The Long Tail of Social Networking

Revenue Models of Social Networking Sites

Albrecht Enders

Assistant Professor of
Strategic Management

University of Nuremberg

Hans-Peter Denker

Master Student of
Strategic Management

University of Nuremberg

Harald Hungenberg

Chaired Professor of
Strategic Management

University of Nuremberg

Sebastian Mauch

Master Student of
Strategic Management

University of Nuremberg

Abstract

Benefiting from new Internet technologies and altered user behavior, social networking sites have become the poster child of a series of new web services that have been emerging with the advent of "Web 2.0". In this article, we follow a comparative case approach of two major German social networking sites—StayFriends and XING— in order to answer the question of how social networking sites create value for their users and how they can capture it. By transferring Chris Anderson's concept of "The Long Tail" to internet-based social networks, we develop a novel perspective on the value creation of these new types of businesses. In particular, we examine how social networking sites can generate revenues through advertising, subscription, and transaction models. In addition, we identify the number of users, their willingness to pay, and their trust in peers and the platform as the key value drivers. Finally, we discuss managerial implications, providing examples from our case studies and recommendations for leveraging the value created through these services.

Keywords

Introduction

The advent of Web 2.0[1], which has opened up new ways to communicate, share content, and collaborate, symbolizes a paradigm shift from website provider- or "supplier"- generated content to user-generated content (Kolbitsch and Maurer 2006). IT expert, author and media entrepreneur Tim O'Reilly, calls Web 2.0 *the business revolution in the computer industry caused by the move to the Internet as [a] platform, and an attempt to understand the rules for success on that new platform.* The applications should "[…] *harness network effects to get better the more people use them.*"[2]

These new opportunities for using the Internet were made possible by several simultaneous developments, the most important ones being the following: The creation and adoption of new syndication formats such as RSS[3] and new technologies like AJAX[4], the increased number of people accessing the Internet via broadband connections, and also a change in the behavior and mindset of Internet users who have come to perceive the web increasingly as a medium for sharing information and identity than for simply consuming content provided by portals (Kolbitsch and Maurer 2006). These developments have led to changes in the way people use the Internet. Nowadays, for example, users spend significantly more time online and want to share more information about themselves.

Different business models, generally regarded as Web 2.0 applications, currently try to seize these new opportunities. Media-sharing portals such as FlickR and YouTube, the voice-over-IP-application Skype,[5] the free collaborative online encyclopedia Wikipedia,[6] and the broad "blogosphere"[7] realm rely on new technologies to promote the collective spirit of the Internet. Another group of business models, which has benefited greatly from the changes mentioned above, entails internet-based social networking sites (called SNS in the remainder of the article). These online communities enable users to communicate and connect with each other, to build up a personal network, as well as to share personal content. On these sites, members create their personal profiles to present themselves to others (O'Murchu et al., 2004), while community providers primarily act as enablers, offering support capabilities as well as search and communication tools. This movement towards social interaction on online platforms has created a new basis for community, which is also called "network individualism" (Boase, et al., 2006). While, in the past, individuals typically had to rely on geographically bounded communities for creating social capital (or social networks), users of online communities can now seek out a variety of appropriate contacts depending on their specific information needs at any given time.

The best known and biggest online community today is MySpace[8], which was acquired for € 482 million by Rupert Murdoch's media conglomerate News Corp.[9] in 2005. MySpace currently hosts more than 130 million profiles and managed to increase the number of unique visitors in 2005 by 367% to 38.4 million.[10] The social networking site Facebook, which was originally set up as an online network for college students, has enjoyed similar success since it also has made membership possible for a broader public. New portals emerge almost every week and it seems that they are more than just a short-term hype.[11] More recently, in December 2006, the business networking site XING staged its IPO.[12]

The idea of capitalizing on bringing people together online is not entirely new. Prior literature has identified various motivations for bricks-and-mortar companies to integrate virtual communities (VCs) into their existing business models. For instance, they can be installed to serve communication, information, entertainment or transaction purposes (Armstrong and Hagel, 1996), to support a company's physical products (Walden, 2000) or to create a single point of access for information within a company (Williams and Cothrel, 2000). While also promoting communication amongst users or serving as a source of

entertainment, the key characteristic of social networking business models is the visualization of individual social and professional networks among users and tools that help to leverage these networks. Literature concerned with the success factors of VCs is therefore not comprehensive in explaining the success of SNS. The latter have so far been addressed in the literature only in a descriptive and categorizing way (e.g. O'Murchu et al., 2004) without any emphasis on their business models and the underlying value creation and value capturing strategies. This is primarily due to the fact that SNS are a rather new phenomenon.

The research question we will address in this article is how SNS create and capture value using different types of business models. To do so, we first analyze the reasons for the rise of SNS in the wake of Web 2.0 by applying the concept of "The Long Tail" (Anderson, 2006) to SNS. Second, we use a qualitative comparative case study, as proposed by Yin (2003), and analyze the business models of two SNS, XING and StayFriends, in order to point out differences in the creation and capturing of value on SNS. Third, we generalize our findings and develop a theory of revenue drivers and corresponding revenue models for SNS. Finally, we derive generic strategy recommendations for each revenue model.

The Long Tail of Social Networking

In view of the rapid growth of SNS, the question arises of how they actually create customer value and how this value can be converted into sustainable revenue streams for SNS operators. We argue here that SNS create customer value because they are superior to traditional means of networking in two ways. First, they offer new ways of getting to know new people and, second, they facilitate the management of existing contacts.

To analyze these advantages in more detail in the following section, we draw on the insights of "The Long Tail" concept (Anderson, 2006) and apply them to SNS. The Long Tail concept illustrates how the emergence of electronic retailing and digital goods created a paradigm shift in the way companies can generate revenues (see Figure 1). While in traditional bricks-and-mortar stores, such as Wal*Mart, 20% of products typically account for 80% of revenues, internet-based retailers, such as the online music store Rhapsody, have realized that "endless choice is also creating unlimited demand" (Anderson, 2006).[13]
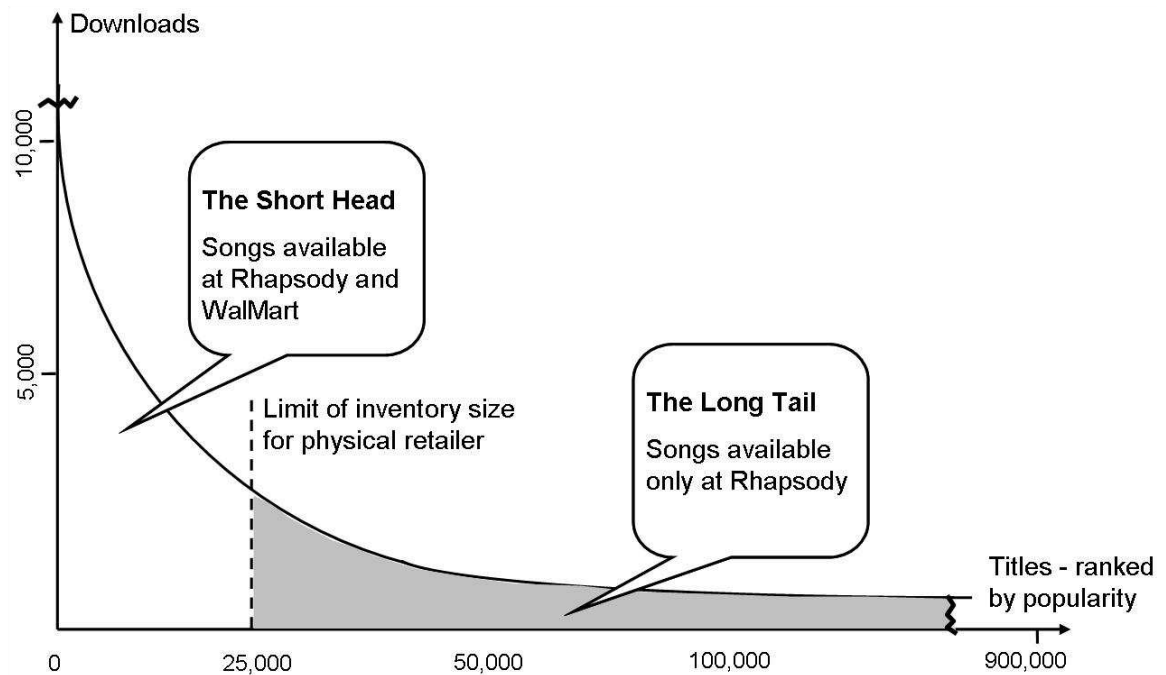
Figure 1: The Long Tail; source: Anderson (2006)

The original example used by Anderson (2006) compared online music retailers with traditional bricks-and-mortar retailers such as Wal*Mart, just as we compare online networking to traditional "bricks-and-mortar" or rather "flesh-and-blood" networking.

