on the usage of Facebook, N=3444):

Value of Privacy 1: Should your mobile phone number be visible to all people on Facebook, or not? What is the most important reason for or against it?

N=3444

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes, Facebook is like a telephone book. I am pleased if people who are looking for me also can find me in order to contact me. (no value)	48	1.4	1.4	6.0
Yes, I am pleased if I get different information about the world such as advertising (e.g. via SMS). (no value)	16	.5	.5	6.4
No, I am afraid that my phone number will be misused for advertising. (extrinsic value)	409	11.9	11.9	18.3
No, I am afraid that I will be harassed or threatened. (extrinsic value)	518	15.0	15.0	33.4

No, that would violate my privacy and privacy is something very important for me. (intrinsic value)	2295	66.6	66.6	100.0
Other opinion:	158	4.6	4.6	4.6
Total	3444	100.0	100.0	

Table 9: Value of privacy 1

3444 students were asked if their mobile phone number should be visible to all people on Facebook, or not. Two thirds of the respondents (66.6%) stated that it would violate their privacy and that privacy is something very important for them (intrinsic value). Only 6.4% of the participants think that their mobile phone number should be visible to all people on Facebook and therefore consider privacy as no important value.

Value of Privacy 2: Do you mind if photos on which you are obviously drunk are publicly visible on Facebook. What is the most important reason for or against it? N=3444

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes. If such photos are published it is embarrassing and I feel ashamed. (extrinsic value)	297	8.6	8.6	14.5
Yes. I am afraid that my employer or my future employer sees these photos and that I then get problems at work or will not get the job at an employment interview. (extrinsic value)	1230	35.7	35.7	50.3

Yes. That is something private and privacy is something very important for me. (intrinsic value)	1481	43.0	43.0	93.3
No. I do not mind, there is no harm in a joke and everyone is drunk once in a time. This is completely normal. One does not need to conceal such a circumstance. (no value)	159	4.6	4.6	97.9
No. I am not afraid to show myself as I am. Even in an interview it can be a benefit, because people see that you are a sociable person who has fun in his/her life. (no value)	73	2.1	2.1	100.0
Other opinion:	204	5.9	5.9	5.9
Total	3444	100.0	100.0	

Table 10: Value of privacy 2

The respondents were interviewed if they mind when photos on which they are obviously drunk are publicly visible on Facebook. Half of the students (50.3%) do mind for extrinsic reasons and over 40% agree that it is something private and privacy is very important for them (intrinsic value). Only 6.7% do not mind (no value).

Value of Privacy 3: Would you ever publish pictures, where you are shown naked, on a social networking site profile? What is the most important reason for or against it? N=3444

	Frequency	Percent	Valid Percent	Cumulative Percent
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Valid	Yes, why not. I am not embarrassed being naked in front of other people, also not on the Internet. (no value)	19	.6	.6	4.0
	No. That would be a violation of my privacy. Intimacy is one of the most important values and has to be protected. (extrinsic value)	1442	41.9	41.9	45.9
	No. That is too private and all private data should be kept private and not be made public. (intrinsic value)	1863	54.1	54.1	100.0
	Other opinion:	120	3.5	3.5	3.5
	Total	3444	100.0	100.0	

Table 11: Value of privacy 3

3444 students were asked if they would ever publish pictures, where they are shown naked, on a social networking site profile. Overall, more than half of the participants (54.1%) stated that it is too private and all private data should be kept private and not be made public (intrinsic value). More than 40% consider privacy as extrinsic value. Only 19 students claim that they would publish such pictures on a social networking site (no value). If we combine the results of these three questions (value of privacy 1-3), an overall privacy value index can be calculated. The index can be calculated with the following formula (for the definition of this index see the survey questions section in the research report):

- 3 x extrinsic/intrinsic/no value: Privacy is considered as extrinsic/intrinsic/no value.
- 2 x extrinsic/intrinsic/no value: Privacy is rather considered as extrinsic/intrinsic/no value.
- 1 x extrinsic/intrinsic/no value/other opinion: No valid assessment possible.

The next figure shows the privacy value index:

Privacy Value Index, N=3122

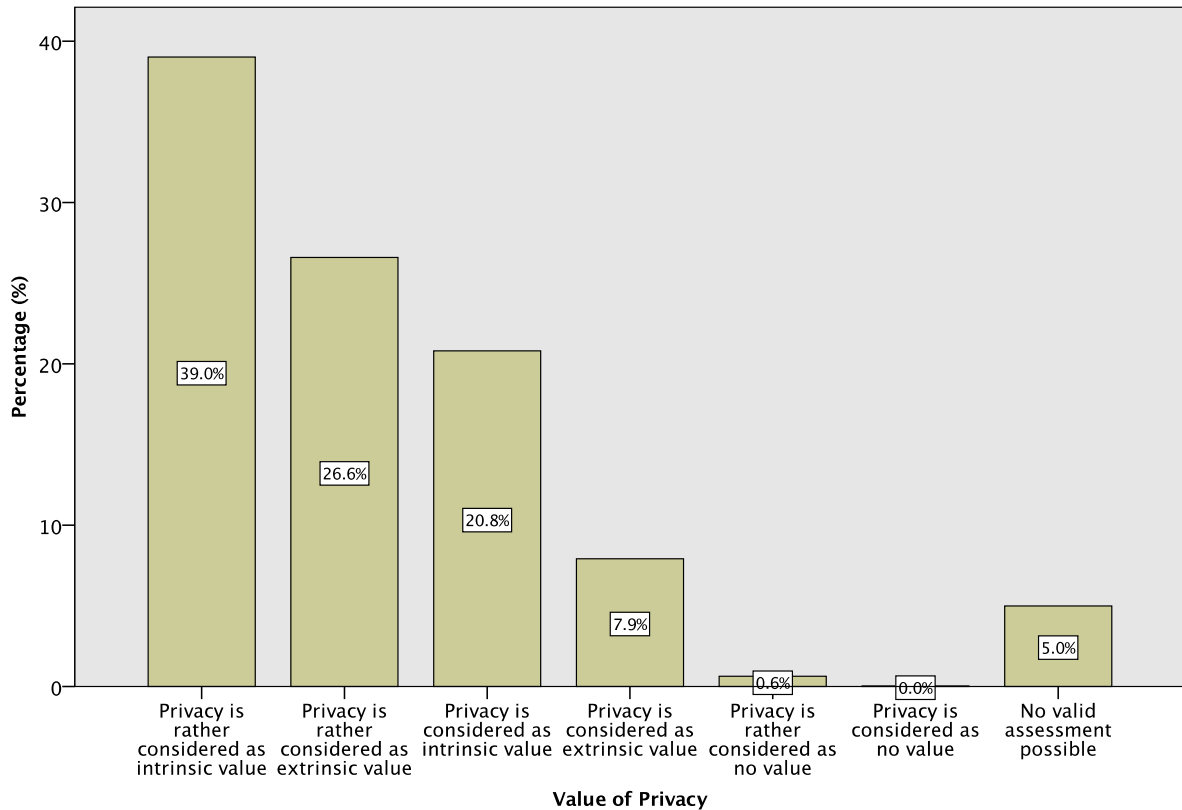


Figure 16: Privacy value index (based on value of privacy 1-3)

This index shows that most of the students do have an intrinsic understanding of privacy in mind. Almost 60% of the respondents consider or rather consider privacy as intrinsic value (2-3 x intrinsic value), a third (34.5%) consider or rather consider privacy as extrinsic value (2-3 x extrinsic value), and 0.6% of the students consider (0.03%) or rather consider privacy as no important value (2-3 x no value). The hypothesis that privacy is rather considered as extrinsic than as intrinsic value can therefore not be verified, but it shows that privacy seems to be a very important value for students in daily life. Please note: 1 x extrinsic/intrinsic/no value/other opinion: No valid assessment possible. Privacy is considered as no value (0.03%). 2-3 x other opinion were not taken into consideration, N=3122.

The next three figures display the results of the privacy value index (N=3122) in comparison with gender, level of study, and field of study:

Privacy Value Index and Gender, N=3122

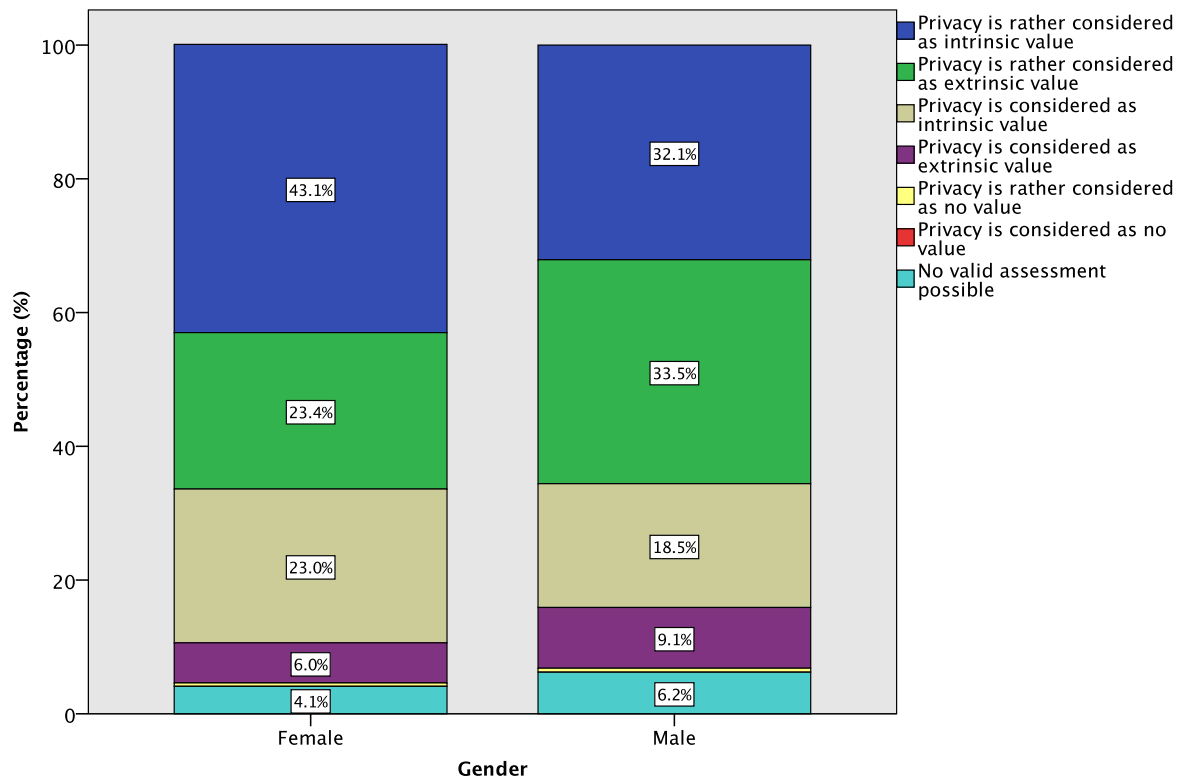


Figure 17: Privacy value index and gender

66.1% of the female and 50.6% of the male respondents consider or rather consider privacy as intrinsic value. Moreover, 29.4% of women and 42.6% of men (rather) consider privacy as extrinsic value and 0.5% of the female and 0.6% of the male students consider or rather consider privacy as no important value. This shows that more women than men tend to consider privacy as intrinsic value and that more men than women tend to consider privacy as extrinsic value. A reason for this tendency could be patriarchal societal structures that construct women as being irrational, emotional, intuitive, weak, and lovely and men as being rational, powerful, structured, and thinking logically (Davis 1998, 163-164). It could be an outcome of these structures that more male students consider privacy as extrinsic value, which is a more rational and functionalist approach where privacy is seen as an instrumental value for providing means in order to achieve some end(s), and that more female students consider privacy as intrinsic value, which is a more intuitive and subjective approach where privacy is considered as a unitary value for its own sake and valuable in itself.

Privacy Value Index and Level of Study, N=3122

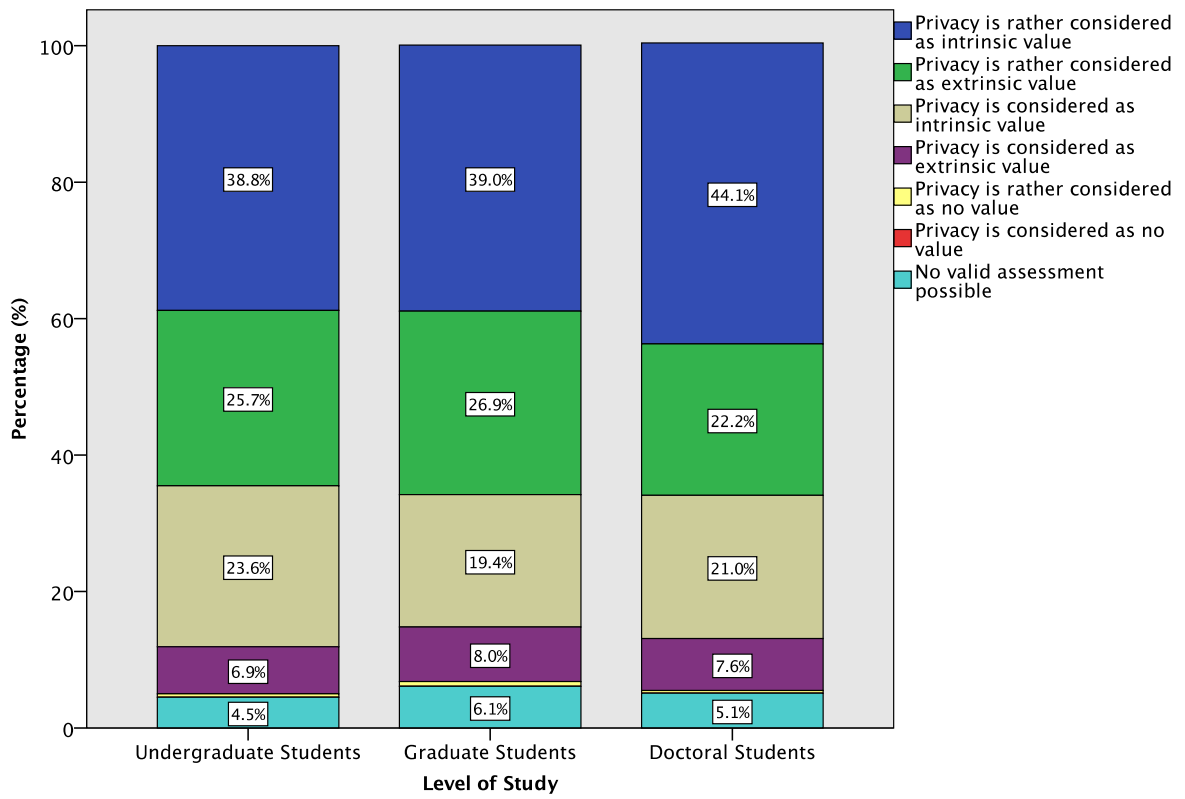


Figure 18: Privacy value index and level of study

62.4% of the undergraduate, 58.4% of the graduate, and 65.1% of the doctoral students consider or rather consider privacy as intrinsic value. 32.6% of undergraduates, 34.9% of graduates, and 29.9% of postgraduates (rather) consider privacy as extrinsic value. In addition, 0.5% of the undergraduate, 0.7% of the graduate, and 0.4% of the PhD students consider or rather consider privacy as no important value.