Wal*Mart, operating primarily as a retailer of physical goods in a physical store, can only offer a predefined selection of goods due to limitations in shelf space, and costs for producing, storing, and delivering the goods. Therefore, Wal*Mart and other physical retailers are likely to offer only the "hits" (i.e. the songs and albums which sell best and are most worthwhile providing).

Opposed to that, pure digital content can be stored, replicated, and distributed at much lower costs, like media such as music, pictures, and videos, or personal content, such as profiles, online group discussions, and personal networks. At Rhapsody, 98% of all products sell (albeit in small quantities), and the fact that they sell is reason enough for carrying them, especially since shelf space is not as restricted as in the real world. The same logic can be applied to peer-to-peer file-sharing networks that will, under certain circumstances, also offer a similar content variety (see Huberman and Wu, 2005). Since digital products can be offered at virtually no additional cost, it is a viable strategy for online retailers to "sell less of more", i.e. to offer products that sell only in small quantities. Due to the fact that they cause no additional costs and complexity, they are worthwhile carrying.

Transferring the concept of the long tail to the realm of social networks helps us to better understand the two above mentioned advantages of internet-based networking sites. First, via traditional means of networking, individuals almost exclusively contact people they got to know personally in the past. For the most part, this is the inner social circle of people that an individual has a strong relationship with, either socially or in business. *Strong ties, or core ties* as they are also called, are those people who others turn to in order to discuss important matters, with whom they are in frequent contact, or from whom they seek help (Boase, et al., 2006). However, individuals usually do not have easy access to the contacts of their contacts via traditional networking.

Yet, sociological research has shown that in many situations, such as advice-seeking or job search, we do not benefit so much from the people with whom we have strong social bonds, but rather from people we do not know directly or only very superficially—our so called *weak ties* (Granovetter, 1973). By granting access to these weak ties, SNS offer a much larger pool of potentially interesting contacts than traditional means of networking can typically provide.

Second, due to time restrictions traditional networking allows individuals only to stay in touch with a limited number of people. It requires simply too much effort to update permanently all contact data in a traditional address book or an Excel-sheet, since contacts do not regularly inform the individual about changes in their contact data such as address, telephone number, job position, or e-mail-address. Hence, contact data is not always up-to-date and the individual might lose track of these people, even if he or she would, in theory, be willing to retain the contact. Relationships thus expire over time due to a lack of interaction (Burt, 2000). On SNS, however, terminating a relationship requires the user's active intervention, otherwise a contact will be retained in a user's contact list. Thus, it becomes possible to manage a constantly growing number of contacts without any additional efforts. Actively used SNS grant users access to valid contact data at all times, with the profiles acting as a de facto self-actualizing address book.

The combination of these two factors, i.e. the impact of weak ties and the improved contact management, creates a vast potential for online networking. With reference to the "Long Tail" concept provided by Anderson (2006), we call this potential the *Long Tail of Social Networking* (see Figure 2). This tail visually conceptualizes the social network of an individual network member. The X-axis, which depicts the number of contacts the member maintains, is sorted by networking intensity. The Y-axis depicts networking intensity, which is a function of the contact frequency and the amount and type of information that is exchanged between the member and her contacts. Depending on the number of contacts and the intensity of interaction with other members of the network, the shape of this tail will differ for each individual member. Those users who have many contacts have longer tails than those with only few contacts, and users who interact heavily with others have fatter tails than those who do not. Overall, the Long Tail curve reflects the fact that we tend to have a few people with whom we have very close relationships (the very top left of the graph), whereas there are more people we only know superficially and contact infrequently (the lower right of the graph).
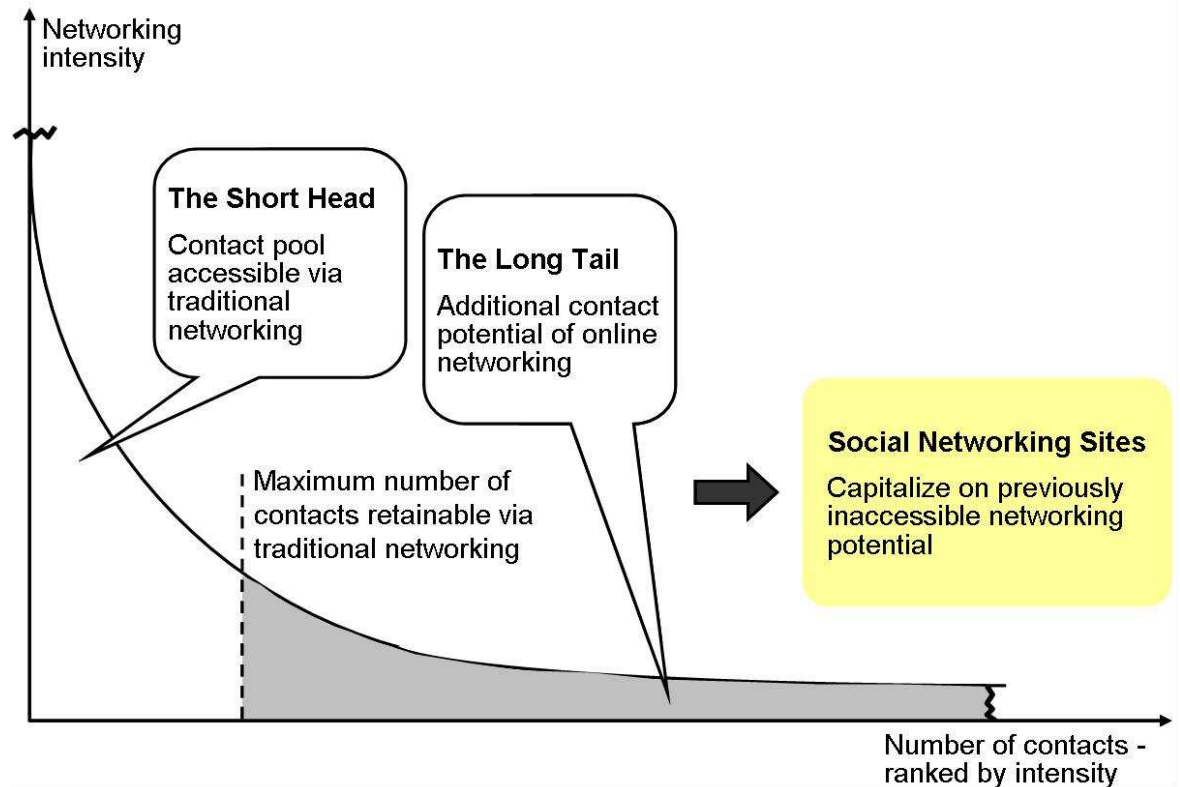
Figure 2: The Long Tail of social networking; source cf. Anderson (2006)

The short head on the left contains those contacts that are easily accessible via traditional networking. It consists of a limited number of contacts which we are frequently in contact with. After the short head there is a cut-off point. Contacts beyond this point are either inaccessible via traditional networking or have such a low contact intensity that the connection is not worthwhile being maintained and will dilute over time. Boase and Wellmann (2006) have shown that the mere introduction of online discussion lists, where members of a local community can post messages about a variety of topics (such as soliciting childcare services or lawn maintenance), led to a significant expansion in neighborhood interaction and connectedness. While "non-wired" residents only knew the name of on average eight other neighbors, "wired" residents who participated in the online discussion lists knew the names of 25 neighbors. As we have argued, through their peculiar features, SNS further improve the possibilities to get to know more people and stay in touch with them, even if they are contacted only as often as once a year or less. Thus, by granting their users access to contacts in the long tail, SNS remove the cut-off point after the short head that limits the size of tradtional networks. This, in turn, allows users of SNS to tap both into the short head and the long tail of social networking.

Numerous different website providers currently try to benefit from this new potential with different business models. In the following sections, we examine underlying factors driving value creation and revenue generation of SNS.

Same Industry – Different Business Models

As SNS are a relatively new phenomenon and their business models are quite a new topic to be explored, a qualitative case-based approach is suitable for initial theory building (Eisenhardt, 1989). We used a comparative case design, as suggested by Yin (2003), to explore the phenomenon of SNS in its real-life context, using multiple sources of evidence. By using a comparative case design we intended to avoid problems associated with single

case studies, i.e. difficulties related to making controlled observations and deductions as well as difficulties related to replicability and generalizability of the results (Lee, 1989).

Since no comprehensive listing of players in this relatively young industry has been provided yet, we relied on a pre-selection of 87 international SNS published on Wikipedia.[14] In order to create a heterogeneous basis for choosing our objects of case analysis, we short-listed 15 platforms from this catalog (see Table 1). Besides trying to sample different types of business models according to size, origin and context, we especially focused on including a variety of different revenue models, both generic and hybrid, in the sample. The sample below represents all the different types of revenue models we discovered during our research and the combinations in which they occurred.

Name	Context	Revenue Model	Users	Origin
aSmallWorld	Social	Advertising	0.15 million	Sweden
Bebo	Social	Advertising	22 million	US
Classmates.com	Social	Advertising/Subscription	40 million	US
draugiem	Social	Advertising/Transaction Fees	0.8 million	Latvia
Facebook	Social	Advertising/Transaction Fees	13 million	US
Friendster	Social	Advertising	36 million	US
LinkedIn	Business	Subscription/Transaction Fees	8.5 million	US
MySpace	Social	Advertising	130 million	US
Orkut	Social	Advertising	37 million	US
Passado	Business/Social	Advertising	4.7 million	UK
Plaxo	Business	Subscription/Sale of Product or Service	15 million	US
Ryze	Business	Advertising	0.25 million	US
Spoke	Business	Advertising	35 million	US
StayFriends	Social	Advertising/Subscription	3.5 million	Germany
XING	Business	Advertising	1.45 million	Germany

Table 1: Overview of selected social networking sites

Since we had direct top management access to the business networking site XING and the social networking site StayFriends, we decided to conduct the in-depth case studies with these two companies. Both are among the leading players in Europe, they have implemented viable revenue models, and can therefore be regarded as ideal cases in point for our purpose. As part of our research, we surveyed press articles, studied internal company documents, and interviewed top management members of both companies to gather and triangulate different data points.

Our comparison focuses on the different approaches to the market for SNS, highlighting differences in revenue models and the main underlying revenue drivers including (1) the number of users on a platform, (2) the users´ willingness to pay for a specific service, and (3) the level of consumer trust.

XING – A Business Networking Platform Gone Public

The online business networking site XING was launched in October 2003. XING was the first SNS worldwide to go public in December 2006, which eventually turned it into one of the most well known Web 2.0 companies in Europe[15]. According to press releases, the emission of 1,350,000 shares yielded € 35.7 million[16] On XING, users create their own profile, comparable to a CV, where they can enter personal, business and contact data, their wants and haves, and upload a photo. XING offers services in four different categories: (1) find & search (providing search tools for different business needs), (2) enable business (setting up necessary functions for carrying out transactions), (3) manage personal

information (with up-to-date contact details), and (4) communities and events (encouraging online activities as well as offline events).

Revenue Model

For the fiscal year 2006, XING management estimated to generate € 10 million revenues, which constitutes an increase of 66.6% over to 2005. The major part (90-95%) of revenues is generated from membership fees. XING installed a two-tier membership system: a free version of the basic service and a premium membership at € 71.40 per year, payable in monthly rates of € 5.95. Only XING´s premium members can send personal messages, see who recently changed the company or position, or matches their own wants and haves, which aims at encouraging users to upgrade to a premium membership. The remainder of revenues is generated from so-called premium groups. These are closed branded areas on the platform designed for large communities (e.g. the *SPIEGEL*[17] Graduate Network), and corporate (e.g. *Accenture*[18] Alumni) or academic (e.g. *AIESEC*[19]) alumni organizations. With this subscription offer, XING wants to increase activity and content creation on the platform.

XING decided against displaying advertisements on its website as an additional source of revenues for two main reasons. First, the placement of advertisements on the site might jeopardize the platform's image as a serious business networking site. Second, it was uncertain whether the platform would be able to generate sufficient traffic, which presents a mandatory prerequisite for making advertising an attractive revenue source. Lars Hinrichs, CEO at XING, comments on advertising:

"Advertising as a source of revenue is like a fire: Once you get it going, it keeps getting hotter, but when it does not get enough to feed on, it dies down to a faint smoldering."

Customer acquisition

As XING is active only in a business context, the target group is limited to those willing to do business online. To date, XING has attracted 1.45 million users, which is, compared to other SNS, a rather small user base (see Table 1). The major part of all XING users has been acquired via recommendations of existing users. Using various invitation tools, every member may invite his or her acquaintances to join the community. Because of this user driven viral growth, XING does not need to spend much money on customer acquisition.

Willingness to pay

Rich user profiles, large personal networks made available to other users, and expert group entries facilitate networking on XING, as they make it easier for users to assess other members and the people behind the profiles. XING entices users to actively participate in the community and return frequently to the website. Around 70% of all members visit the site at least once a month. This activity apparently also impacts the willingness to pay: 13% of all users, which amounts to almost 200,000 people, currently own a premium membership.

Consumer trust

Since users enter substantial amounts of sensitive personal data, a high level of consumer trust is essential for XING's business model. To guarantee privacy, members specify for every single contact whether they want to share information, such as guestbook entries, group memberships, or their personal contact list. Data privacy toward external organizations or individuals is also taken seriously. Visibility of one's own profile and group articles toward search engines can be chosen freely. Eoghan Jennings, CFO of XING, comments on the role of trust for SNS business models:

"Social networking business models are built upon trust and on how the portals deal with user-generated content. Essentially they are 'a trust for trust'."

Only recently XING has decided to take the trust it creates among its users to the next level. In May 2007, XING announced the introduction of its "marketplace", where members can post offers to the XING community. The initial Marketplace launch incorporates job openings, but is later on intended to include service and real estate offers as well. Using the preferences about industries, previous experience and users' want and haves, XING is able to provide a better matching of supply and demand for these offers, while at the same time providing a higher level of trust by making the links between two individuals transparent. XING is not the only SNS trying to leverage trust by offering such a service: Almost simultaneously, US Facebook launched its market place feature in May 2007, also providing classifieds that users can make accessible to their personal network.