Privacy Value Index and Field of Study, N=3122

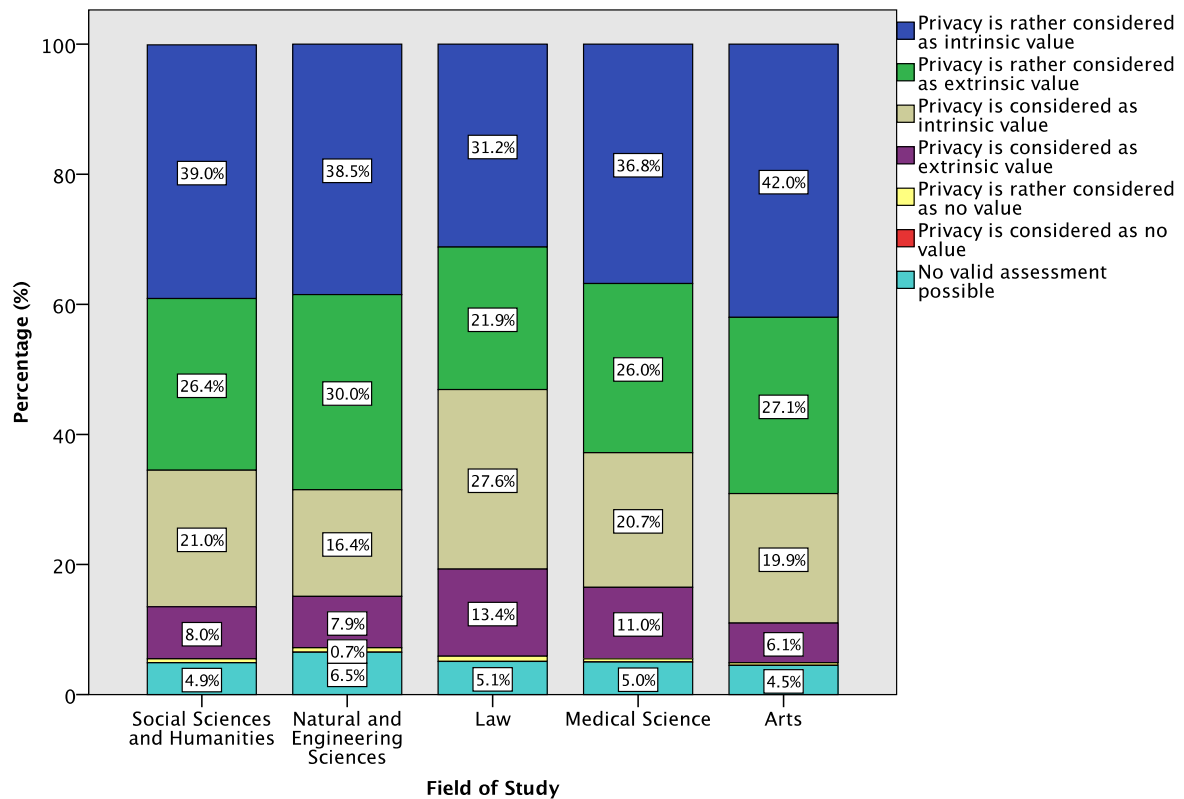


Figure 19: Privacy value index and field of study

60.0% of the students of social sciences and humanities, 54.9% of the students of natural and engineering sciences, 58.8% of the students of law, 57.5% of the students of medical science, and 61.9% of the students of arts consider or rather consider privacy as intrinsic value. Besides, 34.4% of the students of social sciences and humanities, 43.4% of the students of natural and engineering sciences, 35.3% of the students of law, 37.0% of the students of medical science, and 33.2% of the students of arts (rather) consider privacy as extrinsic value.

10. Theory of Privacy

Hypothesis 7: Privacy is rather considered as extrinsic than as intrinsic value and as based on the control theory.

If privacy is rather considered as based on the control theory than on the access theory (Hypothesis 7) was measured with the help of an index that was calculated based on the answers given to three multiple choice questions that tested such considerations (interpretation in parenthesis). The next three tables show the results of these questions (non-Facebook-users were not taken into consideration, because these questions focus on the usage of Facebook, N=3444, there are more than 100% in total, because multiple responses were possible):

Theory of Privacy 1: Social networking platforms such as Facebook or Myspace record the usage behaviour of their users for purposes of advertising. How do you think about this circumstance? (multiple responses possible), N=3444

	Responses		Percent of Cases
	N	Percent	
set1 ^a I do not mind. (no theory)	311	6.8%	9.0%
I find that bad and I would prefer to decide for myself, which data are recorded about me. (control theory)	2312	50.4%	67.1%
I find that bad and think that regulations should be established on a political level (e.g. international data protection regulations) in order to legally hinder the collection of certain data. (access theory)	1844	40.2%	53.5%
Other opinion:	120	2.6%	3.5%
Total	4587	100.0%	133.2%

a. Dichotomy group tabulated at value 1.