StayFriends – Germany's Biggest Social Networking Site

StayFriends went live in August 2002, and today it is Germany's biggest SNS with more than 3.5 million users. The portal helps people to find and reconnect with former classmates and friends they have lost track of over time. In July 2003, StayFriends was acquired by the US company Classmates.com[20], which offers the same service in the US, and is one of the biggest SNS worldwide with more than 40 million registered members. StayFriends allows users to create personal profiles, where they add personal and contact data, information about their current personal status, as well as the schools attended. Users can upload photos and add stories from their school days. In addition, members can search for their friends, using their previous schools and class memberships. Once they have found old friends from school, users can exchange personal messages or write in other users´ guestbooks.

Revenue model

In the beginning, the entire service was offered for free, as the management considered the number of users too small to create sufficient search results. Only when the first 250,000 people had registered after 1½ years, a subscription model was introduced. The goal of this initial strategy was to acquire a critical mass of members as soon as possible. Today, StayFriends relies on a two-tier membership system comparable to the one of XING; however, with a much lower fee: free basic and a so-called gold membership at € 18 per year. The gold membership, for example, is required to view other users´ complete profiles (including all photos), or to exchange messages via the platform. Apart from membership fees, revenues are also generated by selling advertising space on the website.

StayFriends does not intend to create high activity levels on the platform, but to make people sign up and stay for several years. That way, StayFriends is able to contact them when a certain trigger event, such as the signing up of a former class mate, occurs, that might entice a user to upgrade his membership from basic to gold.

Customer acquisition

Customer acquisition plays a pivotal role for the entire StayFriends model, and comprises the major part of StayFriends´ overall expenses. In contrast to Xing, viral growth on StayFriends is limited as the immediate benefit from inviting other people to the platform is rather low – users want to reconnect with people they have lost track of, not with those they already know. Michel Lindenberg comments on the role of viral growth for his business model:

"In order to grow through viral marketing, there must be a direct personal advantage. openBC for example has an immediate benefit: When you invite someone to openBC, you can add him to your contact list right away and expand your network. When you invite somebody to StayFriends, you hope that he or she invites somebody, who might then invite somebody else who was in your class..."

Instead of leveraging viral marketing, StayFriends acquires new members via three other paths. The majority of StayFriends´ users have been acquired via content integration. The StayFriends service is accessible via major Internet portals, like T-Online or AOL. The most important advantage of this method is that, through the cooperation with these portals, users stay within an environment they already know and trust. The second customer acquisition path consists of online advertising campaigns. Over time, StayFriends´ marketing team has gained profound experience in designing online advertising campaigns and today considers it one of its core competencies. The third path of customer acquisition entails the StayFriends website optimization to improve search placements with major search engines such as Google. The website is optimized for Google searches on the names of the schools and of the StayFriends members.

Willingness to pay

As mentioned above, StayFriends´ concept is built upon trigger mechanisms. The main trigger for an existing basic member to upgrade to a gold membership is the registration of a new classmate. Other triggers that are intended to cause a membership update are newsletters and e-mail messages that are sent out when new members, coming from the same graduation year, sign up to the platform. Additionally, Stayfriends implemented a feature that allows members to upload current pictures of themselves and old class pictures (e.g. from excursions and graduation parties).

In order to induce members to upgrade to gold membership status, these features are only offered with limited functionalities to non-paying members. For instance, users may look at the profiles of their classmates, but they cannot see their e-mail addresses, and cannot send them personal messages via the StayFriends platform. Michel Lindenberg explains:

"A crucial step has been to transfer communication from the user's private mailbox to the StayFriends platform. It makes a big difference to a user whether he receives a message from an old friend between two spam mails or next to a picture of his old friend. And then he is only a click away from sending a message to someone else from his class. It has had a major impact on our revenues."

Consumer trust

For many members of the StayFriends platform, sharing old school memories is quite a private matter. Therefore, StayFriends had to ensure that users trust the platform. This is achieved by providing users with far reaching control about their privacy settings. For instance, users can control the visibility of sensitive personal information such as date of birth or private address. Users can also determine whether they want their profile to be found by popular search engines like Google. Even when it comes to law enforcement agencies, StayFriends follows a strict privacy policy. Despite frequent queries of police or prosecutors, StayFriends does not pass out any information about users without a court order.

Three Options to Increase Revenues

Both platforms managed to achieve leading positions in the market for SNS, even though they followed completely different approaches. XING has built up the image of a serious, business-only community and tries to accentuate this image with a no-advertising-policy. At the same time, XING charges users relatively high prices – almost four times the price of StayFriends. In contrast to XING´s no-advertising-model, StayFriends does display advertisements on the platform and consequently generates additional revenues from this source. This raises the question as to which revenue models are suitable for SNS and which revenue drivers are relevant for the different models.

On the Internet, various revenue models have evolved over time. However, as we have discovered in our field studies, only some of them seem to be suitable for SNS (see Table 1). The existing literature provides various classifications for internet-based revenue models (e.g. Jelassi and Enders, 2005; Dubosson-Torbay et al., 2001). Building on the categorization by Laudon and Traver (2006) for e-commerce revenue models, we want to classify revenue models for SNS into three categories: (1) advertising models, (2) subscription models, and (3) transaction models.

Theoretically, there would also be other ways to generate revenues on SNS. One possibility would be to sell user-related data, which would certainly be of particular interest to advertisers. However, selling this data would typically be unacceptable among users due to ethical and privacy issues. We therefore exclude such practices as a potential revenue source.

Another possibility is to charge time-based fees. With increasing connectivity and bandwidth, however, this model, which was widely used by VCs run by online service providers such as AOL or Netcom, is probably a relic of the past. Armstrong and Hagel (1996) already concluded in the mid-1990's that time-based revenue models would only be feasible in the short run due to the lack of other viable revenue models at that point in time.

During our field studies, we observed that few portals relied on one single source of revenues. Rather, most communities have implemented a combination of these three models. Cancer (2006) states that subscription models are often combined with revenues from advertising, as it is the case for StayFriends. In the total sample of 15 SNS being analyzed during this research project, we found four combinations of "hybrid" revenue models (see Table 1). However, SNS normally focus on one primary source of revenues, as it is the case in the examples of XING and StayFriends.