Table 12: Theory of privacy 1

3444 students were asked how they think about the circumstance that social networking platforms record the usage behaviour of their users for purposes of advertising. Most importantly, half of the respondents (50.4%) find that bad and would prefer to decide for themselves, which data are recorded about them (control theory). Over 40% consider privacy as based on the access theory and only 311 survey participants do not mind. This indicates that the vast majority of the students find this form of economic surveillance problematic.

Theory of Privacy 2: In Austria, telecommunication service providers (e.g. Internet service providers) have to pass on electronic communication activities of their customers to the police if the latter demands so. Do you mind about it? If yes, how could this circumstance be counteracted? (multiple responses possible), N=3444

		Responses		Percent of Cases
		N	Percent	
set2 ^a	No, I do not mind. (no theory)	1463	37.2%	42.5%
	Yes, I find that problematic and I would prefer to decide for myself, which communication activities of me can be passed on to the police. (control theory)	1058	26.9%	30.7%
	Yes, I find that problematic and I think that regulations should be established on a political, legal, or societal level in order to protect private information so that they are not accessible to someone else. (access theory)	1167	29.7%	33.9%
	Other opinion:	245	6.2%	7.1%
Total		3933	100.0%	114.2%

a. Dichotomy group tabulated at value 1.

Table 13: Theory of privacy 2

The respondents were interviewed if they mind that telecommunication service providers have to pass on electronic communication activities of their customers to the police if the latter demands so. Worth mentioning is the fact that 37.2% of the participants do not mind about this circumstance. Almost 40% of the students do not mind about this kind of political surveillance.

Theory of Privacy 3: Suppose you are repeatedly harassed by a stranger on Facebook and you feel surveilled by this person (stalking). Do you mind about it? If yes, how could such a situation be handled? (multiple responses possible), N=3444

		Responses		Percent of Cases
		N	Percent	
set3 ^a	No, I do not mind. (no theory)	103	2.4%	3.0%

Yes, I mind. I would solve this problem on an individual level by denying this person access to my Facebook profile. (control theory)	2729	64.8%	79.2%
Yes, I mind. I wish that regulations could be established on a political, legal, or societal level in order to protect the access to private data. (access theory)	1267	30.1%	36.8%
Other opinion:	112	2.7%	3.3%
Total	4211	100.0%	122.3%

a. Dichotomy group tabulated at value 1.

Table 14: Theory of privacy 3

3444 students were asked if they mind when they are repeatedly harassed by a stranger on Facebook and they feel surveilled by this person. Overall, almost two thirds of the respondents (64.8%) would solve this problem on an individual level by denying this person access to their Facebook profile (control theory). About 30% consider privacy as based on the access theory and only 103 participants do not mind. This indicates that most of the students find this shape of personal surveillance problematic. By comparing the results of these three questions (theory of privacy 1-3), we can see that in the context of the expressed circumstances the vast majority of the students find economic and personal surveillance problematic, whereas many of our respondents do not mind about political surveillance. This could be an indication that social networking site users are more concerned about economic surveillance than political surveillance. One reason one can imagine is that there is much public talk about privacy threats of commercial web platforms such as Facebook and Google. The following collected news clips are an indicator of this development:

“Selling You on Facebook: Many popular Facebook apps obtain sensitive information about users—and users' friends” (The Wall Street Journal, April 7, 2012)

“Snoopers who track your online browsing: Computer users are being spied on as big business tries to work out how best to target adverts at them.” (The Sun, March 3, 2012)

“Facebook is a surveillance engine, not friend” (The Times of India, February 7, 2012)

These examples point out how important the topic of commercial privacy threats has become for the media and for our daily lives. The media often alert that privacy seems to be under attack and vanishing especially caused by commercial websites. For instance, Web 2.0 activities such as creating profiles and sharing ideas on Facebook, announcing personal messages on Twitter, uploading or watching videos on YouTube, and writing personal entries on Blogger, enable the collection, analyses, and sale of personal data by profit-oriented web platforms. Obviously, our respondents are more concerned about this form of surveillance.

If we combine the results of these three questions (theory of privacy 1-3), an overall privacy theory index can be computed. The index can be calculated with the following formula (for the definition of this index see the survey questions section in the research report):

- control theory + access theory: RALC theory
- 3 x control/access/RALC/no theory: Privacy is considered as based on the control/access/RALC/no theory.
- 2 x control/access/RALC/no theory: Privacy is rather considered as based on the control/access/RALC/no theory.
- 1 x control/access/RALC/no theory/other opinion: No valid assessment possible.
- control theory and/or access theory + no theory: No valid assessment possible.

The next figure presents the privacy theory index:

Privacy Theory Index, N=3363

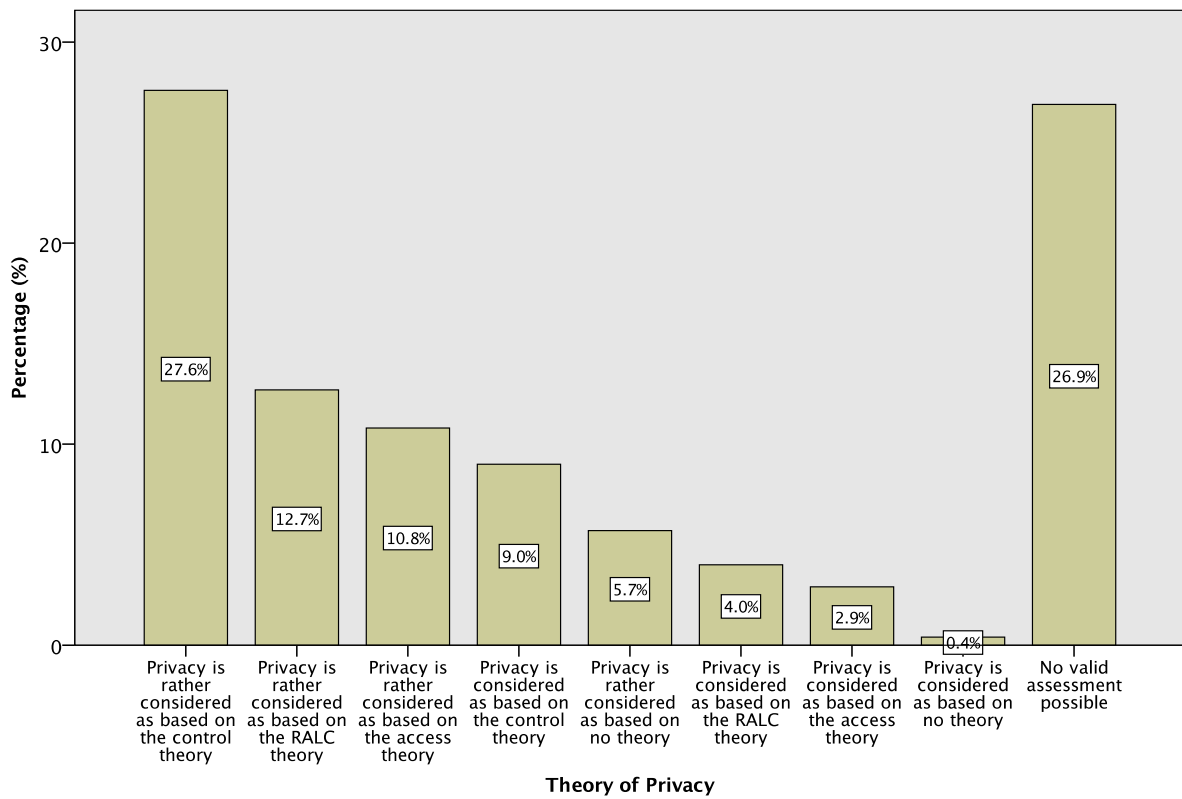


Figure 20: Privacy theory index (based on theory of privacy 1-3)

This index indicates that most of the students contemplate privacy in the context of the control theory. More than a third of the respondents (36.6%) consider or rather consider privacy as based on the control theory (2-3 x control theory), 16.7% consider or rather consider privacy as based on the RALC theory (2-3 x RALC theory), 13.7% consider or rather consider privacy as based on the access theory (2-3 x access theory), and 6.1% of the students consider or rather consider privacy as based on no theory (2-3 x no theory). The hypothesis that privacy is rather considered as based on the control theory can consequently be verified. These results furthermore indicate that privacy seems to be a very important value for students in daily life. Please note: Control theory + access theory: RALC theory. 1 x control/access/RALC/no theory/other opinion: No valid assessment possible. Control theory and/or access theory + no theory: No valid assessment possible. 2-3 x other opinion were not taken into consideration, N=3363.

The next three figures show the results of the privacy theory index (N=3363) in comparison with gender, level of study, and field of study:

Privacy Theory Index and Gender, N=3363

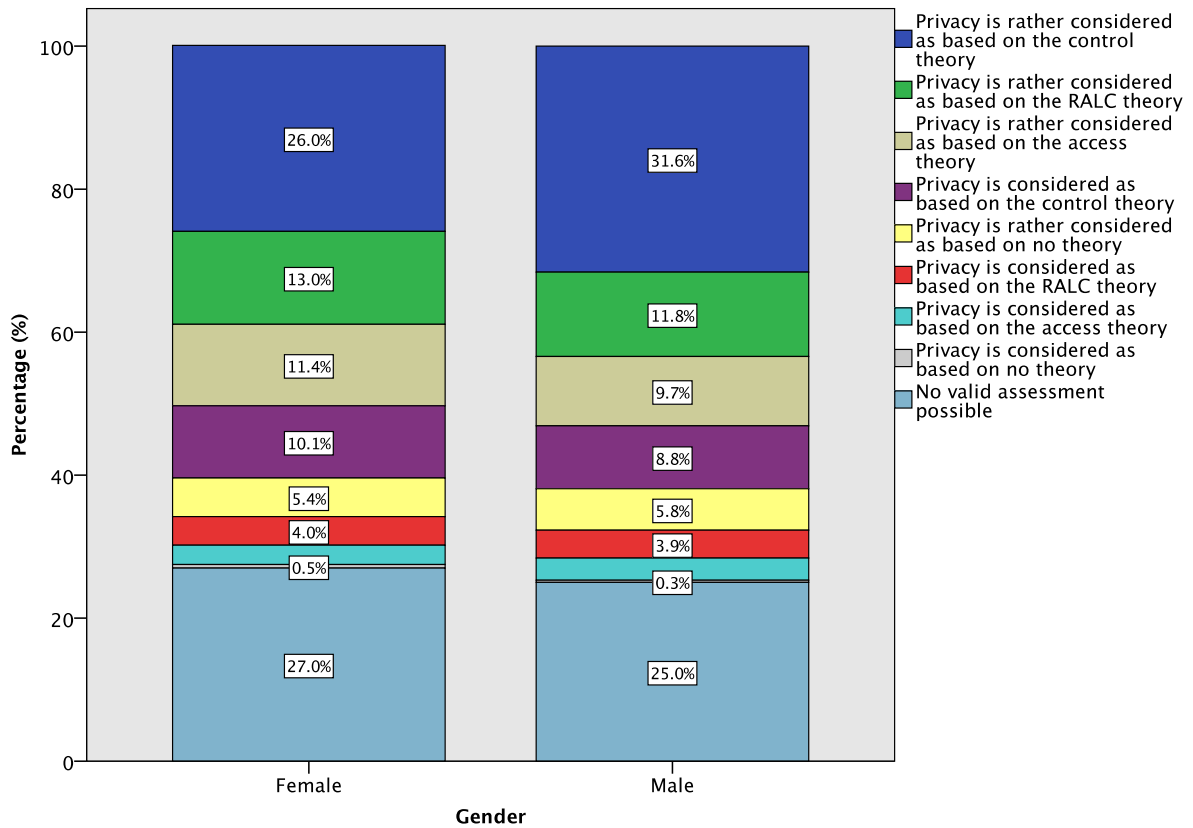


Figure 21: Privacy theory index and gender

36.1% of the female and 40.4% of the male respondents consider or rather consider privacy as based on the control theory. Moreover, 17.0% of women and 15.7% of men (rather) consider privacy as based on the RALC theory and 14.1% of the female and 12.8% of the male students consider or rather consider privacy as based on the access theory. 5.9% of women and 6.1% of men (rather) consider privacy as based on no theory.