In the following sections, we will analyze the three revenue models in more detail (see Figure 3). We argue that for each revenue model at least one out of the three main revenue drivers identified in the two case studies is important: (1) the number of users on a platform, (2) the users´ willingness to pay for a specific service, and (3) the level of consumer trust. The existing user base and the stream of new members determine the number of users. The user's willingness to pay for the service depends on the value the SNS provides to its customers. On SNS, the level of consumer trust depends on the trust users have in the platform itself and the trust they have in other users. In the following sections we will discuss the revenue models and their underlying revenue drivers in more detail and derive strategy recommendations to ensure success for each model.
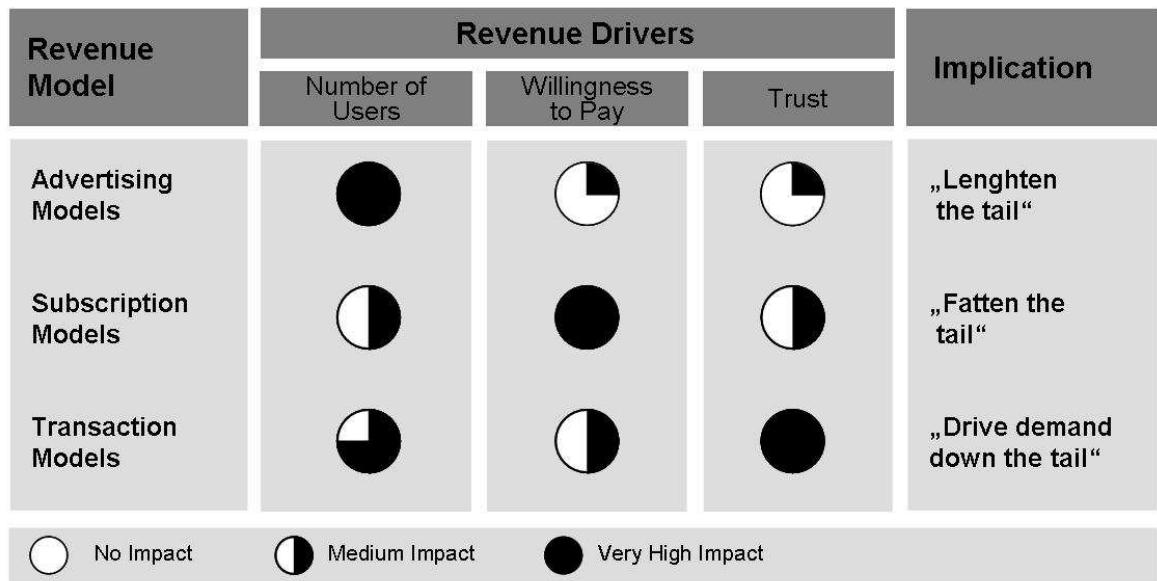
Revenue Model	Revenue Drivers			Implication
	Number of Users	Willingness to Pay	Trust	
Advertising Models	●	◔	◔	„Lenghten the tail"
Subscription Models	◖	●	◖	„Fatten the tail"
Transaction Models	◔	◖	●	„Drive demand down the tail"

○ No Impact	◖ Medium Impact	● Very High Impact

Figure 3: Revenue models, revenue drivers and implications for SNS

Advertising Models – Increasing the Number of Users

Advertising appears to be one of the foremost forms of revenue generation on SNS (see also Table 1). One important reason for this predominance is a tendency among users to demand free services. Although, for example, Jupiter Research reported more publishers launching paid access services, slightly fewer people were ready to pay for online content in 2002 (42%) than in 2000 (45%) (Crosbie, 2002). For websites relying on an advertising model, it is necessary to attract large and/or highly specialized, differentiated viewerships in order to maximize revenues (Laudon and Traver, 2006). On SNS, two forms of advertising can be observed: affiliate models and banner advertising. In affiliate models, websites steer traffic to an "affiliate" website and, in turn, receive a referral fee or a percentage of revenues from resulting sales (Laudon and Traver, 2006). Facebook[21], for example, offers organizations or companies the option to create special groups in return for a sponsorship. Banner advertising allows platform operators to charge fees in exchange for the display of advertisements on their website (Canzer, 2006).

To be profitable, revenue models based on advertising require high levels of website traffic (Canzer, 2006). Therefore, the key revenue driver for this revenue model is the number of users (see Figure 3). In contrast, willingness to pay among members does not affect revenues in this model. Users are ready to accept advertising to a certain degree; they perceive it as the price they have to pay for receiving free (or cheap) online content (Canzer, 2006). A certain minimum level of trust, however, is necessary for these business models, just as for any e-commerce business model.

Displaying advertising allows SNS providers to offer services at lower prices, as was shown in the example of StayFriends, or even for free, as it is the case for MySpace. In order to increase revenues from advertising models, the number of users has to be increased accordingly. The number of users depends on the existing user base and the stream of new members. Therefore, the key implication for platform providers is to attract new members to the community.

As was shown through the examples of XING and StayFriends, SNS try to attract new members to their sites using different mechanisms. Some SNS, such as StayFriends, have to rely on costly customer acquisition paths, such as advertising or search engine optimization, to attract users to their platform. The most attractive path, however, is viral

growth, which is primarily driven by user recommendations. By inviting other contacts to join the network, users expand their individual online network and thereby also *lengthen their long tail of social networking* (see Figure 4).
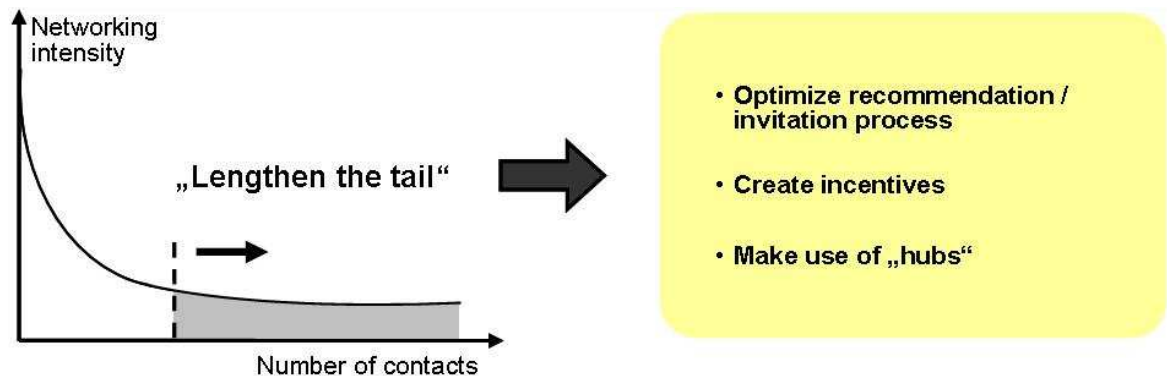
Figure 4: Lengthen the tail; source: cf. Anderson (2006)

Based on our case findings, we posit that, in order to entice viral growth, SNS operators need to (1) optimize their recommendation/invitation processes, (2) create incentives for inviting new members, and (3) actively engage so called "hubs" (i.e. people with a widespread network of contacts) in the acquisition process. These three levers for creating viral growth are described in more detail below.

First, in order to optimize the recommendation process, various intuitive invitation tools have to be implemented. XING, for example, allows users to send customized invitations to one or several people directly from their start page. XING also features a plug-in for several mail applications. Users can, for example, compare their Microsoft Outlook address book with their XING contact list and invite people who have not registered yet.

Second, users are more likely to recommend a service if they clearly understand the benefits from doing so. On XING, a member's personal network grows with every invited user as the latter is automatically added to the member's contact list. SNS without direct user benefit from recommending the platform can offer incentives instead. StayFriends, for instance, grants members a free month of gold membership for three successful invitations. Other incentives could be sweepstakes, bonus systems, etc.

Third, the number of contacts an individual maintains can vary widely. Sociological studies concluded that the average size of people's immediate social contacts is 124 people (Hill and Dunbar, 2003). A limited number of people, so called "hubs", have an extraordinary high number of contacts (Barabási, 2003). SNS providers should actively search for these hubs and try to entice them to recommend their service (Gladwell, 2000) by offering special incentives. For instance, whenever XING enters a new market, the company hires so called country managers who are individuals with a large network of contacts. In turn, these country managers recommend the service to their extensive professional network. As compensation, XING grants them a certain percentage of all premium membership fees from the newly acquired members.

Subscription Models – Increasing Willingness to Pay

The second major source of revenues for SNS consists of subscription models where a website offers its users content or services and charges a subscription fee for access to some or all of its offerings (Laudon and Traver, 2006). Usually, basic features are offered for free, while, for more advanced features, the user has to upgrade and pay a fee. Subscription models existed in e-commerce already before the advent of Web 2.0, yet they are just starting to become more popular with service providers, e.g. electronic news or music services (Wang et al., 2005).