Privacy Theory Index and Level of Study, N=3363

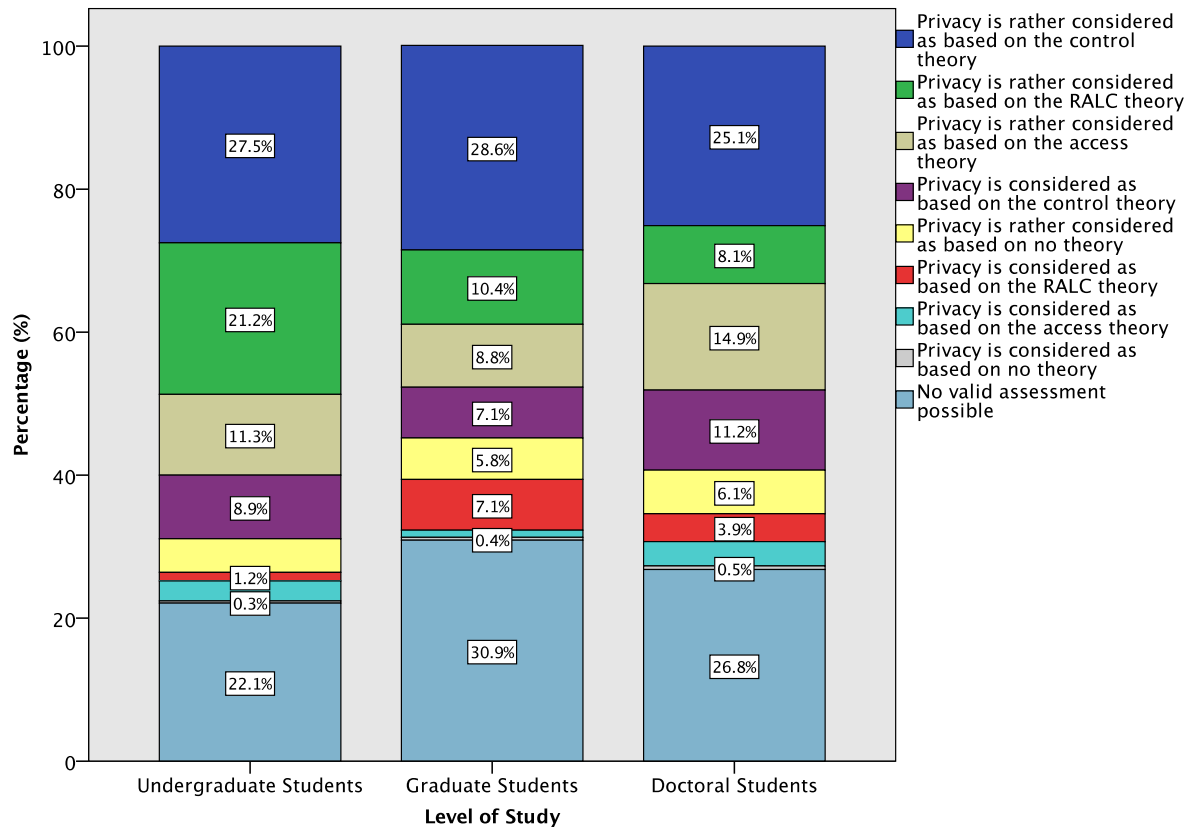


Figure 22: Privacy theory index and level of study

36.4% of the undergraduate, 35.7% of the graduate, and 36.3% of the doctoral students consider or rather consider privacy as based on the control theory. 22.3% of undergraduates, 17.5% of graduates, and 12.0% of postgraduates (rather) consider privacy as based on the RALC theory. In addition, 14.1% of the undergraduate, 9.8% of the graduate, and 18.3% of the PhD students consider or rather consider privacy as based on the access theory.

Privacy Theory Index and Field of Study, N=3363

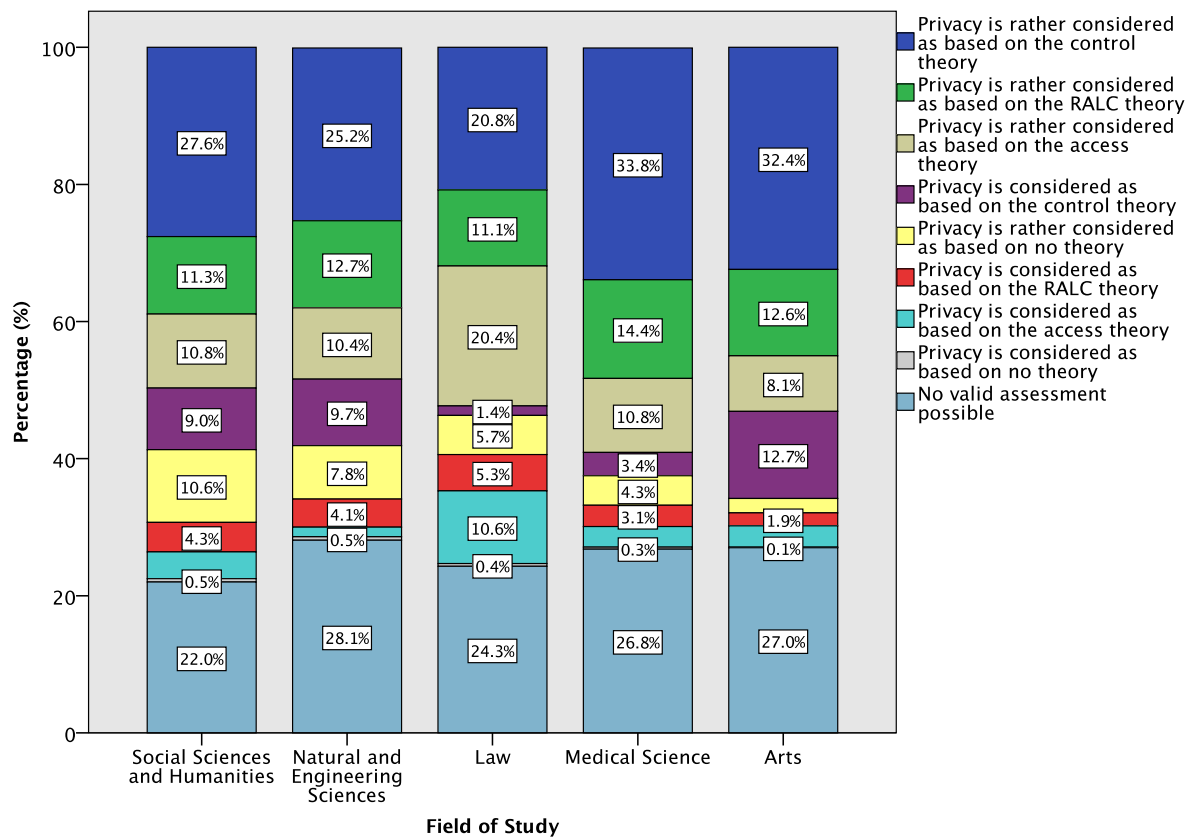


Figure 23: Privacy theory index and field of study

36.6% of the students of social sciences and humanities, 34.9% of the students of natural and engineering sciences, 22.2% of the students of law, 37.2% of the students of medical science, and 45.1% of the students of arts consider or rather consider privacy as based on the control theory. Besides, 14.7% of the students of social sciences and humanities, 11.8% of the students of natural and engineering sciences, 31.0% of the students of law, 13.8% of the students of medical science, and 11.2% of the students of arts (rather) consider privacy as based on the access theory. These results show that the students of law consider privacy different compared to the other students. Only a fifth consider privacy as based on the control theory, but nearly a third consider privacy as based on the access theory. One reason could be that jurists tend to learn more about laws and are more frequently confronted with rights. They therefore consider privacy as based on the access theory to a certain extent, which is more a rights-based and objective conception of privacy, whereas the control theory is more of a subjective theory oriented on choice independent of law. It seems as students of law find the protection of privacy important in order to guarantee the “right to be let alone” (Warren and Brandeis 1890, 193).

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