Every business model based on networking or communities requires a critical mass of users in order to provide search matches needed to create customer value. However, users are not likely to pay a subscription fee for a service simply because of high user numbers. A certain degree of consumer trust in the platform and the peers is also required, since users are supposed to pay for the service. However, user concerns about the security of a given service do not seem to have significant impact on users' willingness to pay (Wang et al., 2005). Instead, the crucial driver for subscription-based models is the creation of high levels of unique customer value, which determines their willingness to pay for a service. On SNS, customer value originates mainly from user-generated content and related activity and interaction. When a user can access rich profiles of other users and tap into expert groups, as is the case on XING, for instance, this is likely to result in a higher networking intensity, which corresponds to a *fattening of the long tail of social networking* (see Figure 5).
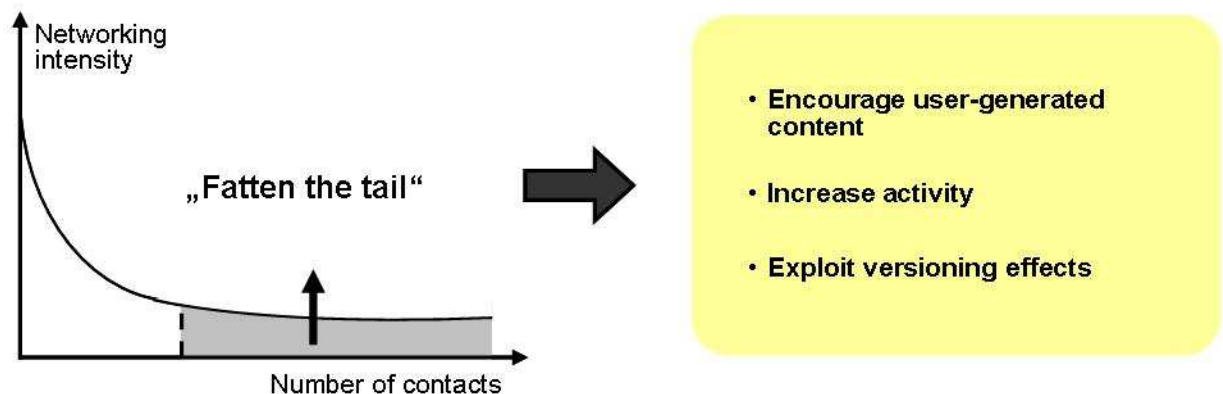

Figure : Fattening the tail; source: cf. Anderson (2006)

In order to maximize the willingness to pay, the community provider must aim at creating customer value, which can be achieved (1) by increasing levels of user generated content, (2) by providing functionalities and incentives so that members frequently update and expand their profiles, and (3) by offering multiple membership packages with different pricing schemes.

First, user-generated content, such as group entries, personal networks, or user profiles present the main value driver for social networking (Hagel and Armstrong, 1997). In order to increase the level of user-generated content, SNS operators can take advantage of the phenomenon that sharing information online seems to be a means of expressing one's identity, leading to increased self-esteem, reputation, and respect from others (van Baalen et al., 2005). For instance, by connecting to other peers on the XING platform, users explicitly articulate their social connections and visualize their own social networks. Furthermore, XING users have created 5,000 online groups, with up to 45,000 members in individual groups. Some users even organize regular offline events without any involvement of XING staff.

Second, as the XING case illustrates, the multiple functions of the platform create a high level of activity, which in turn results in high levels of customer value. The high log-in statistics of XING indicate that the platform is used quite actively,[22] which is simultaneously a value indicator and a value driver, since activity results in more activity in a reinforcing circle (Hagel and Armstrong, 1997). Fostering this culture of communication among users can be achieved by integrating multiple contacting tools, such as messaging functions, guestbooks and discussion forums, enabling members to easily get in touch with their contacts. XING also informs members about the upcoming birthdays of their contacts, which, to many users, presents a compelling reason to send a birthday message.

Third, offering a low-end and a high-end version of the product, where the latter offers additional and more sophisticated features or tools, can be easily accomplished for digital products and can entice self-selection and maximize the total value of the product to the customer (Shapiro and Varian, 1999). This self-selection can be used to create versioning effects, i.e. to channel demand into the product version that is most favorable for the company maximizing its revenues.

Transaction Models – Building a "Trust for Trust"

The third possibility for SNS to generate revenues is through a transaction model, where a company receives a fee for enabling or executing a transaction (Laudon and Traver, 2006). Two types of transaction models can be distinguished: endogenous and exogenous transactions. Endogenous transactions are carried out when users buy physical or digital goods and services from the platform provider; for example, virtual gifts that can be purchased with so-called micro-payments on the US platform Facebook. Exogenous transactions take place when the SNS provider sells third party (or user-generated) content to its users or enables transactions between users, e.g., with a yellow pages directory introduced by the US business networking site. In this case, the platform operator can profit from a fee on the volume of transactions conducted over the platform.

In order to create sustainable revenues from a transaction model, a critical mass of users is essential (Zeng and Reinartz, 2003). Moreover, willingness to pay needs to exceed a minimum level. There is certain interdependence between the two factors. If, for example, the platform provider receives a certain percentage of the traded value and the values are relatively high (then the users´ willingness to pay has to be high as well), the critical mass of users may be relatively small. In the past, however, transaction fees for online communities have been rather low (Armstrong and Hagel, 1996). In the case of small fees, as for example on eBay, the number of transactions has to be high in order to be profitable. Alternatively, a small number of users has to trade with a high frequency via the platform.

Just like online retailers, such as Amazon, that drive demand down the long tail by giving recommendations using sophisticated collaborative filtering methods, SNS also grant access to contacts further down in the tail. The contacts in the tail, however, are mostly people the individual has never met before. Therefore, high levels of consumer trust are essential for people to trade via the platform. According to Walden (2000), users need to have trust in both, the product and the firm, before they are ready to execute transactions. Due to information asymmetries, customers require information about the product and the company from a trusted source. While a critical mass of users and a minimum willingness to pay among members are both important prerequisites for this model, the key revenue driver for SNS relying on a transaction model is trust in peers and the platform (see Figure 3).

When SNS entice their users to interact and do business with contacts they are only rarely in touch with, i.e. the contacts in their personal long tail, they effectively *drive demand down the long tail of social networking.* This shift of demand can be achieved (1) by increasing trust and (2) by providing the search mechanisms to connect supply and demand (see Figure 6).
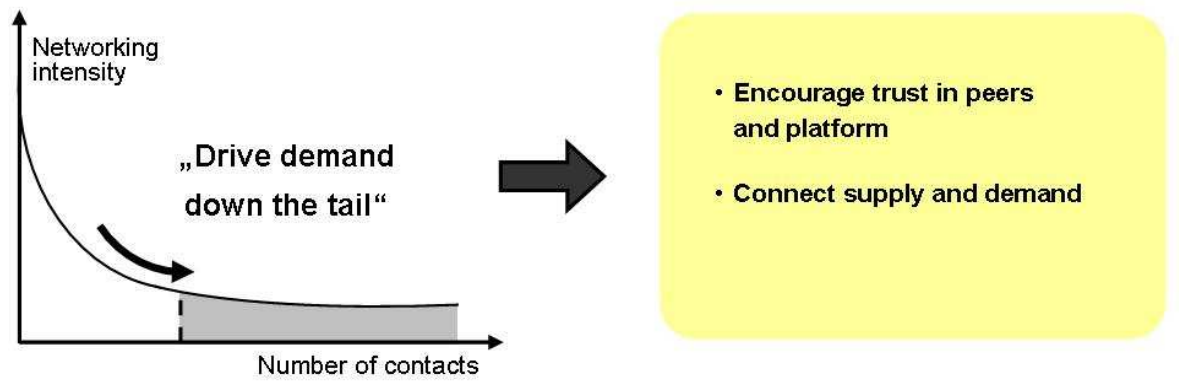
Figure 6: Drive demand down the tail, source: cf. Anderson (2006)

First, following Walden's (2000) approach, we differentiate between measures that are meant to increase trust in peers, and measures that are meant to increase trust in the platform. On the one hand, in order to increase trust in peers, visualizing second-degree contacts (for instance with a graphic like XING´s "contact path" showing the relation between two given members of a site) can create a stronger sense of trust. It makes users aware that a seller is only one or two steps away from their own direct circle of contacts. The basic idea is that while other transaction-enabling business models, such as eBay, provide more or less anonymous mechanisms of trust-building (for example eBay's rating system), SNS can directly visualize the connection to someone offering a product or service. On the other hand, high levels of trust in the platform can be ensured by guaranteeing high levels of privacy. Our research has shown that XING and StayFriends both provide various possibilities to increase privacy, for example, by determining which information to share with others, or whether their profiles and group entries are to be found by search engines.

Second, in order to drive demand down the tail, SNS have to connect supply and demand (Anderson, 2006). Offering appropriate tools and platforms to connect individuals with specific interests has been identified as an important factor that helps to generate high levels of participation in online communities (Quan-Haase and Wellman, 2004). XING's upcoming "power search" functionality is one example of how SNS match members according to their wants and haves.

Another way to improve matching is to create a service directory, such as the one implemented on LinkedIn, which allows users to list and recommend different services, similar to the yellow pages. It aims at enabling transactions among users by providing matches for all kinds of services, for example, legal advice, real estate affairs, and even blue-collar services.

Conclusion and Outlook

The extant literature has provided various perspectives on how revenues can be generated in virtual communities. Prior research, however, has not examined this topic for the relatively new phenomenon of internet-based social networks. In this article, we have

shown how Web 2.0 applications in general and SNS in particular capitalize on the technical developments and changes in user behavior. We have demonstrated that SNS are able to do so because they serve the users´ needs to present themselves to others, connect and communicate with their contacts, and share content with them.

SNS make a larger contact pool available to their members and allow them to easily manage and maintain virtually unlimited numbers of contacts by granting access to *the long tail of social networking* – an additional pool of contacts that is inaccessible via traditional networking. As we have argued, providers of online social networks must look for ways to lengthen and fatten this tail and to drive demand down the tail. Using the cases of XING and StayFriends, we have analyzed different revenue models that are suitable for SNS and their underlying crucial revenue drivers: (1) the number of users, (2) their willingness to pay and (3) their trust. The importance of each driver, however, varies for each revenue model.

Advertising models can be implemented in situations where the users´ willingness to pay is low or even zero and a minimum level of consumer trust is guaranteed. The key revenue driver in this model is a high level of traffic on the platform. Generally speaking, a revenue model solely based on advertising is only a viable option for platforms with large user bases. Increasing the member base is therefore crucial and can best be achieved through viral growth. In order to grow through recommendations from existing members, intuitive and easy invitation tools should be provided. Furthermore, members should benefit from inviting others. Benefits can either arise solely from the fact that others join the platform, as it is the case on XING, or they can be created artificially through incentives, as it is the case at StayFriends. The third implication is to make use of well-connected people (hubs) and their personal networks.

By contrast, for subscription models the key revenue driver is the users´ willingness to pay. Only in those cases where willingness to pay is high, SNS should opt for such a revenue model. Nonetheless, a critical mass of users is essential as it is also a factor influencing user activity, which in turn determines the users´ willingness to pay. Consumer trust also needs to exceed certain levels, as we pointed out earlier. In order to maximize revenues from this model, different versions of the product should be offered, as they can entice self-selection. Making the high-level version of the product as attractive as possible can increase the number of users signing up for it (Shapiro and Varian, 1999). Attractiveness can be increased by enticing users to actively participate in the community, communicate with other members, and generate content themselves.

For the third revenue model, which is primarily based on transactions, both a critical mass of users and a moderate willingness to pay have to be assured. The key revenue driver we identified for this model, however, is consumer trust. Trust is a construct that has significant impact on users´ online purchasing behavior (Ratnasingham, 1998; Lim et al., 2006). Doing business with people we have never met before requires a great deal of trust, especially when the transaction is executed online without any physical interaction. Only SNS that are able to create high levels of consumer trust, both in the platform and in other members, will be able to implement a transaction model. Showing users their relation to other members can help to build trust in other users. Referral or introduction features can further increase this trust. Guaranteeing high levels of data privacy and giving users possibilities to determine which data to share with others can encourage users´ trust in the platform.

Every revenue model needs to provide a minimum level of all three revenue drivers (see Figure 3), with the exception of advertising, which can also be implemented in cases where users´ willingness to pay is zero.

Limitations to the results from our case study stem from the fact that they are based on observations of a quite recent phenomenon. This has twofold implications. On the one hand, there is limited empirical evidence as to which revenue models are viable and especially sustainable in capturing value. This seems to be one reason why many SNS opt for a combination of at least two different revenue streams. On the other hand, there is still uncertainty about the creation of value, since it is yet unclear which effect SNS exactly have on people's social ties. While we conclude that, due to the low effort required, SNS facilitate establishing and maintaining ties with many different people, this low effort could also result in rather loose ties that dissolve over time (Mergel and Langenberg, 2006), especially when contacts are maintained solely in the virtual world. Further large-scale empirical studies have to be carried out to validate our implications and deepen the understanding of value creation and capturing for SNS, for instance concerning the correlation of revenue model and success.

SNS are basically built on collaboration and interaction, as is our concept of *the long tail of social networking*. As we have indicated before, Internet revenue models are constantly evolving and it is likely that new models will surface over the next months and years, changing the importance of the revenue drivers we identified in this article. Most importantly, two recent technological developments might significantly influence the future evolution and growth of SNS. First, as SNS, and here most notably Facebook, have started to open up their core technology for external developers, their infrastructure might eventually turn into online platforms that, much like Microsoft Windows today, will provide the standards for web developers. These developers, which, in the case of Facebook, include among others Microsoft, Amazon or the Washington Post, build social network applications, such as photo albums, chess games or online radio applications, which function only within the boundaries of the SNS. Both the SNS and the developers benefit from this arrangement. SNS providers benefit from these externally developed applications because they are able to provide richer interaction possibilities for users, thereby fattening the long tail of social networking. Developers benefit from gaining access to the installed user base of the SNS. Second, so called social ads that are based on demographic and psychographic data taken from member profiles are becoming increasingly important as users provide more information about their personal background and as they continue to add applications to their profiles. As a result of these improved targeting opportunities, the importance of advertisements as a source of revenue for SNS is also likely to increase.

As these developments continue to evolve, willingness to pay might lose importance while number of users will remain an important revenue driver for SNS. Already in 1997, Armstrong and Hagel (1997) proposed that for virtual communities the first step on the way to profitability was the acquisition of a critical mass of members. If this also holds true for SNS, at least the major SNS seem to have taken this first hurdle on the way to sustained profitability. The next crucial task will therefore be to build up and maintain member loyalty to the platform.

References

Anderson, C. (2006) *The long tail – how endless choice is creating unlimited demand*. Random House Business Books, London.

Armstrong, A. and Hagel, J. (1996) The real value of online communities. *Harvard Business Review* **74**, 134-141.

Barabási, A.-L. (2003) *Linked: how everything is connected to everything else and what it means for business, science and everyday life*. Plume, Cambridge.

Boase, J., Horrigan, J., Wellman, B. and Rainie, L. (2006) *The strength of Internet ties.* Pew Internet & American Life Project, Washington.

Boase, J. and Wellman, B. (2006) Personal relationships: on and off the Internet. In *The Cambridge Handbook of Personal Relationships,* (eds.*)* Vangelisti, A. and Perlman, D. Cambridge University Press, Cambridge.

Bughin, J. and Hagel, J. (2000) The operational performance of virtual communities – towards a successful business model?. *Electronic Markets* **10**, 237-243.

Burt, R. S. (2000) Decay functions. *Social Networks* **22**, 1-28.

Canzer, B. (2006) *e-business: strategic thinking and practice.* Houghton Mifflin Company, Boston – New York.

Dubosson-Torbay, M., Osterwalder, A. and Pigneur, Y. (2002) ebusiness model design, classification and measurements. *Thunderbird International Business Review* **44**, 5-23.

Eisenhardt, K.M. (1989) Building theories from case study research. *Academy of Management Review* **14**, 532-550.

Elberse, A. and Oberholzer-Gee, F. (2006) Superstars and underdogs: an examination of the long tail phenomenon in video sales. Working Paper, Harvard Business School Working Paper Series, No. 07-015, Available Online (accessed 2007-01-09): http://www.people.hbs.edu/aelberse/papers/hbs_07-015.pdf.

Ellison, C. (2006) Fever pitch. *CRM Magazine* **10**, 24-32.

Gladwell, M. (2000). *The tipping point - how little things can make a big difference*. Abacus, London.

Granovetter, M. S. (1973) The strength of weak ties. *American Journal of Sociology* **6**, 1360-1380.

Hagel, J. and Armstrong, A.G. (1997) *Net gain*. Harvard Business School Press, Massachusetts.

Hill, R. A. and Dunbar, R. I. M. (2003) Social network size in humans. *Human Nature* **14**, 53-72.

Hoffman, D. L. and Novak, T. P. (2000) How to acquire customers on the web. *Harvard Business Review* **78**, 179-188.

Huberman, B. A. and Wu, F. (N/A) Bootstrapping the long tail in peer to peer systems. Working Paper, HP Labs, Palo Alto, CA, Available Online (accessed 2007-01-06): http://arxiv.org/abs/cs.NI/0512033.

Jelassi, T. and Enders, A. (2005) *Strategies for e-business – creating value through electronic and mobile commerce*. Pearson Education Limited, Essex.

Kolbitsch, J. and Maurer, H. (2006) The transformation of the web: how emerging communities shape the information we consume. *Journal of Universal Computer Science* **12**, 187-213.

Laudon, K. C. and Traver, C. G. (2007) *E-Commerce: business, technology, society*. Pearson Prentice Hall, New Jersey.

Lee, A. S. (1989) A scientific methodology for MIS case studies. *MIS Quarterly* **13**, 33-50.

Lim, K. H., Ling, S. C., Lee, M. K.O. and Benbasat, I. (2006) Do I trust you online, and if so, will I buy?. *Journal of Management Information Systems* **23**, 233-266.

Mergel, I. and Langenberg, T. (2006) What makes online ties sustainable? A research design proposal to analyze online social networks. PNG Working paper No. PNG06-002, Cambridge. Available online (Accessed 2007-01-09-), URL: http://www.ksg.harvard.edu/netgov/files/PNG_WorkingPaper_Series/PNG06-002_WorkingPaper_MergelLangenberg.pdf.

O'Murchu, I., Breslin, J. G. and Decker, S. (2004) Online social and business communities. DERI Technical Report 2004-08-12, *DERI - Digital Enterprise Research Institute*.

Quan-Haase, A. and Wellman, B. (2004) How does the internet affect social capital?. In *Social Capital and Information Technology,* (eds*.)* Hyusman, M. and Wulf, V. MIT Press, Cambridge.

Ratnasingham, P. (1998) The importance of trust in electronic commerce. *Internet Research: Electronic Networking Applications and Policy* **8**, 313-321.

Shapiro, C. and Varian, H. R. (1999) *Information rules - a strategic guide to the network economy*. Harvard Business School Press, Massachusetts.

Van Baalen, P., Bloemhof-Ruwaard, J. and van Heck, E. (2005) Knowledge sharing in an emerging network of practice. *European Management Journal* **23**, 300-314.

Walden, E. (2000) Some value propositions of online communities. *Electronic Markets,* **10**, 1-6.

Wang, C. L., Zhang, Y., Ye, L. R. and Nguyen, D.D. (2005) Subscription to fee-based online services: what makes consumer pay for online content?. *Journal of Electronic Commerce Research* **6**, 304-311.

Williams, R. L. and Cothrel, J. (2000) Four smart ways to run online communities. *Sloan Management Review* **41**, 81-91.

Yin, R. K. (2003) *Case study research - design and methods*. Sage Publications, Thousand Oaks/London/New Delhi.

Zeng, M. and Reinartz, W. (2003) Beyond online search: the road to profitability. *California Management Review* **45**, 107-130.

Notes

[1] The term Web 2.0 originated from a series of conferences about new web technologies of the same title. These conferences were initiated by Tim O'Reilly, an internationally renowned expert on Internet and open source technologies.

[2] "Web 2.0 Compact Definition: Trying Again", o'Reilly Radar, by Tim o'Reilly, URL: http://radar.oreilly.com/archives/2006/12/web_20_compact.html

[3] RSS (Really Simple Syndication) is a web feed format enabling users to automatically include content of websites on their own website or read and organize this content with RSS-aware software.

[4] AJAX (Asynchronous JavaScript and XML) is a web development technique for creating interactive web applications by enabling web pages to reload small amounts of data from a server, so that the entire web page does not have to be reloaded each time the user requests a change.

[5] Voice over Internet Protocol (VoIP) is the routing of voice conversations over the Internet or through any other IP-based network.

[6] URL FlickR: http://www.flickr.com; URL YouTube: http://www.youtube.com; URL Skype: http://www.skype.com; URL Wikipedia: http://www.wikipedia.org.

[7] Blogosphere is the collective term encompassing all blogs as a community or social network. Many weblogs are densely interconnected, and have grown their own culture. Sites such as Technorati (URL: http://www.technorati.com) use the links made by bloggers to track their interconnections.

[8] URL MySpace: http://www.myspace.com.

[9] Business Week Online: "News Corp.'s Place in MySpace", URL: http://www.businessweek.com/technology/content/jul2005/tc20050719_5427_tc119.htm (accessed 01/05/07).

[10] Nielsen/Netratings, New York, May 2006, URL: http://www.nielsen-netratings.com/pr/pr_060511.pdf., (accessed 01/05/07).

[11] "MySpace, Facebook and Other Social Networking Sites: Hot Today, Gone Tomorrow?", Knowledge@Wharton, URL: http://knowledge.wharton.upenn.edu (accessed 01/02/07).

[12] e-consultancy: Web 2.0 company XING raises €35.7 million in IPO, URL: http://www.e-consultancy.com/news-blog/362352/web-2-0-company-xing-raises-35-7-million-in-ipo.html (accessed 01/05/07)

[13] While the general idea of Anderson's findings is intuitively appealing, it also needs to be pointed out that preliminary empirical evidence does not fully support (Elberse and Oberholzer-Gee 2006) this theory.

[14] List of social networking websites, URL: http://en.wikipedia.org/wiki/Social_networking_sites (accessed 01/05/07).

[15] Business 2.0, a magazine of CNNMoney.com: Web 2.0 Around The World, URL: http://corporate.xing.com/fileadmin/image_archive/pressreview_en_business_2_0_0608.pdf (accessed 01/06/07).

[16] See Note 11.

[17] One of the most influential weekly news magazines and online news portals in Germany, URL SPIEGEL: http://www.spiegel.de.

[18] Accenture is a global management consulting, technology services and outsourcing company, URL: http://www.accenture.com.

[19] AISEC is an international student organization, URL: http://www.aiesec.net.

[20] URL Classmates.com: http://www.classmates.com.

[21] URL Facebook: http://www.facebook.com
[22] XING stock exchange prospectus.